Environmental Impact Report

Proposed Golf Course – Town of Wilson

Kohler Company
Sheboygan, Wisconsin

Project No.: 193703078
April 9, 2015

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ABBREVIATIONS

AAA	Automobile Association of America
BLS	Below Land Surface
BMP	Best Management Practice
BSA	Bank Service Area
CTH	County Trunk Highway
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
DATCP	Department of Agriculture Trade and Consumer Protection
DOA	Department of Administration
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FTE	Full-time Equivalent
GPD	Gallons Per Day
GPM	Gallons Per Minute
GPS	Global Positioning System
IBA	Important Bird Area
ILF	In-Lieu Fee
IPM	Integrated Pest Management
LAWCON	Land and Water Conservation Fund Act
LEED	Leadership in Energy and Environmental Design
LOS	Level of Service
MBTA	Migratory Bird Treaty Act
MSL	Mean Sea Level
NHI	Natural Heritage Inventory
NOAA	National Oceanic and Atmospheric Administration
NPS	National Park Service
NRCS	Natural Resources Conservation Service
OHWM	Ordinary High Water Mark
PCB	Polychlorinated Biphenyl

PGA	Professional Golfers Association of America
POWTS	Private On-site Wastewater Treatment System
SHPO	State Historical Preservation Office
TSS	Total Suspended Solids
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
WDNR	Wisconsin Department of Natural Resources
WWTP	Wastewater Treatment Plant

EXECUTIVE SUMMARY

Kohler Company ("Kohler") seeks to develop an 18-hole public golf course, a clubhouse and support amenities on 247 acres of undeveloped private land owned by Kohler. The project creates a unique opportunity to open 247 acres of private property for public enjoyment and recreational use, enhance Sheboygan County's reputation as one of the world's premier golf destinations, and at the same time, preserve and enhance many of the Property's environmental features and attributes for the long term.

The Property is located between the Black River and Lake Michigan, north and east of the Kohler-Andrae State Park (State Park) in the Town of Wilson, Sheboygan County, Wisconsin. Kohler acquired a total of approximately 468 acres in the vicinity during the 1930's. In 1965, Kohler donated 221 acres to the State of Wisconsin for the creation of the John Michael Kohler State Park. The remaining 247 acre parcel retained by Kohler in private ownership is uniquely suited for a premier 18-hole golf course.

With its Lake Michigan vistas, rolling topography and unique natural features, the property offers an unparalleled setting for a spectacular golf in forest and dunes experience. Kohler again intends to tap world-renowned designer Pete Dye to design a course that will rival the top 50 courses in the world. Page vi of the Executive Summary contains the proposed golf course plan (Figure ES-1). The proposed course, together with Kohler's other championship golf courses in the area, will maintain the reputation of Sheboygan County as one of the premier golf destinations in the world.

An economic impact study by S. B. Friedman Development Advisors estimates the proposed golf course will generate over $20 Million in annual economic output for Sheboygan County, 227 full time equivalent jobs, and over $1.1 Million in new tax revenue per year. In developing this project, Kohler is not requesting any public financing, tax incremental financing or public-funded infrastructure.

Golf course land use is appropriate at the Kohler Property. "Golf courses with country club/restaurant facilities/driving ranges" are allowable as conditional uses in the P-1 Park and Recreation District that applies to the property under the Town of Wilson zoning code. Kohler is not proposing any changes to Town zoning.

The project will not compromise the property's natural features. To the contrary, Kohler and Dye will design the course and all amenities as respectful environmental stewards, with a minimalist approach striving to maintain the character of natural features. The proposed golf course will integrate many existing trees, dunes and natural contours, and minimize environmental impacts. During project planning, several conceptual course layouts and entrance alternatives were identified, characterized and evaluated. The proposed alternative minimizes impact on neighbors, regulated natural features, and the State Park.

Less than 5 acres of wetland will be affected, a reduction of over 80 percent from initial course layouts. Wetland mitigation would be provided through approved programs, resulting in a net increase in wetland habitat.

While construction activities within the floodplain are unavoidable and may involve minor filling, the project will result in minimal increase to floodplain elevations.

Habitat for regulated endangered plant species will generally be preserved. To the extent possible, any impacted plants will be transplanted to nearby areas with similar characteristics Invasive species such as thorny Japanese barberry will be removed, and Kohler will monitor invasive species on an on-going basis to improve overall habitat. The management of invasive species will have a significant, long term positive benefit to the property and biological community. Invasive species removal allows native plant communities to repopulate, significantly enhancing the habitat, and promotes increases in biological and wildlife diversity.

The use of pesticides and fertilizers is highly regulated at both the State and Federal levels to protect surface and groundwater. Kohler has a proven record of employing the best management practices regarding use of approved pesticides and fertilizers on its golf courses and its courses have never been cited for an environmental violation. Kohler will implement an integrated pest management plan to minimize pesticide and fertilizer usage at the new course--just as it does at its other golf courses. With these methods, in 2014, Kohler applied fertilizer at rates on its other golf courses that were significantly less than Wisconsin Administrative Code maximums: 32 percent of maximum on tees, 40 percent of maximum on greens and only 20 percent of authorized state and federal maximum levels on fairways.

A ground water study was completed to determine the potential impacts on neighboring residential wells from irrigating the proposed golf course. Based upon the field investigation, pumping tests, and a review of well logs from the area, golf course irrigation is not anticipated to adversely impact the surrounding neighborhood. Kohler will proactively manage its water usage to minimize irrigation, employing computerized irrigation systems, soil moisture sensors and daily inspections.

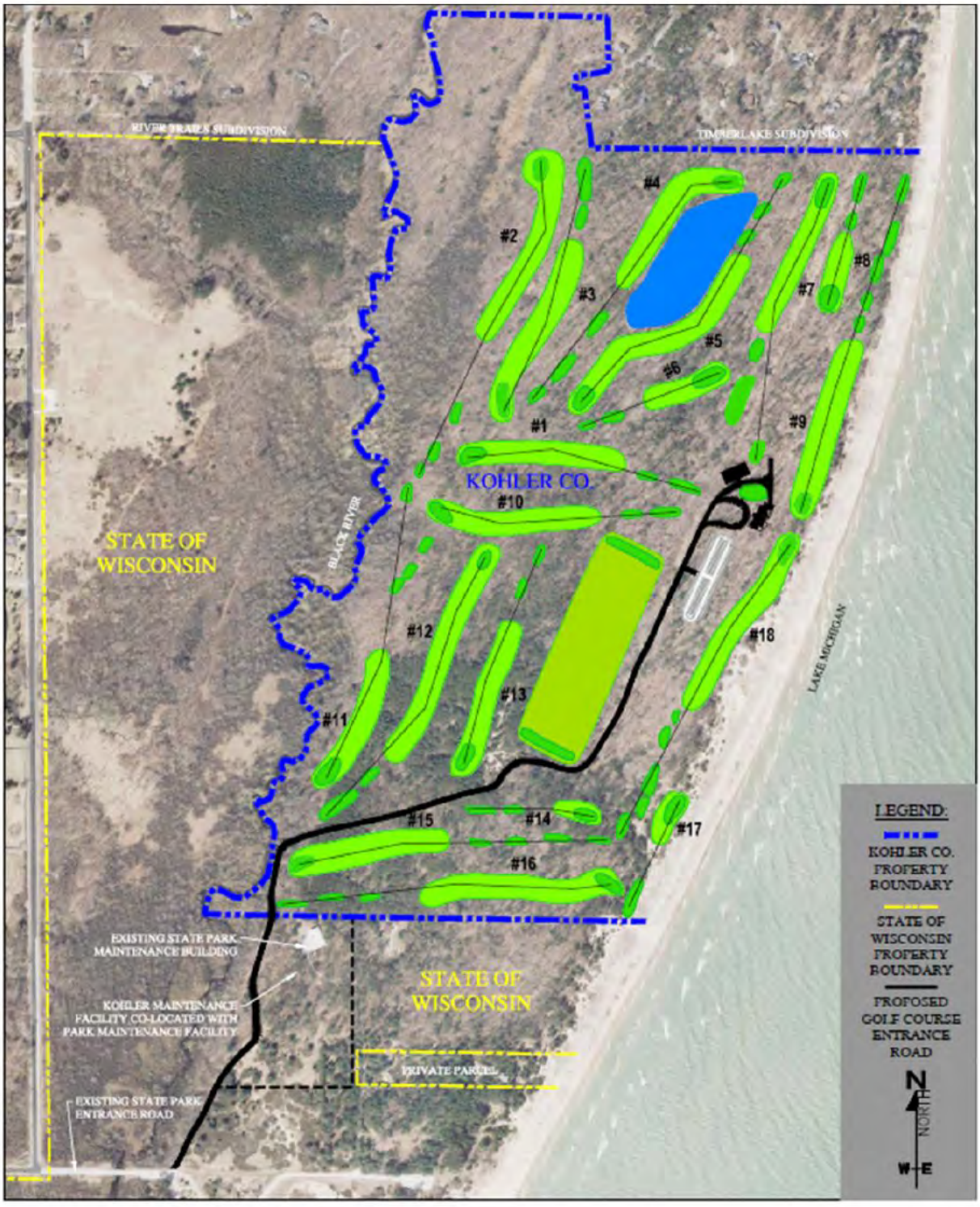
Kohler will manage storm water consistent with Town of Wilson and WDNR best management practices, reducing post-development peak flow rates to pre-development rates, removing 80 percent of total suspended solids and infiltrating at least 90 percent of storm water infiltrated prior to development.

Kohler investigated numerous alternative entrance routes to the Property resulting in a proposed route that has the least impact on both the neighbors and environment. Access through residential neighborhoods to the north was investigated but not recommended due to traffic impacts to area residents. Multiple routes originating off 12th Street through the State Park were also investigated, but determined more impactful than the route being proposed. A traffic study was completed and concludes that the studied intersections significantly exceed widely-accepted Level of Service (LOS) standards. While no traffic improvements are required, Kohler is proposing to modify the State Park entrance area by adding a roundabout, east of the existing bridge spanning the Black River to further improve circulation. Two lanes would be dedicated for entering State Park visitors while golf course traffic and exiting State Park visitors would utilize the roundabout. Kohler would fund the entire cost of the improvements.

The proposed golf course entrance road location is similar to that recommended by both WDNR and the Town of Wilson for a previous development project. The route and maintenance facility placement will require an easement from the WDNR on approximately 4 acres of land already dedicated to park maintenance. Specifically, Kohler proposes to: i) enhance the current entrance to the State Park off Beach Park Road and utilize an existing bridge over the Black River, thus avoiding the need for another crossing over the Black River; and, ii) build a maintenance facility close to the State Park maintenance building providing the State an opportunity to upgrade the utilities at its building.

The proposed golf course avoids, minimizes, and mitigates environmental impact of both its construction and long term operations. On balance, Kohler believes that the benefits of its proposed golf course project far outweigh any adverse impact.

Figure ES-1 Proposed Golf Course Plan



1.0 PROJECT SUMMARY

Kohler Company ("Kohler") seeks to develop an 18-hole public golf course (the "Project") on 247 acres of private land owned by Kohler between the Black River and Lake Michigan, north and east of Kohler-Andrae State Park (the "State Park"). The Project will be limited to Kohler Company owned property and an approximate 4 acre State Park easement north of Beach Park Road on State land that is not typically utilized by the public. For the Project to move forward, various Federal, State, and local permits and approvals will be required, including approvals from the Wisconsin Department of Natural Resources (WDNR).

In preparation for submitting this environmental impact report (EIR) to the WDNR, numerous biological, cultural, and socio-economic studies were completed to evaluate existing and proposed conditions.

This EIR supports the various permit applications for the Project, provides a description of existing environmental conditions, assesses human and environmental impacts that may result from the Project, and summarizes the mitigation measures to be implemented to avoid and/or minimize environmental impacts.

Throughout the Project planning process, a final layout has been developed that reduces impacts, including: reducing wetland impacts from greater than 25 acres to less than 5 acres; reducing the area of tree clearing to approximately 50 percent; utilizing an existing bridge to avoid impacts to the Black River and associated floodplain; reducing the need for an easement on State Park property by 85 percent (from 33 acres to approximately 4 acres), while avoiding existing trails west of the Black River.

1.1 PROPOSED ACTION

Kohler proposes to create a public 18-hole golf course on Kohler-owned property (the "Kohler Property"). The Project is located north of the State Park in the Town of Wilson (Figures 1-3). The course will be designed by Pete Dye, a world-renowned golf course designer who successfully designed Kohler's Blackwolf Run and Whistling Straits golf courses in Sheboygan County.

Access to the Kohler Property is proposed through a 4 acre easement on the adjacent State Park property to the south. This portion of the State Park is not typically utilized by the public and contains an existing park maintenance building and residence for the Park Ranger. Similar to a proposed development previously recommended by the WDNR and the Town of Wilson, access to the Kohler Property will require the construction of a two lane asphalt entrance road. This route will allow for the utilization of an existing Black River bridge crossing thereby minimizing impacts to the river and adjacent floodplain.

A maintenance facility will also be constructed relatively close to the existing park maintenance building on that portion of State Park property not typically utilized by the public. The Kohler maintenance facility will be used for golf course grounds maintenance support and storage. As a direct benefit to the State Park, enhanced public utilities will be available to upgrade the park's maintenance building, along with the occasional use of the entrance road for park maintenance operations.

A multi-level clubhouse will be erected on the Property that encompasses minimalist design elements and concepts. The 13,000 to 16,000 square foot clubhouse will include a Lake Michigan observation tower, restaurant, locker room, lobby, bar area, retail, and outdoor wedding and special event space. A guest and associate parking lot will be located near the clubhouse and include a bag drop area. The clubhouse will be designed to be eligible for

Leadership in Energy and Environmental Design (LEED) certification, and include the use of timber and canvas materials as architectural features.

A caddie/cart barn and two on-course rest stations will be constructed on the Kohler Property.

1.2 PROJECT LOCATION

The Kohler Property is located in part of Section 14 of Township 14 North, Range 23 East, in the Town of Wilson, Sheboygan County, Wisconsin (Figures 1 and 2). Lake Michigan borders the Kohler Property to the east, and the State Park borders the Kohler Property to the west and south. Residential neighborhoods are adjacent to the north boundary. South 12th Street is located west of the State Park property (Figure 3 and 4).

Kohler originally acquired approximately 468 acres of property in the area during the 1930s. In 1965, Kohler donated 221 acres to the State of Wisconsin for the creation of the John Michael Kohler State Park, while retaining the remaining 247 acre parcel which is the subject of this report.

1.3 PURPOSE AND NEED

The purpose of the Project is to open the Kohler Property to public use as a high quality 18-hole golf course and associated facilities to benefit the local economy and to provide community-friendly and environmentally sensitive access to the golf course. An entrance road from Beach Park Lane through the State Park provides public access to the Kohler Property in a manner that reduces traffic issues for the surrounding residential neighborhoods.

The Project presents an extraordinary opportunity to open 247 acres of private lands to the public. In the past, authorized access to this private property was limited to a relatively small number of individuals. This project creates access for the general public to enjoy the property, whether that be by playing a round of golf or taking in the beauty of Lake Michigan from the clubhouse.

Golf is more than an enjoyable pastime; it is a key industry contributing to the vitality of the nation's economy. Golf attracts businesses and visitors, drives residential and recreational development and creates demand for a variety of goods and services. In 2008, Wisconsin's golf industry generated approximately $2.4 billion of direct and indirect economic output, $771.5 million of wage income and 38,431 jobs. (SRI International, 2008).

The economic benefits of a new golf course are measured in more than just recreation and business travel dollars. Benefits begin with millions of dollars of planning, design and construction work. Once constructed, a course creates jobs along with state and local income including sales and property taxes. In addition, a new golf course, and a championship-caliber course in particular, has a "multiplier effect," infusing wages and benefits to circulate through the local economy, increasing property values and ancillary public and private benefits.

Wisconsin is recognized as a golf mecca. *Golf Digest* ranked Sheboygan County as the number seven golf destination in the world in its 50th anniversary issue. (See Table 1.1 below of the top ten golf destinations in the world.) In its 2015/2016 America's 100 Greatest Public Courses, *Golf Digest* ranked all four Kohler courses in the top 100: #4 – Straits course, #16 – Rivers course, # 47 – Irish course, and #72 – Meadow Valleys course. All four courses at Blackwolf Run and Whistling Straits were among the top 10 in the State of Wisconsin led by the Straits course being ranked #1. Also, in its World's Best Golf Destinations 2014/2015 rankings, *Golf Odyssey* ranked The American

Club as the Best Overall U.S. Resort. In determining this ranking, the publication evaluated golf, lodging, dining and activities.

Table 1.1 Golf Destination Rankings

50 GREATEST GOLF DESTINATIONS, *GOLF DIGEST* MAGAZINE – SEPTEMBER 2000
1. Monterey, California
2. St Andrews, Scotland
3. Pinehurst/Southern Pines, North Carolina
4. Northern Ireland
5. Southwest Scotland/Ayshire
6. Southwest Ireland/County Kerry
7. **Sheboygan County, Wisconsin**
8. Phoenix/Scottsdale, Arizona
9. Greater Myrtle Beach, South Carolina
10. Hilton Head, South Carolina

1.4 DEVELOPER OF PROJECT

Kohler was founded in 1873 and is headquartered in Kohler, Wisconsin. It is Sheboygan County's top employer and one of America's oldest and largest privately held companies. Kohler has presence on six continents and is a global leader in the design and manufacture of kitchen and bath products; engines and power systems; premier furniture, cabinetry and tile; and is the owner/operator of two of the world's finest five-star hospitality and golf resort destinations in Kohler, Wisconsin and St Andrews, Scotland.

The Kohler golf tradition in Sheboygan County began in 1985 when Herb Kohler hired world-renowned architect Pete Dye to design Blackwolf Run. Pete Dye is one of only five golf course designers inducted into the World Golf Hall of Fame. His design philosophy is environmentally sensitive, utilizing the natural terrain and preserving natural site features. Building on Blackwolf Run's reputation, Kohler added Whistling Straits, another Pete Dye design, in 1995. What immediately becomes apparent with all of Kohler's golf courses is the unique sensitivity and respect to the surroundings of the immediate area. Nowhere to be found are ancillary or contiguous housing or commercial developments that are almost always present near golf courses throughout the United States.

Kohler's success in the golf world leverages Kohler's success in its hospitality venues. Kohler became a hospitality destination in 1981, when it converted a worker boarding house into an elegant, luxury hotel with upscale restaurants and amenities. Today, The American Club is Wisconsin's only Forbes Five-Star hotel with an AAA five diamond resort designation. In addition to The American Club, Destination Kohler offers not only outstanding accommodations and dining options, but also Kohler Waters Spa, Sports Core Health and Racquet Club, The Shops at Woodlake, Kohler Design Center and countless other high quality amenities and events within Sheboygan County, including River Bend, a meticulously restored residence of former Governor Walter J. Kohler and River Wildlife a 500 acre environmentally sensitive wildlife preserve.

Kohler, along with the Kohler Trust for Preservation, also jointly owns and manages Eagle Valley, a 1500 acre nature preserve nestled on top of the cliffs of the Mississippi River in southwestern Wisconsin. In 2012, Kohler and Herb Kohler created the Kohler Environmental Center on 260 acres of land in Wallingford, Connecticut placing Choate Rosemary Hall on the leading edge of secondary education in the United States.

Kohler's experience and expertise in developing, managing and operating all of these properties over the years shows a proven track record and is evidence of Kohler's commitment to environmental responsibility, sustainability, innovation and high standards of execution.

The proposed Project will be the latest world-class Kohler golf course designed by Pete Dye. The uniqueness of the location, the setting and the terrain provide a one-of-a-kind opportunity to create a world class, golf in forest and dunes destination. The Kohler commitment to excellence, as evidenced by the success of its other hospitality venues in the area, including the American Club, Blackwolf Run and Whistling Straits, will create a critical mass unrivaled in the United States.

1.5 AUTHORITIES AND APPROVALS

The uniqueness and location of the Project requires permits and approvals from Federal, State, and local authorities as summarized in Table 1-2. Kohler is committed to collaborating and systematically investigating development options that protect the environment, and increase public access to the Kohler Property.

The various permitting processes create an opportunity for regulatory agencies and Kohler to work together to create a one-of-a-kind golf destination in an environmentally sensitive way. Table 1-2 summarizes the permits and associated regulatory agency collaboration anticipated for this Project.

Table 1-2. Anticipated Permitting Requirements for the Project

AGENCY	INTEREST OR PERMIT
U.S. Army Corps of Engineers	Section 404 Clean Water Act Permit for Wetland Discharge
National Park Service	Conversion of Land and Water Conservation Fund Act Lands
U.S. Fish and Wildlife Service	Threatened and Endangered Species Protection
Wisconsin Department of Natural Resources	Section 401/NR 103 Wetland Discharge
Wisconsin Department of Natural Resources	Chapter 30 Grading Permit
Wisconsin Department of Natural Resources	NR 150 Environmental Impact Statement
Wisconsin Department of Natural Resources	Threatened and Endangered Species Protection
Wisconsin Department of Natural Resources	NR 151/NR216 Construction Time Storm Water Discharge Permit
Wisconsin Department of Natural Resources	Sanitary Permit
Wisconsin Department of Natural Resources	High Capacity Well Permit
State Historic Preservation Office	Archaeologic Consultation
Sheboygan County	Shoreland-Floodplain Conditional Use Permit; Zoning Permit; Sanitary Permit
Town of Wilson	Conditional Use Permit; Storm Water Permit; Erosion Control Permit, Building Permit

1.5.1 Federal

1.5.1.1 U.S. Army Corps of Engineers (USACE)

The Project will require compliance with Section 404 Clean Water Act (CWA) administered by the USACE for wetland impacts.

1.5.1.2 National Park Service (NPS)

The State Park property is funded by the NPS Land and Water Conservation Fund Act (LAWCON). Use of State Park property will require approval from the NPS. The proposed easement area of use is approximately 4 acres of State Park property.

1.5.1.3 U.S. Fish & Wildlife Service (USFWS)

The Project will require USFWS review and compliance with the Endangered Species Act and Migratory Bird Treaty Act (MBTA).

1.5.1.4 Federal Emergency Management Agency (FEMA)

No significant increases are expected to floodplain elevations.

1.5.2 State of Wisconsin

1.5.2.1 Wisconsin Department of Natural Resources (WDNR)

The Project will require permits and approvals from the WDNR, including:

- Wetland Water Quality Certifications, Wetland Fill and Wetland Compensatory Mitigation (Wis. Adm. Code Chapter NR 103, Section 401 Clean Water Act)
- Grading (Wis. Stat. §30.19, Section 404 Clean Water Act)
- Individual Permit, Irrigation Pond with wetland impacts (Section NR 103, Wis. Adm. Code)
- Storm water (WPDES Sections NR 216 and NR 151, Wisc. Adm. Code)
- High Capacity Well Permit (Section NR 812, Wisc. Adm. Code)
- Sanitary Permit (WPDES Section 283, Wisc. Adm. Code)

Kohler requested an Endangered Resource Review from the WDNR for this Project. Coordination with the WDNR regarding endangered resources is ongoing.

Kohler understands that the WDNR will require an Environmental Impact Statement under Section NR 150 (Wis. Adm. Code) to ensure that the WDNR and the public have comprehensive information to fully consider the short and long term effects of the Project.

1.5.2.2 Wisconsin State Historic Preservation Office (SHPO)

Kohler has undertaken extensive historical and archaeological surveys of the property. Consultation with the SHPO will occur upon completion of the surveys.

1.5.3 Local

1.5.3.1 Sheboygan County

Kohler will seek a shoreland/floodplain conditional use and zoning permit from Sheboygan County, along with a request for wetland rezoning per Chapter 72, Shoreland Ordinance. A zoning permit and sanitary permit will also be required from the County Planning Department for this Project.

1.5.3.2 Town of Wilson

The Project will require a conditional use permit from the Town of Wilson. The golf course is allowable as a conditional use in the current P-1 Parks and Recreation District.

2.0 PROPOSED PHYSICAL CHANGES

2.1 MANIPULATION OF TERRESTRIAL RESOURCES

Construction of the Project will include the following activities: selective tree removal, grading, installation of utilities, including septic and irrigation systems, excavation of an irrigation pond, construction of an access road and cart paths, construction of new buildings, and construction of the golf course.

Vegetation will be removed from the footprint of the golf course fairways, greens and tees. Mature trees and other native vegetation will be retained between the golf holes where possible. Vegetation will also be removed from the access road and utility right-of-way, building footprints, septic fields, irrigation system, and driving range. It is anticipated that approximately 50 percent of the existing trees will remain following construction. As part of this development, invasive plant species will be managed on the Kohler Property.

Site grading is anticipated to be minimal across the site. The site designer intends to respect major dune structures and natural contours of the Property. The largest topographic change will be the excavation of an approximate five-acre irrigation pond. The spoils from the irrigation pond may be used on-site.

The vegetation within the footprint of golf holes (tees, greens, fairways) and driving range will be replaced with turfgrass. Native vegetation and trees will be planted during the final landscape phase to enhance the aesthetics and habitat value on the site, replacing some of the specimens and invasive species removed. The majority of the club house landscaping and the non-turfgrass areas on the course will be composed of native vegetation.

Infrastructure to be constructed on the site includes the access road, the cart paths, the parking lots, the rest stations (2), the maintenance buildings, the club house, and the caddie/cart barn.

2.2 MANIPULATION OF WATER RESOURCES

2.2.1 Waterways

No disturbance of public waterways is proposed.

The Project will not withdraw surface water from the Black River or Lake Michigan. The Property does not have access to a public water supply, so feasibility studies were conducted to determine a source for irrigation and potable water supply for the Project. Surface water sources were found to be infeasible.

Access to the Property is planned to utilize the existing Beach Park Lane crossing of the Black River. This route avoids creating an additional river crossing and avoids direct impacts to the Black River and associated floodplain.

2.2.2 Ground Water

Based on the feasibility studies, groundwater pumped from the bedrock aquifer is the best option for the irrigation supply (Layne 2014, Excel 2014a, Stantec 2014a). An on-site well will pump water from the bedrock aquifer to an irrigation pond for storage and use. Refer to Section 2.3.7 for groundwater pumping information.

The shallow groundwater aquifer is located within the overlying sand layer, at places within three feet of the ground surface. Domestic wastewater septic systems will be constructed to provide adequate separation from the shallow groundwater.

Groundwater modeling data indicates operation of the irrigation system is not anticipated to impact adjacent private water supply wells. As a special insurance, Kohler will fund and develop a program with the Town of Wilson to mitigate potential impacts to adjacent private water supply wells, similar to the program that was successfully implemented at Whistling Straits.

2.2.3 Floodplain

A portion of the proposed golf course will be constructed along the east perimeter of the Black River floodplain. Construction within the floodplain may include minor filling for a small portion of the golf course and the entrance road. Increases to the floodplain elevation are anticipated to be minimal.

2.2.4 Wetland Impacts

The Project will result in less than 5 acres of wetland impacts scattered in various areas across the entire 247 acre property. Construction within wetlands is expected to include fill placement. The volume of fill has not yet been calculated, as the process of avoiding and minimizing wetland impacts is ongoing. Wetland mitigation is planned to offset all wetland impacts, resulting in a net increase of wetlands.

2.3 BUILDINGS, TREATMENT UNITS, ROADS AND OTHER STRUCTURES

2.3.1 Course Layout

This Project is the latest world-class Kohler golf course designed by Hall of Fame golf course architect Pete Dye. The course will be developed with a goal of ranking in the top 50 courses in the world upon maturity. Corridors will be opened to sunlight, and views of Lake Michigan while removing invasive species and maintaining approximately half of the trees on the Property. The dunes and their natural contours would be respected and are essential to the design.

The 18-hole golf course will be located entirely on the Kohler Property (Figure ES-1). An approximate 5 acre irrigation pond is planned in the northern portion of the Kohler Property, while the practice range is planned to be in the south portion. The clubhouse and other amenities are centrally located.

2.3.2 Clubhouse

A multi-level clubhouse is planned to be between 13,000 and 16,000 square feet in size and consist of areas designated for indoor/outdoor dining, bar area, locker rooms, retail, and banquet room. The clubhouse building would be designed to be eligible for LEED certification, and include the use of timber and canvas materials as architectural features.

The restaurant in the clubhouse will be available to the public and would open in spring and remain open through the New Year's holiday season. The dining area could accommodate approximately 60 interior dining seats and 50 exterior dining seats. The banquet room would have a capacity for up to approximately 70 people for special event functions. A Lake Michigan observation tower will also be accessible to guests.

A parking lot located near the clubhouse will accommodate approximately 150 guest vehicles.

2.3.3 Maintenance Building

The maintenance facility is planned to include approximately 22,000 square feet of building space. Functions within the maintenance building include administrative offices, locker rooms, equipment storage, equipment wash and repair, and a dedicated self-contained area for

storage, mixing, and loading of plant protectants. A closed loop system for the equipment wash is planned that would capture, filter, and re-use water from the wash area.

2.3.4 Entrance Road

Eight entrance routes were investigated to identify a preferred route for guest and operational traffic. All entrance route options are constructible and viable; however the presence of environmental encumbrances and current use results in certain routes being more desirable than others. Eight maintenance building locations were considered in co-locations with the entrance routes. Section 4.2.3 presents the entrance route locations.

The benefits of Alternative E include:

- Minimizes impacts to the floodplain by avoiding the creation of a new bridge crossing the Black river
- Minimizes wetland impacts to the least amount of all alternatives
- Avoids State Park recreational areas and trails
- Avoids impacts to cultural resources
- Avoids traffic through residential areas to the west and north of the property

The two-lane entrance road and maintenance facility requires an approximately 4 acre easement through State Park property, north of Beach Park Lane, in an area not typically utilized by the public.

A traffic study was completed and concludes that the studied intersections significantly exceed widely-accepted Level of Service (LOS) standards. While no traffic improvements are required, Kohler is proposing to modify the State Park entrance area by adding a roundabout, east of the existing bridge spanning the Black River to further improve circulation. Two lanes would be dedicated for entering State Park visitors while golf course traffic and exiting State Park visitors would utilize the roundabout. Kohler would fund the entire cost of the improvements. Additional details on the Traffic study are provided in Section 3.3.2.

2.3.5 Utilities

Based upon preliminary discussions with utility providers (gas, electric, communications), it is anticipated that service connections will be extended from existing facilities located in County Trunk Highway V (CTH V) approximately one-half mile west of the Kohler Property. The new services will be bored beneath State Park property wetlands and the Black River within an agreed-upon easement less than one acre in size. Potable water and irrigation water will be provided by on-site wells and testing has been completed that confirms conventional septic field systems can be used to treat domestic wastewater.

2.3.6 Integrated Pest and Nutrient Management

The use of pesticides and fertilizers is highly regulated at both the State and Federal levels to protect surface and groundwater. Kohler has a proven record of employing the best management practices regarding use of approved pesticides and fertilizers on its golf courses and its courses have never been cited for an environmental violation.

Kohler uses an integrated pest management (IPM) approach at all of its golf properties as a sustainable method for managing pests and intends to adopt the same plan for this Project. The plan consists of six steps:

1. Identify the pest (Kohler subscribes to the Wisconsin Turfgrass Disease Diagnostic lab at UW-Madison for next-day microscopic pest identification and control recommendations)
2. Develop a control plan/strategy
3. Establish threshold limits for the pest
4. Monitor the pest populations
5. Control the pest
6. Evaluate and/or redesign the plan

The foundations of the IPM plan include the latest horticulture practices (fertilization, soil tests, irrigation, drainage and minimizing turf stress) to promote healthy, vigorous plants that withstand pest outbreaks without pest controls. Managers are educated in the biological lifecycle of pests so when pest populations approach a control threshold they can predict outbreaks, assess damage potential and time control at the most effective lifecycle stage. Pest control measures are first attempted by physical, mechanical and cultural controls. The use of a pesticide is a last consideration after other measures are unsuccessful. Pesticide applications are made to specific target areas to reduce the overall size of the treatment area. All golf course management staff are pesticide applicator certified by the Wisconsin Department of Agriculture, Trade, and Consumer Protection (DATCP).

Nutrient management is a key part of the project specific IPM plan and the ability to support healthy growth of the turfgrass. Kohler will develop a nutrient management plan for the project similar to the plans used at the other Kohler courses in the region. Fertilizers will be applied based on current soil tests, and the fertilization component of the IPM plan will be evaluated and modified as necessary each year. The Kohler golf course fertilization program is constantly being modified to incorporate the latest technologies including slow release and organic products.

Section NR151 of the Wisc. Admin. Code mandates an annual maximum amount of nutrients that can be applied to golf course turfgrass areas to protect surface and groundwater. In 2014, all Kohler golf courses in Sheboygan County, on average and in total, applied fertilizer at only 32 percent of the maximum amount on tees, 40 percent of the maximum amount on greens and only 20 percent of authorized state and federal levels on fairways.

2.3.7 Irrigation and Water Best Management Practices

Based on the 18-hole historical irrigation records at the Blackwolf Run and Whistling Straits Golf Courses, irrigation system flow rates of up to 1,500 gallons per minute (gpm) and average long term volumes of 15,000,000 to 25,000,000 gallons per year can be anticipated. The average pumping volume during the peak months of the last seven years at the Kohler golf courses was 190,000 gallons per day (gpd) per 18-holes, with a peak of 334,000 gpd during the driest months of the 2012 drought. Kohler anticipates that similar rates and volumes will be needed for this Project.

Kohler investigated several alternatives for sourcing irrigation water from surface waters, including a Lake Michigan submerged intake, a Ranney collector well system, a Black River intake, and using wastewater from the City of Sheboygan wastewater treatment plant (WWTP).

The Lake Michigan submerged intake was found to be unfeasible due to significant potential impacts to the lake bed during construction, concerns with zebra mussel interference at the intake, and damage from ice and wave action due to shallow lake water depths.

A Ranney collector well is a system which could extract Lake Michigan water from the adjacent saturated sandy beach areas. The advantages of this system include minimal impacts during construction and avoiding operational issues from zebra mussels. An on-site investigation and test borings completed in July of 2014 indicated extremely low hydraulic conductivity values making this alternative not technically feasible (Stantec, 2014a).

The Black River alternative was determined to be unfeasible after a 2014 investigation indicated the flow rates of the river would not meet the irrigation water demands without creating adverse impacts (Stantec, 2014a).

Reusing water from the WWTP is also not a feasible option due to potential environmental impacts, regulatory compliance constraints, and operational issues.

Similar to the existing Kohler golf courses, an irrigation well with a 450 gpm pump is planned to supply water to an irrigation pond. Water from the pond will be distributed via an underground irrigation system to the appropriate areas of the golf course.

Irrigation best management practices (BMPs) are employed at the existing Kohler golf courses and would be employed for the proposed Project as well. Kohler proactively manages irrigation water use in efforts to minimize volumes. Irrigation is carefully scheduled to match turf and soils conditions, to conserve water, reduce runoff, and prevent disease. Evapotranspiration rates and pending weather fronts are also factored into irrigation schedules. Other BMPs to regulate water use include:

- Computer controlled irrigation system for maximum efficiency
- Irrigation design is prescriptive; sprinklers are fully adjustable to water just the playing surfaces while avoiding native or out of play areas
- Use of soil moisture sensors to determine watering needs
- Use of quick couplers for hand water of isolated dry areas to prevent over watering of adjacent areas
- Cycle-soak feature automatically turns sprinklers off to prevent surface water run off until water has moved into soil to be used by plant roots
- Daily inspections of pressure readings and proper pump operation
- Low trajectory sprinkler nozzles apply water closer to the ground to minimize drift from wind
- Monthly irrigation system audits

2.3.8 Storm Water Management

The Town of Wilson and the WDNR require storm water management on this Project, as summarized below:

- Town of Wilson – The Town's storm water management code requires post-development storm water peak flow reduction and total suspended solids removal. It also mandates storm water infiltration facilities be provided. Specifically, the Town

requires post-development peak flow rates for the 2-year, 10-year, and 100-year storm events to not exceed their corresponding pre-development peak flow rates. The Town also requires 80 percent of the total suspended solids (TSS) be removed from post-development runoff and that the quantity of post-development storm water that is infiltrated exceed 60 percent of what infiltrated prior to development.

- WDNR – Similar to the Town, the WDNR has requirements for post-development storm water peak flow reduction, total suspended solids removal and infiltration. Specifically, the WDNR requires post-development peak flow rates for the 1-year and 2-year storms to not exceed their corresponding pre-development peak flow rates. They also require 80 percent of the TSS be removed from post-development runoff and that the quantity of post-development storm water that is infiltrated exceed 90 percent of what infiltrated prior to development.

Storm water management strategies have been developed to exceed the expected regulatory requirements for the Project. The strategies are based upon sandy soils and high infiltration rates associated with the Kohler Property. The bulk of the storm water management plan consists of filter strips which treat most impervious areas for quality and quantity prior to infiltrating and discharging to any nearby surface waters. For those areas that require more treatment (e.g., maintenance building), dry detention basins will be added to detain any additional runoff. Biofiltration areas may also be required to treat areas with concentrated flow that cannot drain to filter strips. These are depressed areas with three feet of engineered soil, mulch, and wetland type plantings. All treatment areas are planned to be constructed 5 feet above the anticipated high groundwater elevation or achieve 80 percent TSS removal prior to infiltrating.

2.4 ALTERNATIVES

2.4.1 ALTERNATIVE SITE LOCATION

The size and features of the Property are ideal for creating a world class golf course in Sheboygan County. The Lake Michigan shoreline, sand-based geology, natural contours, and sand dunes make this setting unique to Sheboygan County and the State of Wisconsin. Kohler has privately owned the property for over 75 years and currently operates four golf courses in Sheboygan County.

Kohler does not own and did not locate any comparable properties for sale along the Lake Michigan shoreline that had potential for a world-class golf course.

2.4.2 ALTERNATIVE DESIGNS

During project planning, four conceptual course layouts and eight entrance route alternatives were identified, characterized and evaluated. The course layout alternatives were considered in order to identify a preferred course design and minimize environmental impacts. The alternatives also include alternate maintenance building locations. The preferred alternative (Alternative E) has the least amount of wetland impacts of the twelve alternatives, minimizes impacts as much as practicable, and avoids impacts to recreational areas of the State Park and archaeologically significant human burial mounds.

Alternative drawings with course layout, entrance routes, and maintenance building locations are presented in Section 4.2.3. The following provides a summary of the alternative designs considered for this project:

No Build Alternative
The no-build alternative would mean the loss of the economic benefits created by the proposed project including 227 full-time equivalent permanent jobs and the generation of nearly $21 million in annual economic activity for Sheboygan County households and businesses.

Additionally, the Property is currently closed to the public. The no-build alternative would negate the opportunity to open the Property for public enjoyment and deny creation of a recreational opportunity that complements the current land use of the Property and area. Currently the majority of property owners in Timberlake Subdivision do not have access to Lake Michigan. Contrary to the build alternatives, the no-build alternative does not allow for a lake access easement to be granted to the owners in Timberlake Subdivision.

Alternative A
The Alternative A course layout design is near maximum build-out which expands to the northwest within close proximity to the burial mounds, to the east on the beach adjacent to Lake Michigan, to the south on State Park property, and to the west within the Black River floodplain. The entrance route originates on South 12th Street, and traverses the southern part of the State Park property crossing wetlands and the Black River. The maintenance building is located in the west central portion of the Kohler Property, north of the entrance route within a [redacted] This alternative would require an easement of more than 32 acres from the State of Wisconsin.

Alternative B-1
The Alternative B-1 course layout design is near maximum build-out within the existing Kohler Property, expanding to the northwest within close proximity to the burial mounds, to the east on the beach adjacent to Lake Michigan, to the south adjacent to the Kohler Property boundary, and to the west within the Black River floodplain. The entrance route originates on South 12th Street, further north than Alternative A, and traverses the State Park property crossing wetlands, recreational trails, and the Black River. The maintenance building is located in the central portion of the State Park property south of the entrance route within a degraded hardwood swamp and would be visually screened by a mound.

Alternative B-2
Alternative B-2 proposes the same course layout design and entrance route as Alternative B-1. The Alternative B-2 proposed maintenance building does not include the visual screening mound that is proposed in Alternative B-1. The entrance route originates on South 12th Street and traverses the State Park property crossing wetlands, recreational trails, and the Black River.

Alternative C
The Alternative C reduces the footprint of the course layout within the Kohler Property. Holes designed in the northwest location are moved further to the south away from the burial mounds. Holes within the Black River floodplain are moved further to the east. Holes adjacent to Lake Michigan are moved to the west.

The entrance route and maintenance building remain in the same location as Alternative B-2. The entrance route originates on South 12th Street and traverses the State Park property and crosses wetlands, recreational trails, and the Black River.

Alternative D-1
Alternatives D-1 through D-7 contain the same course layout design with alternate entrance routes and maintenance building locations to identify the location/route that minimize impacts.

The entrance route originates on South 12th Street, and traverses the southern part of the State Park property, crossing wetlands and the Black River. The maintenance building is located on the State Park property south of the entrance route within an [redacted] wet meadow, degraded wet meadow, hardwood swamp, and degraded hardwood swamp. This alternative would require an easement from the State of Wisconsin for the entrance road and maintenance facility located within the State Park property.

Alternative D-2
The entrance route begins on South 12th Street on the north end of the State Park property, crossing wetlands, recreational trails, and the Black River near the north-south midline of the Kohler Property. The maintenance facility is located in old field south of the entrance route. The entrance road to the maintenance facility crosses a degraded wet meadow. This alternative would require an easement from the State of Wisconsin for the entrance road and maintenance facility located within the State Park property.

Alternative D-3
The entrance route for Alternative D-3 begins at the intersection of Stahl Road and South 12th Street, in a Kohler-owned residential development immediately north of the Black River Trails State Park property; continues straight east crossing the Black River, and then south adjacent to the burial mounds to the approximate midline of the Kohler Property. The maintenance facility for Alternative D-3 is located on the upland area near the north edge of the State Park property south of the entrance route. This alternative would require an easement from the State of Wisconsin for the maintenance facility located within the State Park property.

Alternative D-4
The Alternative D-4 entrance route begins at the intersection of Stahl Road and South 12th Street, in a Kohler owned residential development immediately north of the State Park property. Alternative D-4 entrance route diverges from Alternative D-3, southeast across the State Park property, avoiding the burial mounds, and then east crossing the Black River. The maintenance facility for Alternative D-4 is located on the upland area near the north edge of the State Park property (same location as Alternative D-3). Alternative D-4 would require an easement from the State of Wisconsin for the entrance road and maintenance facility located within the State Park property.

Alternative D-5
The Alternative D-5 entrance route begins on South 12th Street, traverses the State Park property crossing wetlands, recreational trails, and the Black River near the midline of the Kohler Property. The maintenance facility is located in old field and degraded [redacted] of the entrance route. This alternative would require an easement from the State of Wisconsin for the entrance road and maintenance facility located within the State Park property.

Alternative D-6
Alternative D-6 begins on Beach Park Lane at the State Park property entrance, and travels north adjacent to and within portions of the east side of the Black River floodplain to the midline of the Kohler Property. Alternative D-6 does not impact State Park property recreational trails/areas, as the entrance route and maintenance facility are located in an area of the State Park property designated solely for park maintenance operations.

The maintenance facility is located east of the entrance route in the State Park property not typically utilized by the general public. This alternative would require an easement from the

State of Wisconsin for the entrance road and maintenance facility located within the south portion of State Park property.

Alternative D-7
Alternative D-7 begins at Timberlake Road located north of the existing Kohler Property. This alternative utilizes Kohler Property and requires no easement for use of State Park property. The road travels south within the Black River floodplain to the midline of the Kohler Property before turning east. The maintenance building is located to the furthest extent north on uplands within the Kohler Property in close proximity to the burial mounds. Alternative D-7 also routes guest and maintenance traffic through several residential neighborhoods.

Alternative E (Preferred Alternative)
Alternative E reduces the course layout footprint within the Kohler Property, minimizing environmental impacts to the extent practicable. This alternative relocates an approximately five-acre irrigation pond at the north portion of the Kohler Property out of the wetland complex near the Black River. The Alternative E entrance route and maintenance facility locations represent the least impact to wetlands, cultural resources, floodplain impacts, and avoid impacts to recreational areas of the State Park.

The Alternative E entrance route begins on Beach Park Lane at the existing State Park entrance, and travels north within portions of the east side of the Black River floodplain. The entrance route turns east at the Kohler Property and continues northeast. State Park recreational trails/areas are not impacted, as the entrance route and maintenance facility location would be located in an area of the park not typically utilized by the public. The maintenance facility is located east of the entrance route within the State Park property. Alternative E would require an approximate 4 acre easement from the State of Wisconsin for the entrance road and maintenance facility located within the south portion of State Park property.

2.5 CONSTRUCTION SEQUENCE AND SCHEDULE

2.5.1 Methods

Construction of the golf course is expected to begin with selective tree removal followed by phased construction of several holes simultaneously. It is expected that nine holes will be constructed and stabilized each year and that the overall construction process will take approximately 2 years.

Erosion and sediment control implemented during construction shall comply with the guidelines and requirements set forth in Wisc. Admin. Code Section NR 216, NR 151, and the WDNR Runoff Management Performance Standards. Technical Standards published by the WDNR shall also be utilized to implement the required performance standards. The methods and types of erosion control will be dependent on the location and type of work. All sediment control measures shall be adjusted to meet field conditions at the time of construction, and installed prior to any grading or ground disturbance.

2.6 EMISSIONS AND DISCHARGES

2.6.1 Air

Construction equipment including trucks, excavators, and bulldozers will be used to construct the Project. To reduce potential noise impact, construction equipment shall be operated in compliance with all applicable local, state and federal laws and regulations relating to noise

levels permissible within and adjacent to the Project. All motorized construction equipment will be required to have mufflers constructed in accordance with the equipment manufacturer's specifications or a system of equivalent noise reducing capacity. It will also be required that mufflers and exhaust systems be maintained in good working order, free from leaks or holes.

During normal operation of the golf course, daily traffic is expected to include passenger vehicles, and delivery trucks. Maintenance vehicles, both gas and diesel-fueled, will be used on the golf course.

A preliminary assessment of a typical golf course in the northeastern United States calculated 9,936.8 gallons of fuel (26.9 t Ce/yr) were used in an 8 month period for maintenance (Portness, 2008). In 2014, an 18-hole Kohler golf course used 4,133.6 gallons of gasoline and 3,422.95 gallons of diesel fuel for maintenance vehicles. Similar results are anticipated for the Project. Additionally, emissions and fuel use are minimized through an approximate 5 year capital equipment replacement program, which purchases new equipment with current air emission regulations and fuel use efficiencies. Bartlett et al. (2011), reported golf courses with a high percentage of trees would have a net carbon sequestration.

2.6.2 Hazardous Materials

The storage and handling of hazardous materials will be in accordance with all state and federal laws and regulations. Kohler does not anticipate the use or storage of materials that are not currently handled in the operation of its existing golf courses. Kohler has never been cited for environmental violations at its existing golf courses.

A fuel island located adjacent to the maintenance facility will consist of double lined, aboveground tanks with secondary containment. Safety bollards will be installed around the perimeter of the tanks and spill response kits readily available.

Pest management materials will be stored in an IPM control center. The IPM control center is a dedicated secure structure for the storage and mixing of pest control products. Spray equipment is stored and maintained within the control center and drainage occurs via a closed loop system with all materials being recycled and reused for their approved use per the product label.

2.7 MAPS, PLANS AND OTHER DESCRIPTIVE MATERIAL

The following materials are attached to this document in Appendix A:

Figure 1	Project Location and Topography
Figure 2	Project Location and Orthophotography
Figure 3	Plat Map
Figure 4	Zoning Map
Figure 5	Wisconsin Wetland Inventory and NRCS Soil Survey Data
Figure 6	Wetland Delineation and Floodplain Map
Figure 7	Plant Communities Map
Figure 8	Invasive Plant Species Map
Figure 9A	Project Alternative A
Figure 9B-1	Project Alternative B-1
Figure 9B-2	Project Alternative B-2
Figure 9C	Project Alternative C
Figure 9D	Project Alternatives D1-D7
Figure 9E	Project Alternative E (Preferred)

3.0 AFFECTED ENVIRONMENT

3.1 PHYSICAL ENVIRONMENT

3.1.1 Topography

The topography of the Kohler Property is nearly level to gently rolling with elevations ranging from approximately 582 feet above mean sea level (msl) to 595 feet above msl (Figure 1). The water level associated with Lake Michigan is approximately 580 feet above mean sea level (msl), and the base of the dunes is at 585 feet above msl and varies based on regional precipitation. The dune elevations rise from approximately 585 feet above msl to 595 feet above msl. Inland from the dunes, the land undulates between approximately 585 and 595 feet above msl. The Black River and its riparian wetlands are located approximately 584 feet above msl on the west limits of the Kohler Property.

3.1.2 Soils

The Kohler Property is dominated by sand and muck soils (Figure 5). Sand beaches along the lakeshore are bordered by sand dunes approximately 10 feet high. Soils along the Black River and riparian wetlands include Adrian, Palms and Houghton mucks. The remainder of the Property is mapped as Granby loamy fine sand, Oakville loamy fine sand, and Sisson very fine sandy loam. These three soil units have sandy B and C layers. The Adrian, Palms and Houghton mucks and Granby loamy fine sand units are rated hydric by the Natural Resources Conservation Service (NRCS), while the Oakville and Sisson units are not hydric.

3.1.3 Ground Water

A field study was completed to confirm the geological and hydrogeological characteristics of the Kohler Property. Ten wells were constructed at depths ranging from 25 to 500 feet. Based upon the well logs, dolomite bedrock begins approximately 120 feet below land surface (bls) and extends to a depth of approximately 500 feet bls. The bedrock is overlain with a confining layer of up to 90 feet of clay which is overlain by a layer of sand to the land surface.

Well monitoring and pump tests identified two separate aquifers on the Kohler Property. The shallow aquifer is located within the surficial sand layers between three feet bls to the underlying lacustrine clay. The shallow aquifer is hydraulically separated by the underlying clay deposit from the deep aquifer. The deep aquifer is located within the dolomite bedrock. The bedrock aquifer is artesian in nature and water elevations collected from wells screened within the bedrock aquifer were at the ground surface or, in some cases, overflowing the well casing.

While golf course irrigation is not anticipated to adversely impact the surrounding neighborhood, Kohler will develop a program with the Town of Wilson to mitigate potential impacts to adjacent private water supply wells, similar to the program that was successfully implemented at Whistling Straits.

3.1.4 Surface Water

The Project is located in the Black River watershed, a sub-watershed of the Sheboygan River watershed. The Black River originates near the Village of Oostburg, and flows east and north through agricultural land to the State Park and forms the western boundary of the Kohler Property. The Black River discharges into Lake Michigan within the City of Sheboygan approximately 1.25 miles north of the Kohler Property. In general, the bottom substrate consists

of sand, and the riparian buffer is mainly wetlands and woodlands. An unnamed tributary flows from South 12th Street in the northwest corner of the State Park property into the Black River.

Water quality in the Black River is poor (Galarneau, 2001). Primary land use in the watershed is agricultural lands. Residential areas are found in the upper and lower reaches near the Village of Oostburg and the City of Sheboygan. Polluted runoff and excessive sedimentation from agricultural land contributes to poor habitat for fish, macroinvertebrates and periphyton. In addition, the headwaters receive wastewater discharge from the Oostburg WWTP.

A water quality assessment was completed for a one-year period from October 2010 through September 2011 near Indian Mound Road; water samples were tested for nitrogen, conductivity, pH, dissolved oxygen, and total phosphorus (WDNR, 2014). Results were within a normal, expected range for flowing systems in Wisconsin except for total phosphorus. The current NR102 standard for total phosphorus in streams is a maximum of 75 ug/L. Water bodies with levels above this can be considered impaired. The sample results averaged 279 ug/L, over 3 times the maximum standard. The Black River is proposed to be listed on the 303(d) Impaired Waters List based on a degraded biological community due to high Total Phosphorus (WDNR, 2014b).

The Kohler Property is adjacent to Lake Michigan. The ordinary high water mark (OHWM) is currently defined as 582.7 feet above msl. The shoreline in this area consists of sand beaches and adjacent dunes.

3.1.5 Floodplain

The west limits of the Kohler Property follows the centerline of the Black River. The Black River floodplain has been evaluated for this Project from its confluence with Lake Michigan to Beach Park Road (the main entrance to Kohler-Andrae State Park). According to the Flood Insurance Study for Sheboygan County published by the Federal Emergency Management Agency (FEMA) in 2009, the Black River has a tributary area of 18.3 square miles and a peak discharge of 2,500 cubic feet per second during the 100-year flood event. The Black River flows from south to north and has a 100-year flood event elevation of 589.48 feet above msl at the southern Project limits and decreases to 588.65 above msl when it reaches the north Project limits (Figure 6).

Under normal conditions, this segment of the Black River is a narrow stream that is less than 25 feet wide and five feet deep. It has an approximate normal water surface elevation of 582.00 feet above msl and is bordered on both sides by a wide, level riparian wetland complex with a width that ranges from approximately 300 feet to 1,300 feet.

3.1.6 Air

According to the U.S. Environmental Protection Agency (EPA), Sheboygan County is identified as a "nonattainment" area for ground-level ozone. This area does not meet the EPA's 2008 8-hour ozone national air quality standard (75 parts per billion; EPA 2014). Sheboygan County meets all of the other national air quality standards, including sulfur dioxide, carbon dioxide, and particulates.

3.2 BIOLOGICAL ENVIRONMENT

The Kohler Property and State Park property contain a diverse assemblage of natural plant communities. Vegetation sampling efforts in 2014 recorded 288 plant species and mapped thirteen plant communities on the Kohler Property and State Park property (Stantec, 2014b). Figure 7 shows the plant community locations.

3.2.1 Terrestrial Habitat

The Kohler Property and State Park property contain several terrestrial plant communities. The beach, dune, and ridge and swale communities are found near the Lake Michigan lakeshore, while the northern dry forest/pine plantation, [redacted] northern dry forest and old field are found further inland.

The beach community occurs in the narrow band adjacent to Lake Michigan, and is comprised of two zones: the lower beach and the upper beach. The lower beach community is directly affected by wave action and is characterized by a lack of perennial vegetation cover, the presence of drift, and the occurrence of annuals, including [redacted] This community is affected by fluctuating lake levels and waves associated with storm events. The upper beach includes a zone elevated several feet above the beach that is stabilized by perennial vegetation, including grasses, willows (*Salix* spp.) and cottonwood (*Populus deltoides*).

The dune community is the dominant plant community along the lakeshore above the normal water level. This community is characterized by xeric conditions, little to no soil development, and substrate consisting of dry sand. The landforms consist of windblown dunes up to approximately 10 feet in height. The dunes are partially stabilized by herbaceous vegetation, including perennial grasses. Scattered shrubs include common and creeping junipers *(Juniperus spp.)*. Areas of unstabilized sand provide habitat for annual dune species, including [redacted] These populations are found along the Kohler Property lakeshore.

The forested dune community occurs on older stabilized dunes to the west of the dune community. The forested dunes are characterized by a relatively high cover of woody vegetation, including an understory of juniper species and perennial graminoids and forbs; and a canopy of trees dominated by red pine (*Pinus resinosa*). Soil development is poor, with the substrate consisting of sand. Notable plant species observed in this community include white camas (*Zigadenus elegans* subsp. *glaucus*) [redacted]

The majority of the Project west of the lakeshore and east of the Black River, consists of a northern forest complex on sandy upland. The topography is gently rolling, with longitudinal ridges running generally north-south, parallel to the lakeshore. This area has variable microtopography and vegetation ranging from dry mesic to mesic. The forest canopy is mature with approximately 75 to 100 percent cover on average. Numerous trees throughout the forest habitat have been blown over from the lakeshore winds and poor soil stability. Canopy dominants include white pine (*Pinus strobus*), red oak (*Quercus rubra*) and sugar maple (*Acer saccharum*). Understory vegetation is consistent with [redacted] groundlayer, with dominant species including Pennsylvania sedge (*Carex pensylvanica*) and clubmoss (*Lycopodium obscurum*). The forest canopy and vegetation integrity is higher toward the west, and the presence of weedy and invasive species, especially Japanese barberry (*Berberis thunbergii*) is more pronounced toward the east. The understory is open, with a lack of tree saplings, showing evidence of significant deer browse in this community. No rare species were noted within this community.

Degraded [redacted] occurs between the old field and degraded hardwood swamp on the State Park property. This community is an early successional forest resulting from recent natural establishment of pioneer forest species within an old field. Canopy dominants include black cherry (*Prunus serotina*), green ash (*Fraxinus pennsylvanica*), and

paper birch (*Betula papyrifera*). The understory is brushy with blackberry (*Rubus allegheniensis*) and invasive species such as bush honeysuckle (*Lonicera tartarica*), multiflora rose (*Rosa multiflora*), and common buckthorn (*Rhamnus cathartica*). No rare species were noted within this community.

The pine plantation occurs on an extensive area of the southwest portion of the Kohler Property, on dry uplands. The canopy is dominated by a mature stand of planted red pine, with a lesser component of white pine and Norway spruce (*Picea abies*). The groundlayer consists of [redacted] herbaceous species with areas of dense invasive Japanese Barberry which forms an impenetrable thorny tangle. Pockets of open canopy occur within the pine plantation that are consistent with dune or forested dune vegetation. No rare species were noted within this community.

A section of the southeast portion of the Kohler Property is composed of northern dry forest, on irregular, rolling terrain composed of stabilized sand dunes. The vegetation is characterized by an open tree canopy of less than 50 percent coverage, with canopy dominants including white pine and paper birch. The groundlayer is dominated by Pennsylvania sedge and common juniper. No rare species were noted within this community.

3.2.2 Aquatic Habitat

The Black River is classified as a limited forage fishery. Fish sampling done in 2000 downstream of CTH KK at river mile 7.5 identified six species of fish; all but one rated tolerant or very tolerant to poor water quality (Galarneau, 2001). Macroinvertebrate sampling upstream of CTH KK in 2010 found 26 species indicating poor water quality and a likelihood of significant organic pollution (WDNR, 2014a). Six native aquatic plant species were observed within the Black River channel, including typical emergent, floating and submerged species found throughout the region. There are no known occurrences of rare aquatic species associated with this segment of the Black River.

3.2.3 Wetland Habitat

Wetlands on both the Kohler Property and State Park property were delineated by Jeff Kraemer of Stantec, a WDNR-approved Assured Wetland Delineator. The delineation was completed in September and October of 2014. WDNR and USACE staff completed a field review and approved the assured delineation approach on October 17, 2014. The proposed access road through the State Park property south of the Kohler Property avoids the wetlands indicated by WWI (Figure 5) and as delineated by WDNR staff in 2013.

The delineation identified 81 wetlands on the Kohler and State Park property, ranging from small pocket wetlands to an extensive riparian wetland complex associated with the Black River (Figure 6). On the east limits of the Kohler Property, [redacted] and ridge and swale wetlands (5.24 acres) exist within pockets and swales between the dunes, parallel to the shoreline. On the west limits of the Kohler Property and extending onto the State Park property, an [redacted] along the Black River and tributary corridors (118.18 acres).

Wetland functional values were assessed using the Wisconsin WDNR Rapid Assessment Methodology for the nine wetland community types identified (Figure 7). Three wetland types were identified as having degraded conditions. Six wetland types were identified as high functional value. The wetland functional assessments are available in the Stantec Wetland Delineation Report (Stantec, 2015).

[redacted] occurs in concave swale landforms parallel to the lakeshore, located between elevated dunes. [redacted] are found in several locations in the southeast corner of the Kohler Property, approximately 200 feet from the Lake Michigan shoreline. This community type is characterized by substantial tree canopy, noteably by red pine. Species composition includes a mix of hydrophytic and non-hydrophytic vegetation. These wetlands are characterized by seasonally saturated soil, and normally dry out later in the growing season. [redacted]

The ridge and swale wetland community occurs in the upland forest complex, within swales parallel to Lake Michigan. These wetlands consist of a mix of wet meadow vegetation, with lesser components of forested wetland and [redacted] They include a variety of conditions from exposed to shaded, year-round to seasonal saturation, and within linear swales and isolated depressions. Dominant vegetation consists of bluejoint grass (*Calamagrostis canadensis*), stinging nettle (*Urtica dioica*), reed canary grass (*Phalaris arundinacea*), and tussock sedge (*Carex stricta*). Occasional green ash *(Fraxinus pennsylvanica)* trees occur within this wetland type. Areas of tag alder (*Alnus incana*) occur within this wetland type, forming pockets of [redacted] No rare species were noted within this community. [redacted]

The [redacted] forms extensive areas within the Black River floodplain and tributary stream. The community is characterized by the dominant shrub species, tag alder, and a perennially saturated substrate. Occasional trees of green and black ash (*Fraxinus nigra*) occur within the [redacted] but do not exceed 30 percent canopy. Common groundlayer species include forget me not (*Myosotis scorpioides)*, water horehound (*Lycopus uniflorus)*, and reed canary grass. Areas of degraded [redacted] occur on the northwest portion of the State Park property and are dominated by non-native and invasive herbaceous species including garlic mustard (*Alliaria petiolata*), dame's rocket (*Hesperis matronalis*), and forget-me-not. No rare species were noted within this community.

The wet meadow community occurs within the Black River floodplain, along the river banks, sometimes forming extensive corridors. The wet meadow consists of two types: high quality wet meadow consisting predominantly of native sedges and grasses; and degraded wet meadow that is dominated by reed canary grass. Common species within the wet meadow include bluejoint grass, lake sedge (*Carex lacustris*), broad-leaved cat-tail (*Typha latifolia*), swamp milkweed (*Asclepias incarnata*), water horehound, and wild mint (*Mentha arvensis*). Degraded wet meadow occurs along the Black River corridor and in wetland locations on the State Park property. This community is dominated by reed canary grass, and may have isolated trees and shrubs scattered within its mapped area. No rare species were noted within this community.

The hardwood swamp community forms extensive stands within the Black River floodplain, and also smaller areas within isolated depressions, and along tributary streams. The community is characterized by a tree canopy dominated by green ash and black ash. Trees in this community have been blown over from the lakeshore winds, high water table and poor soil stability. The understory varies from brushy to relatively open, with tag alder often forming a shrub layer. Common ground layer species include bottomland aster (*Symphyotrichum ontarionis),* water horehound, white avens (*Geum candense), and* bristly buttercup (*Ranunculus hispidus)*. Degraded hardwood swamp areas were also observed with a predominance of invasive shrub species and garlic mustard. No rare species were noted within this community.

The seepage slope hardwood swamp community occurs in narrow bands along the upslope edge of wetlands on either side of the Black River, in the transition zone from hardwood swamp

to [redacted] The community is characterized by a mature tree canopy of yellow birch (*Betula alleghaniensis*), green ash, beech (*Fagus grandifolia*), sugar maple, and red maple (*Acer rubrum*), and an open understory with lady fern (*Aspidium angustum*), skunk cabbage (*Symplocarpus foetidus*), bristly buttercup, woodreed (*Cinna arundinacea*), ostrich fern (*Matteuccia struthipteris*), and sensitive fern (*Onoclea sensibilis*). The community occurs on a gradually sloping landscape position, somewhat elevated above the Black River floodplain and is characterized by groundwater discharge. The trees in this community show morphological adaptations, such as buttresses and shallow roots, as a response to shallow water table. No rare species were noted within this community.

3.2.4 Fauna

Incidental wildlife observations were recorded during on-site biological survey events. Raptor and [redacted] surveys were also completed for this Project. Table 3-1 lists the wildlife observed, excluding threatened and endangered species which are summarized in biological survey reports provided under separate cover.

Table 3-1. 2014 Wildlife Observations on the Kohler and State Park Properties

SCIENTIFIC NAME	COMMON NAME
Pseudacris crucifer	Spring Peeper
Lithobates sylvaticus	Wood frog
Ambystoma laterale	Blue-spotted salamander
Plethodon cinereus	Eastern red-backed salamander
Chelydra serpentina	Snapping turtle
Thamnophis sirtalis	Common garter snake
Odocoileus virginianus	White-tailed deer
[redacted]	[redacted]
Dryocopus pileatus	Pileated woodpecker
Poecile atricapillus	Black-capped chickadee
Strix varia	Barred owl
Accipiter cooperii	Cooper's hawk
Buteo jamaicensis	Red-tailed hawk
Bubo virginianus	Great Horned Owl

The 2013 Christmas Bird Count for Sheboygan noted 50 species, and the Wisconsin Breeding Bird Atlas lists 41 probable and 15 confirmed species for the Sheboygan South survey area.

The amphibian species observed are typical woodland dwellers. The red-backed salamander (*Plethodon cinereus*) uses wooded upland habitats whereas the blue-spotted salamander (*Ambystoma laterale*), the spring peeper (*Pseudacris crucifer*), and the wood frog (*Lithobates sylvaticus*) depend on wetlands for breeding and wooded uplands for foraging and hibernation.

3.2.5 Threatened, Endangered, and Rare Species

Kohler submitted an Endangered Resources Review request to WDNR on August 26, 2014, and to the USFWS on October 3, 2014. Several species of concern were identified as potentially occurring on the Kohler Property and State Park property. Extensive surveys for species of

concern were conducted on the property between 2011 and 2014. When species of concern were observed on-site, their locations were mapped using a sub-meter accuracy Global Positioning System (GPS) device. Additional results from the [redacted] and plant surveys are described in the Stantec Technical Memo Botanical Survey (Stantec, 2014b) and the Stantec Technical Memo [redacted] Surveys (Stantec, 2014c).

The surveys encountered no evidence of active or historical [redacted] on the Property. Surveys encountered the presence of the [redacted] in areas outside of proposed development along the Lake Michigan shoreline. The avoidance of the [redacted] and its habitat will also protect [redacted] which were not observed but are known to occupy similar habitat.

Populations of [redacted] were observed on the Kohler Property with the vast majority occurring in areas outside of proposed development. The potential for minor impacts from the project exists. Although State threatened, endangered, and special concern plants are not protected on private property, Kohler will work with the WDNR to develop mitigation, such as transplanting individual plants to suitable habitat or establishing new populations in suitable areas.

3.2.6 Invasive Plant Species

Invasive plant species, including species listed as Restricted under Wisconsin's Invasive Species Rule (NR 40) were found throughout the Kohler Property and State Park property, as shown on Figure 8. Japanese barberry was widespread in terrestrial habitats, ranging from 70 percent cover in the forests near the southern border of the Properties, to 5 to 10 percent cover throughout the majority of the [redacted] forest on the Kohler Property. Reed canary grass was widespread throughout the degraded wet meadow and [redacted] associated with the Black River, ranging from 5 to 20 percent cover. Multiflora rose was found throughout the degraded hardwood swamp on the State Park property. Japanese knotweed (*Polygonum cuspidatum*) was found in a localized area near the northwest corner of the State Park property. Other invasive species included bush honeysuckle, garlic mustard, and dame's rocket. Purple loosestrife (*Lythrum salicaria*) was not observed.

3.3 CULTURAL ENVIRONMENT

3.3.1 Land Use

The Kohler Property is undeveloped and has been privately owned by Kohler for more than 75 years. The Property's land use is governed by the Town of Wilson. The Kohler Property and the State Park property are zoned P-1 Parks and Recreation. Golf courses are allowable in the P-1 zoning as conditional uses, and an application for a conditional use permit has been submitted to the Town of Wilson. The neighborhoods to the north and west are zoned R-1 Single Family Residential, while the properties to the southwest are zoned A-2 Agricultural. The State Park property to the south is also zoned P-1 Parks and Recreation (Figure 4).

Kohler originally acquired a total of approximately 468 acres in the vicinity during the 1930's. In 1965, 221 acres were donated by Kohler to the State of Wisconsin for the creation of the John Michael Kohler State Park. The remaining 247-acre parcel was also leased to the State in 1965 for a 10-year period.

The State Park borders the Kohler Property to the south and west (Figure 3). The Kohler Park Dunes State Natural Area is contained within the State Park, bordering the lakeshore.

Another 18-hole public golf course, Riverdale Country Club, is located approximately one-half mile west of the Kohler Property, on the west side of 12th Street. Riverdale has co-existed within one-mile of Lake Michigan, along a tributary to the Black River and surrounded by increasing numbers of residential and agricultural neighbors since its opening in 1929.

The Town of Wilson owns a parcel of conservation property adjacent to the northern boundary of the Kohler Property. The Robert Balzer and Ruth Balzer–Schmitt Wilderness Park is a mesic forest dominated by white pine, with secondary dominants of oaks, maples, birch and beech.

Kohler is requesting an easement from the State of Wisconsin for approximately 4 acres of State Park property adjacent to the existing State Park entrance road and maintenance facility. This area of the State Park property is not typically utilized by the public and, therefore, avoids impacts to recreational areas of the State Park.

Kohler has had discussions with representatives of the adjacent Timberlake Subdivision regarding an easement that would allow pedestrian lake access. In connection with developing the golf course, Kohler would allow such access in a manner that does not interfere with the golf course operation.

3.3.2 Traffic

A traffic study was completed to determine the traffic impacts of the proposed golf course (Excel, 2014b). The State of Wisconsin rates the functionality of intersection movements based upon their Level of Service (LOS). In 2012, the State Park had the fifth highest number of visitors (418,373) of all the Wisconsin State Parks (State of Wisconsin, 2013). The LOS for an intersection or traffic movement is calculated in a range from A to F. LOS D is the minimum acceptable value.

The traffic study concludes that all proposed traffic movements at the intersection of CTH V and Beach Park Road will operate at a LOS B or better. The study also shows that all movements at the proposed golf course entrance location to Beach Park Road will operate at LOS A. In both cases, the LOS significantly exceeds the minimum acceptable value. The Level of Service calculations were based upon the existing road intersection configuration. Therefore, no significant improvements were required as a result of the proposed golf course traffic.

To improve circulation, Kohler is proposing to modify the State Park entrance area by adding a roundabout. Two lanes would be dedicated for entry to State Park visitors while golf course and exiting State Park traffic would be routed through the roundabout. Kohler would fund the entire cost of the enhancements.

3.3.3 Socio-economic

Recreation and Tourism

In 2000, Sheboygan County was ranked 7th of golf destinations in the world. This is largely due to the four golf courses developed by Kohler and designed by Pete Dye – Whistling Straits and Blackwolf Run. Blackwolf Run consists of the River Course and the Meadow Valleys Course.

Whistling Straits consists of the Straits Course and the Irish Course. All four courses are ranked in the top 100 public golf course list in Golf Digest Magazine's 2015/2016 issue (Whitten, 2015). The Straits course was ranked 4th in the U.S. An estimated 40,000 visitors play 100,000 rounds in Sheboygan County each year (SB Friedman, 2015).

Sheboygan County contains multiple trail systems with various uses including: hiking, cycling, skiing, and snowmobiling. The county itself maintains about 228 miles of public snowmobiling Trails (Sheboygan County, 2015). Other popular trails include the Old Plank Road Trail, Interurban trail, and the newly constructed Shoreland 400 Rail Trail. The Project site itself contains multiple primitive trails which historically have been used by area residents. These trails have provided recreational opportunities for many years but are currently restricted from public use.

Lake Michigan and a number of inland lakes and county parks located within Sheboygan County provide a variety of recreational activities such as: fishing, boating, bird watching, swimming, canoeing, and kayaking. While the county only maintains six public access areas, there are a number of access areas maintained by other jurisdictions (Sheboygan County, 2015). Lake Michigan provides significant tourist opportunities mostly in the form of sportfishing. Lake Michigan is a prime destination for open water trout and salmon fishing. Sheboygan County hosts 10 charter fishing companies.

In addition to the lakes, Sheboygan County contains parks and natural areas such as Gerber Lake Wildlife Area, Esslingen Park, Roy Sebald Sheboygan River Natural Area, and Amsterdam Dunes. Amsterdam Dunes includes a 333 acre preserve along Lake Michigan and is also being developed as a wetland mitigation bank by Sheboygan County. These parks and natural areas along with the State Park provide the community and tourists with significant outdoor opportunities.

Employment, Labor Force, and Income

According to the 2010 census (U.S. Census, 2010), the population of employed civilian citizens over the age of 16 in the Town of Wilson, Wisconsin was 1,797 (Table 3-3). Median household income is also greater in Wilson than Wisconsin or the U.S. ($83,311, $52,413, and $53,046 respectively). Employment in the Town of Wilson, City of Sheboygan, and Sheboygan County is predominantly in the manufacturing sector (greater than 30 percent). Educational and health care sectors employ greater than 15 percent of the workforce followed by the retail sector (approximately 10 percent).

Table 3-3. Employment and Income Comparison (2010)

LOCATION	POPULATION	CIVILIAN LABOR FORCE	MEDIAN HOUSEHOLD INCOME[1]
Town of Wilson	3,330	1,797	$83,311
City of Sheboygan	49,288	26,873	$43,533
Sheboygan County	115,507	28,131	$52,920
Wisconsin	5,686,986	2,872,104	$52,413
United States	308,745,538	138,668,798	$53,046

[1]2010 Census data not available 2009-2013 American Community Survey 5-year estimates used for comparison

Source: U.S. Census Bureau 2010 and 2013 American Community Survey

3.3.4 Historical and Archaeological

An archaeological study began on the Kohler Property in Summer of 2014 including a visual inspection, shovel tests (10 meter interval), geomorphology investigations, and test excavation pits.

Burial mounds are known to exist near the northwest corner of the Kohler Property and therefore golf course development in this area has been avoided. No additional human remains or burial mounds were discovered during the 2014 survey.

The archaeological study is scheduled to resume in spring of 2015 dependent on weather. Consultation meetings with the WDNR, USACE, and the SHPO are planned upon completion of the study.

3.3.5 Visual and Aesthetic

The Kohler Property is dominated by two scenery types within the gently rolling topography: closed canopy forest and the dunes/lakeshore area. The dunes are vegetated with a fringe of tall trees, ground-hugging junipers, and low dune grasses, allowing a clear, long view of Lake Michigan. The dunes and the lakeshore include areas of non-vegetated and partially vegetated sand. The forest transitions to a pine plantation on the south limits of the Kohler Property, and into an [redacted] along the Black River which is dominated by tall shrubs and thick herbaceous vegetation.

The Kohler Property is undeveloped and does not contain structures. Adjacent buildings and fencing, constructed by neighboring property owners along the north and south property lines, are visible on the Property's perimeter. Access on the property is limited to private walking trails.

The lakeshore portion of the Kohler Property has forests and dune areas. The area is primarily visible from Lake Michigan and from the adjoining residential and State Park property. The Property has limited visibility from the west.

Kohler's golf course design philosophy is not to compromise the property's natural features but instead incorporate them with minimalist design intended to highlight the natural contours, native flora and fauna, and maintain the natural lakeshore and dune communities. Development of a golf course will preserve enhanced natural vistas, free from significant structures, for the foreseeable future.

3.4 OTHER SPECIAL RESOURCES

Coastal management in the Great Lakes region is a Federal-State partnership established by the 1972 Coastal Zone Management Act (CZMA). Administered by the National Oceanic and Atmospheric Administration (NOAA), the program provides States financial and technical assistance to develop and implement their own coastal zone management programs. The Wisconsin Coastal Management Program is administered by the Department of Administration (DOA), Bureau of Intergovernmental Relations. According to NOAA, Wisconsin's coastal zone consists of 15 lakefront counties and approximately 820 linear miles of shoreline.

According to the WDNR, the Sheboygan County lakeshore is part of the Central Lake Michigan Coastal Ecological Landscape which extends from Milwaukee County north to Door County. The Kohler Park Dunes State Natural Area, located within the State Park property, is part of this regional landscape. The State Natural area consists of a linear forest zone along Lake Michigan that contains a mixed pine-hardwoods dune forest community dominated with white pine, red

oak, white birch, beech, and sugar maple. This is the largest dune complex on Wisconsin's western shore of Lake Michigan and provides habitat for species associated with the Great Lakes shorelines.

The Kohler Property is within the Harrington Beach-Kohler-Andrae Lakeshore Migration Corridor, an important bird area (IBA). This migration corridor extends from Sheboygan south to Port Washington in Ozaukee County. It encompasses Harrington Beach and Kohler-Andrae State Parks, Cedar Grove Hawk Research Station State Natural Area, and the Forest Beach Migratory Preserve. This IBA contains a variety of habitats including open Lake Michigan waters, sand beach, cool-season grasslands, upland deciduous forest, lowland forest of white cedar and black ash, and shrublands.

Many birds utilize this IBA as migratory stopover and wintering habitat. In winter the open waters host large rafts of diving ducks such as red-breasted merganser (*Mergus serrator*), bufflehead (*Bucephala albeola*), and common goldeneye (*Bucephala clangula)*, as well as loons (*Gavia* spp.) and grebes *(Podiceps spp.)*. Shorebirds are found on the sandy beaches and a wide variety of landbirds use the woodlands and shrubby areas in both spring and fall. Short-eared owls (*Asio flammeus*) are found occasionally in the grasslands during the winter. Raptors migrate along the lakeshore in large numbers (Wisconsin Bird Conservation Initiative, 2014).

3.5 HAZARDOUS MATERIALS

The WDNR Bureau of Remediation and Redevelopment Tracking System (BRRTS) does not identify any sites on the Kohler or State Park Properties. The nearest identified releases are approximately one mile to the north and west and are both shown to be remediated and closed.

4.0 ENVIRONMENTAL CONSEQUENCES

4.1 PHYSICAL

4.1.1 Topography

The existing topography of the Kohler Property will be retained as much as possible. The Project will not compromise the Property's natural features but instead integrate the existing dunes and natural contours into the course design. Surface water drainage patterns are not anticipated to be altered significantly during construction. Due to the permeable sandy soils, storm water runoff will be managed near the source within biofiltration areas.

4.1.2 Soils

Native soil on the Kohler Property is well suited for construction of a golf course. The native sand requires minimum site grading and overall disturbance will be minimized to the narrow fairway and rough playing areas in contrast to mass grading and importing sand to improve drainage typically required for courses constructed on less permeable soil types. The site construction is intended to balance material use and off-site disposal is not anticipated. Imported soil may include topsoil for turf areas and specialized soil mix for green and tee construction. The remaining trees and vegetation will be protected from soil compaction ensuring they become part of the final golf course design and experience.

4.1.3 Ground Water

As further described in Section 3.1.3, a ground water study was completed to determine the potential impact associated with providing irrigation for the golf course on the neighboring residential wells (Stantec, 2014a). The planned irrigation requirements were based upon the 18-hole historical irrigation volumes used at Kohler's Blackwolf Run and Whistling Straits Golf Course. These courses were chosen for comparison because of their shared conditions and proximity to the Kohler Property. Based upon the historical irrigation information, irrigation system flow rates up to 1,500 (gpm) and long term average volumes of 15,000,000 to 25,000,000 gallons per year can be anticipated. The average pumping volume during the peak months of the last seven years at the Kohler golf courses was 190,000 gallons per day (gpd) per 18-holes, with a peak of 334,000 gallons gpd during the driest months of the 2012 drought. These values were used to analyze the anticipated impact of the irrigation system.

To complete the study, two pump tests were completed to determine the regional ground water elevation drawdown associated with pumping from the bedrock aquifer. The tests were completed utilizing a well located in the southeast corner of the Kohler Property as a pumping well and by monitoring nine additional wells located at varying distances from the pumping well. The pumping well is an 8-inch diameter well with a practical pumping limit of 450 – 500 gpm. Therefore, a 72-hour constant head rate pump test was completed at 450 gpm along with a step drawdown test.

Based upon the pumping test and analysis, it was determined that the drawdown associated with a 72-hour pumping test at 450 gpm does not exceed the allowable drawdown typically provided for in the neighboring wells.

The impact associated with pumping during an average year or a drought year similar to 2012 at 450 gpm is not anticipated to adversely impact the surrounding neighborhood.

The regional wetlands are not anticipated to be impacted by the drawdown associated with the irrigation well. Similarly, any domestic wells installed within the shallow aquifer (such as sand point wells) are not anticipated to be impacted.

In the event that an adjacent well was constructed with less than the typical allowable drawdown, it may become necessary to lower the pump elevation within the existing well casing to provide additional allowable drawdown. Due to the artesian nature of the aquifer and the depth necessary to construct a well within the bedrock aquifer, this is considered a minor modification that would not necessitate additional drilling. Kohler will develop a program with the Town of Wilson to mitigate potential impacts to adjacent private water supply wells. A similar program was successfully implemented at Whistling Straits.

4.1.4 Surface Water

Due to the minimal amount of impervious surface associated with a golf course, along with a commitment to incorporate the existing topographic features and infiltrate 100 percent of the storm water runoff, all as further described in Section 3.1.4 above, there is not expected to be an impact to surface water.

The Project will create a new surface water feature, an approximately 5-acre irrigation pond supplied with water from the bedrock aquifer. The pond will be lined to prevent loss to the sandy soils. This pond is considered a beneficial feature to wildlife and aesthetics, similar to constructed ponds on other Kohler golf courses. The design will consider BMPs to create and protect surface water quality in the pond while fulfilling the role of irrigation storage.

The storm water detention basins may temporarily hold water during large storm events, but will be designed to infiltrate or drain quickly, so no new permanent surface water features will be created as a result of storm water management.

There will be no surface water impacts to the Black River or Lake Michigan, as described in Section 4.2.2.

4.1.5 Floodplain

A floodplain study has been completed to assess the potential impact to the Black River floodplain elevation due to the several small areas of construction for the golf course and the entrance road. The floodplain study was completed using HEC-RAS modeling software. Based upon the analysis, localized nominal increases in the floodplain are expected on the Kohler Property and the State Park property. Based upon the study, floodplain impacts are not expected to affect adjacent properties. The impact varies along the length of the Black River, as detailed in Table 4-1.

Table 4-1. Project Black River Floodplain Changes

LOCATION	EXISTING FLOODPLAIN ELEVATION (FT)	PROPOSED FLOODPLAIN ELEVATION (FT)	DIFFERENCE (FT)
Beach Park Road	589.82	589.83	+.01
Southern Lot Line	589.48	589.49	+.01
Northern Lot Line	588.65	588.65	+.00

4.1.6 Storm Water

A storm water management plan will be developed for the golf course to meet the Town of Wilson and WDNR storm water requirements as described in Section 2.3.8. In addition to meeting the quantitative runoff requirements, the following procedures will be followed:

- Impervious surfaces will be kept out of protective areas to the maximum extent practicable, generally defined as 75 feet from lakes and 50 feet from wetlands.
- Storm water runoff from parking areas and roadways will be treated for TSS removal prior to infiltration.
- Storm water runoff from fueling and maintenance areas will not be infiltrated. These areas shall have BMPs designed, installed, and maintained to reduce petroleum in the runoff.
- A separation of five feet will be provided from the bottom of any infiltration device collecting storm water from a roadway or parking lot to the seasonal high ground water elevation.
- The Project will not result in a direct discharge of storm water to Lake Michigan, the Black River, or wetlands.
- A separation of one foot will be provided from the bottom of any infiltration device collecting storm water from a roof top to the seasonal high ground water elevation.

Upon completion, the following operations and maintenance procedures will be implemented (Table 4-2).

Table 4-2. Storm Water Operations and Maintenance Procedures

STORM WATER FACILITY	TYPE OF ACTION
1. Lawn and Landscaped Areas	All lawn areas shall be kept clear of any materials that block the flow of storm water. Rills and small gullies shall immediately be filled and reestablished with native vegetation.
2. Swales	All swales showing signs of erosion, scour, or channelization shall be repaired, reinforced, and re-vegetated immediately. All swales shall be repaired to the original plan requirements.
3. Filter Strips (Within Existing Soils)	The area directly over the infiltration areas draining impervious areas shall be regularly inspected for any type of settling or clogging that may take place. Any failed areas showing signs of degradation shall be restored to the original plan requirements.
4. Biofiltration Basin	During the first 2-3 months of establishment, the basin will require, at a minimum, watering on a weekly basis depending on weather. Visual inspections of the basin shall be performed annually at a minimum. Maintenance shall be required when standing water occurs 3 days after a rain event. Maintenance shall consist of the removal of sediment, and a 2 foot undercut. Replace the undercut material with 1/3 topsoil, 1/3 compost, and 1/3 sand. Restoration of plant material shall be by plugging 1 native perennial per square foot, not by seeding. In the spring of each growing year, dead vegetation shall be removed to allow for new growth. At least 2 times during the growing season, the basin will be weeded and additional hardwood mulch shall be added as needed to assist in weed suppression.
5. Catch Basin/Curb Inlet Grates	The grate openings to these structures must be cleared periodically of any clogging or the blocking of storm water flow from getting into the storm water conveyance system of any kind.
6. Catch Basin/Curb Inlet Sumps	Sumps shall visually be inspected every 3 months. Siltation shall be removed and disposed of offsite when the sump depth is within 3 inches of the outlet pipe invert elevation. The removal of siltation should occur a minimum of once per year.
7. Oil/Grease Filter Insert	Maintenance shall be in accordance with the manufacturer's guidelines, which at a minimum shall be 3 inspections per year, 3 cleanings per year, and 1 filter replacement per year. More specifically, debris shall be removed and the filter medium shall be replaced any time the filter medium appears to be 50 percent coated with oil and grease.
8. Record of Maintenance	The operation and maintenance plan shall remain onsite and be available for inspection when requested by Town of Wilson or WDNR. When requested, the owner shall make available for inspection all maintenance records to the department or agent for the life of the system.

Implementation of the measures described in this section are expected to minimize impacts associated with storm water runoff.

4.1.7 Domestic Wastewater

Domestic wastewater from the club house, cart building, maintenance building and rest stations will be provided via private on-site wastewater treatment systems (POWTS). Based upon soil tests completed, the native sandy soils are suitable for conventional septic systems. The systems will be located adjacent to each structure they serve in locations that topographically provide sufficient separation between the bottom of the system and the shallow groundwater table. There is no adverse impact anticipated as a result of these systems.

4.1.8 Air

The Property is located in a nonattainment area and operation of the golf course is not expected to significantly contribute to long-term increases in air emissions. There is not expected to be a concentration of vehicles associated with daily golf course operations and minimal vehicles will be using the Property during winter months when the golf course is closed.

The Project is expected to have intermittent and temporary air emissions during construction. In the long term, there will be a negligible increase in emissions from staff, guests, delivery and maintenance vehicles. Projected traffic volumes are not expected to impact air quality.

Because the Project is in the planning phases, projected carbon sequestration has not been determined. Selective removal of trees on the Kohler Property will allow the Kohler Property to continue to sequester carbon. Research shows that turfgrass also sequesters carbon (USDA 2003). Carbon equivalent emissions from vehicle fuel use, nitrogen fertilizer manufacture and application, and irrigation pumping lower the carbon sequestration potential of the Project. The carbon balance can be shifted toward net sequestration by retaining woody and native vegetation and investment in course-wide energy efficiency technologies.

4.2 BIOLOGICAL

4.2.1 Terrestrial

Kohler's investigation of terrestrial habit is outlined in Section 3.2.1 above. Construction and operation of the golf course will affect approximately 50 percent of the existing upland plant communities, including [redacted] pine plantation, and forested [redacted] communities. The existing habitat will be replaced with turfgrass and other site features including an approximately 5 acre irrigation pond which will provide open water habitat that does not currently exist.

The remaining 50 percent of the existing upland habitat will be preserved and remain located predominantly between golf course features, increasing forest edge habitat. The native flora and fauna are essential features of the golf course design and playing experience.

A secondary effect of tree removal may favor encroachment of invasive plant species. Potential indirect impacts may occur from importing soil from off-site sources possibly transporting invasive species. To maintain native habitat, invasive species will be monitored and managed through invasive species control efforts that will restore the remaining habitat to its natural state while likely increasing the biodiversity in these areas.

Potential indirect impacts to terrestrial habitat during operation of the golf course may include foot traffic from golfers. Signage will be incorporated into site operations to minimize traffic in sensitive areas.

4.2.2 Aquatic

There are no anticipated environmental impacts to aquatic resources. The Black River will be buffered from the golf course by the expansive riparian wetlands, and there will be no surface water withdrawals for irrigation. Because of high soil permeability, surface water runoff inputs to surface waters will be minimized.

4.2.3 Wetlands

4.2.3.1 Impacts of Alternative Designs

Kohler's wetland delineation process is described in Section 3.2 above. During project planning, four conceptual course layout and eight entrance alternatives were identified, characterized and evaluated. The course layouts alternatives were considered in order to identify a preferred course design and minimize environmental impacts. The alternatives also include alternate maintenance building locations. The preferred alternative (Alternative E) has the least amount of wetland impacts of the twelve alternatives, minimizes impacts as much as practicable, and completely avoids impacts to recreational areas of the park and burial sites.

Eight entrance routes were investigated to identify a preferred route for guest and operational traffic. All entrance route options are constructible and viable, however the presence of environmental encumbrances and current use result in certain routes being more desirable than others.

Eight maintenance building locations were considered in co-locations with the entrance routes.

Alternative drawings with course layout, entrance routes, and maintenance building locations are provided in Figures 9A-E. The following provides a summary of the consequences and impacts for each alternative design considered for this Project:

Consequences of Alternative A:

The Alternative A proposes a course layout design that contains a footprint within the existing Kohler Property and additional expansion on the State Park property to the south. Alternative A impacts approximately 14 total acres of wetlands including portions of the Black River floodplain and one stream crossing of the Black River. This alternative would require an easement from the State of Wisconsin for the entrance route within the west portion of the State Park and use of State Park property to the south.

The Alternative A course layout design and proposed location of the irrigation pond expands to the northwest within close proximity to the burial mounds and within the Black River floodplain. Hole design near the west extent of the Kohler Property are located within or close proximity to the Black River floodplain. Hole design to the south expands onto State Park property.

The entrance route originates on South 12th Street, and traverses the southern part of the west State Park property. The entrance route crosses several wetland communities before bridging across the Black River onto Kohler Property. The entrance route continues east crossing forested dune before turning northeast and ending at the proposed parking area.

The maintenance building is located in the west central portion of the Kohler Property within a [redacted] and northern dry forest (pine plantation). The proposed maintenance building would result in no wetland impacts.

Based on the footprints of the entrance route, course design, maintenance facility and irrigation pond, Alternative A impacts approximately 14 acres of wetland including portions of the Black

River floodplain. The types of wetland that may potentially be impacted include; [redacted] wet meadow, degraded wet meadow, hardwood swamp, degraded hardwood swamp, hardwood swamp/forested seep, ridge and swale wetland and [redacted] Alternative A is less desirable due to the amounts of wetland impacts and the amount of State Park property needed for the design.

Consequences of Alternative B-1:

The Alternative B-1 proposes a course layout design that contains the largest proposed footprint within the existing Kohler Property impacting the greatest amount of wetlands (approximately 25 total acres), including portions of the Black River floodplain and one stream crossing of the Black River. This alternative would require an easement from the State of Wisconsin for the entrance route within the west portion of the State Park property.

Alternative B-1 course layout design and proposed location of the irrigation pond expands to the northwest within close proximity to the burial mounds and within the Black River floodplain. Holes near the west extent of the Kohler Property are located within and close proximity to the Black River floodplain.

The entrance route originates on South 12th Street, and traverses the central part of the west State Park property. The entrance route crosses old field and several wetland communities before bridging across the Black River. The entrance route continues east onto Kohler Property, crosses the ridge and swale wetland before ending at the parking area.

The proposed maintenance building is located within a degraded [redacted] and degraded hardwood swamp.

Based on the footprints of the entrance route, course design, maintenance facility and irrigation pond, Alternative B-1 impacts the largest amount of wetlands (approximately 26 acres), including portions of the Black River floodplain. The types of wetland that may potentially be impacted include; [redacted] wet meadow, degraded wet meadow, hardwood swamp, degraded hardwood swamp, hardwood swamp/forested seep, ridge and swale wetland and [redacted] Alternative B-1 is less desirable due to the amount of wetland impacts and because it would bisect the State Park property and impact the existing recreational trails, creating road/trail crossings.

Consequences of Alternative B-2:

The Alternative B-2 proposes the same course layout design and entrance route as Alternative B-1. The only alterations to Alternative B-2 are the removal of the mound system surrounding the maintenance facility and relocating the turf nursery onto Kohler Property. Alternative B-2 slightly reduces wetland impacts to approximately 24 total acres, including portions of the Black River floodplain. This alternative would require an easement from the State of Wisconsin for the entrance route within the west portion of the State Park property.

Alternative B-2 course layout design and proposed location of the irrigation pond expands to the northwest within close proximity to the burial mounds and within the Black River floodplain. Hole design near the west extent of the Kohler Property are located within and close proximity to the Black River floodplain.

The entrance route originates on South 12th Street, and traverses the central part of the State Park property. The entrance route crosses old field and several wetland communities, as well as recreational trails, before bridging across the Black River. The entrance route continues east onto Kohler Property, crosses ridge and swale wetland before ending at the parking area.

The proposed maintenance building is located in the west central portion of the State Park property located within a degraded [redacted] and degraded hardwood swamp.

Based on the footprints of the entrance route, course design, maintenance facility and irrigation pond, Alternative B-2 impacts approximately 24 total acres of wetlands (including portions of the Black River floodplain). The types of wetland that may potentially be impacted include; [redacted] wet meadow, degraded wet meadow, hardwood swamp, degraded hardwood swamp, hardwood swamp/forested seep, ridge and swale wetland and [redacted] Alternative B-2 is less desirable due to the amount of wetland impacts and because it would bisect the State Park property and impact the existing recreational trails, creating road/trail crossings.

Consequences of Alternative C:

The Alternative C proposes a course layout design that reduces the footprint within the existing Kohler Property, minimizing wetland impacts. Alternative C impacts approximately 16 total acres of wetlands, including portions of the Black River floodplain, and one stream crossing of the Black River. This alternative would require an easement from the State of Wisconsin for the entrance route within the State Park property.

The Alternative C course layout design relocates the hole located in the northwest corner of the Kohler Property and repositions it further south away from the burial mounds. Holes located within the beach adjacent to Lake Michigan are moved further to the west, [redacted]. Holes located to the west adjacent to the Black River floodplain are moved further east, minimizing impacts within the Black River floodplain. Holes designed within the forested dune are relocated, minimizing impacts to sensitive habitats.

This alternative places the entrance route in the same location as Alternatives B-1 and B-2. The entrance route originates on South 12th Street, and traverses the central part of the west State Park property. The entrance route crosses old field and several wetland communities as well as recreational trails before bridging across the Black River. The entrance route continues east onto Kohler Property, crosses ridge and swale wetland before ending at the parking area.

The proposed maintenance building is located in the west central portion of the State Park property located within a degraded [redacted] and degraded hardwood swamp. The location of the maintenance building is the same as Alternative B-2.

Based on the footprints of the entrance route, course design, and maintenance facility Alternative C minimizes wetland impacts, totaling approximately 16 acres (including portions of the Black River floodplain). The types of wetland that may potentially be impacted include; [redacted] hardwood swamp, degraded hardwood swamp, hardwood swamp/forested seep, ridge and swale wetland and [redacted] Alternative C is less desirable due to the amount of wetland impacts and because it would bisect the State Park property and impact the existing recreational trails, creating road/trail crossings.

Consequences of Alternative D-1:

The Alternative D-1 proposes a course layout with wetland impacts totaling approximately 18 acres, including portions of the Black River floodplain. This alternative would require an easement from the State of Wisconsin for the entrance route within the west portion of the State Park property.

The entrance route remains on South 12th Street, and traverses the southern part of the west State Park property. The entrance route crosses uplands and several wetland communities as well as recreational trails before bridging across the Black River. The entrance route continues east onto Kohler Property, crosses ridge and swale wetland before ending at the parking area.

The proposed maintenance building is located in the southwestern portion of the State Park property south of the entrance route. The proposed maintenance building is located within an [redacted] wet meadow, degraded wet meadow, hardwood swamp and degraded hardwood swamp.

Based on the footprints of the entrance route, course design, and maintenance facility Alternative D-1 contains wetland impacts totaling approximately 18 acres (including portions of the Black River floodplain). The types of wetland that may potentially be impacted include; [redacted], wet meadow, degraded wet meadow, hardwood swamp, degraded hardwood swamp, hardwood swamp/forested seep, ridge and swale wetland and [redacted] Alternative D-1 is less desirable due to the amount of wetland impacts.

Consequences of Alternative D-2:

The Alternative D-2 proposes a course layout design with wetland impacts totaling approximately 14 acres including portions of the Black River floodplain. This alternative would require an easement from the State of Wisconsin for the entrance route within the State Park property.

The entrance route begins on South 12th Street on the north end of the State Park property, traverses through uplands, recreational trails and several wetland communities, and bridges the Black River near the north-south midline of the Kohler Property. The entrance route continues east onto Kohler Property, crosses wetlands before ending at the parking area.

The proposed maintenance building is located in the northwestern portion of the State Park property south of the entrance route. The proposed maintenance building is located within an old field with the entrance road crossing a degraded wet meadow.

Based on the footprints of the entrance route, course design, and maintenance facility Alternative D-2 contains impacts totaling approximately 14 acres (including portions of the Black River floodplain). The types of wetlands that may potentially be impacted include; [redacted] degraded [redacted] wet meadow, degraded wet meadow, hardwood swamp, degraded hardwood swamp, hardwood swamp/forested seep, ridge and swale wetland and [redacted] Alternative D-2 is less desirable due to the impacts to the recreational trails on State Park property and the discovery of pre-historic and historic artifacts along the route.

Consequences of Alternative D-3:

The Alternative D-3 proposes a course layout design with wetland impacts totaling approximately 15 acres including portions of the Black River floodplain. This alternative would require an easement from the State of Wisconsin for the entrance route within the State Park property.

The entrance route begins at the intersection of Stahl Road and South 12th Street, in a Kohler owned residential development immediately north of the State Park property; continues straight east crossing the Black River, and then runs south adjacent the Burial mounds to the approximate midline of the Kohler Property. This entrance route traverses uplands and several

wetland communities, continues east onto Kohler Property, and crosses ridge and swale wetland before ending at the parking area.

The proposed maintenance building is located in the north portion of the State Park property south of the entrance route within a pine plantation. The proposed maintenance building would result in no wetland impacts.

Based on the footprints of the entrance route, course design, and maintenance facility Alternative D-3 contains wetland impacts totaling approximately 15 acres (including portions of the Black River floodplain). The types of wetland that may potentially be impacted include; [redacted], degraded [redacted] wet meadow, degraded wet meadow, hardwood swamp, degraded hardwood swamp, hardwood swamp/forested seep, ridge and swale wetland and [redacted] Alternative D-3 is less desirable due to the route's proximity to burial mounds. The upland area adjacent to the burial mounds is also considered to be an area of archaeological significance.

Consequences of Alternative D-4:

The Alternative D-4 proposes a course layout design with wetland impacts totaling approximately 14 acres including portions of the Black River floodplain. This alternative would require an easement from the State of Wisconsin for the entrance route and a maintenance facility within the State Park property.

The Alternative D-4 entrance route begins at the intersection of Stahl Road and South 12th Street, in a Kohler owned residential development immediately north of the State Park property. Alternative D-4 entrance route diverges from Alternative D-3, and runs southeast across the State Park property, avoiding the Burial mounds, and then crossing the Black River. This entrance route traverses uplands and several wetland communities, continues east onto Kohler Property, and crosses ridge and swale wetland before ending at the parking area.

The proposed maintenance building is located in the north portion of the State Park property north of the entrance route (same location as Alternative D-3) within a pine plantation. The proposed maintenance building would result in no wetland impacts.

Based on the footprints of the entrance route, course design, and maintenance facility Alternative D-4 contains wetland impacts totaling approximately 14 acres (including portions of the Black River floodplain). The types of wetland that may potentially be impacted include; [redacted] degraded [redacted] wet meadow, degraded wet meadow, hardwood swamp, degraded hardwood swamp, hardwood swamp/forested seep, ridge and swale wetland and [redacted] Alternative D-4 is a viable option, as it originates at an existing intersection, minimizes impacts to recreational trails, and minimizes environmental impacts. However, Alternative D-4 was not selected as the preferred option, as Alternative D-4 does would impact recreational areas on the State Park property.

Consequences of Alternative D-5:

The Alternative D-5 proposes a course layout design with approximately 14 acres including portions of the Black River floodplain. This alternative would require an easement from the State of Wisconsin for the entrance route and maintenance facility within the State Park property.

The Alternative D-5 entrance route begins on South 12th Street, traverses the State Park property through uplands, recreational trails and wetlands, and bridges the Black River near the north-south midline of the Kohler Property. This entrance route traverses old field, degraded [redacted] and degraded hardwood swamp, which are dominated by non-native and/or

invasive species. The road crosses hardwood swamp, [redacted] and the Black River. The entrance route continues east onto Kohler Property, crossing hardwood swamp/forested seep and ridge and swale wetland before ending at the parking area.

The proposed maintenance building is located in the central portion of the State Park property north of the entrance route. The proposed maintenance building is located on old field and [redacted] The proposed maintenance building would result in no wetland impacts.

Based on the footprints of the entrance route, course design, and maintenance facility Alternative D-5 contains wetland impacts, totaling approximately 14 acres (including portions of the Black River floodplain). The types of wetland that may potentially be impacted include; [redacted] hardwood swamp, degraded hardwood swamp, hardwood swamp/forested seep, ridge and swale wetland and [redacted] Alternative D-5 is less desirable as it would bisect the State Park property and impact the existing Black River recreational trails, creating three separate road/trail crossings.

Consequences of Alternative D-6:

The Alternative D-6 proposes a course layout design with wetland impacts totaling approximately 15 acres including portions of the Black River floodplain. This alternative would require an easement from the State of Wisconsin for the entrance route and maintenance facility within the State Park property.

Alternative D-6 begins on Beach Park Lane at the existing State Park entrance, and travels north adjacent and within portions of the east side of the Black River floodplain to the midline of the Kohler Property traversing [redacted] hardwood swamp/forested seep, and hardwood swamp. The entrance route turns east crossing a ridge and swale wetland before ending at the parking area.

The maintenance facility is located east of the entrance route on portions of the State Park property not typically utilized by the general public and contains [redacted] State Park recreational trails/areas are not impacted as the entrance road and the maintenance facility location would be located in an area not typically utilized by the public. Additional benefits to the State Park would be to make utilities not currently available, accessible to the existing State park maintenance facility along with providing a more suitable access road for park maintenance operations.

Based on the footprints of the entrance route, course design, and maintenance facility Alternative D-6 contains wetland impacts, totaling approximately 15 acres (including portions of the Black River floodplain). The types of wetland that may potentially be impacted include; [redacted] hardwood swamp, hardwood swamp/forested seep, ridge and swale wetland and [redacted] Alternative D-6 is less desirable due to the size of the wetland impact on Kohler Property associated with this entrance route.

Consequences of Alternative D-7:

The Alternative D-7 proposes a course layout design with wetland impacts totaling approximately 14 acres including portions of the Black River floodplain. This alternative solely utilizes Kohler Property and requires no easement for the use of State of Wisconsin property.

Alternative D-7 begins at Timberlake Road located north of the existing Kohler Property. The road travels south within the Black River floodplain, while crossing [redacted] hardwood swamp/forested seep, hardwood swamp, wet meadow and [redacted]

[redacted] to the approximate midline of the Kohler Property. The entrance route turns east eventually crossing a ridge and swale wetland before ending at the parking area.

The maintenance building is located to the furthest extent north on uplands within the Kohler Property at close proximity to the burial mounds. The access route to the maintenance facility crosses hardwood swamp, hardwood swamp/forested seep and wet meadow.

Based on the footprints of the entrance route, course design, and maintenance facility, Alternative D-7 contains wetland impacts, totaling approximately 14 acres (including portions of the Black River floodplain). The types of wetland that may potentially be impacted include; [redacted] wet meadow, hardwood swamp, hardwood swamp/forested seep, ridge and swale wetland and [redacted] Alternative D-7 is less desirable due to the amount of wetland impacts on Kohler Property as well as the proximity of the maintenance facility to the burial mounds. Additionally, Alternative D-7 would route guest and maintenance traffic through several residential neighborhoods.

Consequences of Alternative E (Preferred Alternative):

Alternative E reduces the course layout footprint within the Kohler Property minimizing environmental impacts to the extent practicable, with less than 5 acres of wetland impacts (including portions of the Black River floodplain). This alternative would require an easement from the State of Wisconsin for the entrance route and maintenance facility within the south portion of the State Park property.

The Alternative E entrance route begins on Beach Park Lane at the existing State Park entrance, and travels north adjacent and within the east side of the Black River floodplain traversing hardwood swamp/forested seep and hardwood swamp. The entrance route turns northeast through the Kohler Property and traverses [redacted] (pine plantation, and [redacted]

The maintenance facility is located east of the entrance route within the south portion of the State Park property. The proposed maintenance building is located on [redacted] State Park recreational trails/areas are not impacted since the entrance road and maintenance facility location are located in an area of the Park not typically utilized by the public. Additional benefits to the State Park would be to make utilities not currently available, accessible to the existing State Park maintenance facility along with providing a more suitable access road for park maintenance operations.

Based on the footprints of the entrance route, course design, and maintenance facility; Alternative E minimizes wetland impacts to less than 5 acres. The types of wetland that may potentially be impacted include [redacted], hardwood swamp, hardwood swamp/forested seep, ridge and swale wetland and [redacted] Alternative E was selected as the preferred alternative since this alternative has the least amount of wetland impacts, minimizes impacts to cultural resources, avoids residential areas, avoids impacts to recreational areas of the State Park property and avoids an additional Black River crossing.

Direct impacts from filling and grading wetland communities will result in loss of wetland functions and conversion of wetland plant communities. Impacts to wetland functions include the loss of floristic diversity and wildlife habitat, including seasonal wetlands. Due to the small size of wetland impacts the Project is not expected to significantly affect groundwater recharge or discharge. Public use of the Property will increase the recreation value of the wetland.

4.2.4 Fauna

Kohler's investigation of fauna is described in Section 3.2.4 above. Many wildlife species will naturally disperse during site construction activities to adjacent habitats. Some species will return to utilize available habitat following construction. Certain wildlife species may be directly impacted during and after construction because of habitat loss and their inability to disperse to replacement habitat. Impact to these species is not expected to create a significant effect on regional populations.

Project activities will focus on minimizing impacts to wildlife and improving the unaffected forest habitat. The Project will avoid impacts to [redacted] At least 50 percent of the forest habitat will be retained, and invasive species management, as well as restoration of native trees and shrubs in invasive removal areas, will improve the retained forest habitat.

4.2.5 Threatened and Endangered Species

Significant effort was made during the development of Project alternatives to avoid direct impacts to regulated species as noted in Section 3.2.5 above [redacted] will be avoided and protected by the Project. [redacted] are adjacent to Project features and may experience some minor impacts. Kohler will [redacted] and will avoid and minimize impacts to [redacted] to the extent practical.

Impacts to State listed plant species, which are not protected on private property, will be minimized to the extent practicable. Kohler will work with WDNR to develop mitigation measures for impacted State listed plant species, such as transplanting individuals to suitable habitat (if tolerated by the species), or establishing new populations in suitable areas. Additionally, Kohler will install educational and "Do Not Disturb" signs in rare species areas, and provide other wayfinding cues to direct traffic away from high quality plant communities. Rare species protection protocols will also be included in staff training for course operators.

4.2.6 Invasive Species

Invasive species exist on the Kohler Property and State Park property (See Section 3.2.6). Although there may be opportunities for invasive species to spread from site disturbance, habitat fragmentation, and soil importation, invasive species control efforts will be employed as part of the Project.

Table 4-4 provides recommendations for the invasive species mapped on the Kohler Property. Management of Japanese barberry is the priority due to its current density, while the other species are a secondary priority, being scattered across the Property. Herbicides will be applied by licensed professional pesticide applicators and in accordance with product labels. Kohler will complete invasive species management and replant native trees, shrubs and groundcover in areas beneficial to the habitat.

The management of invasive species will have a significant, long term positive benefit to the property and biological community. Invasive species removal allows native plant communities to repopulate, significantly enhancing the habitat and promoting increases in native biological and wildlife diversity.

Table 4-4. Invasive Species Management Recommendations

Species	Plant Community	Recommended Treatment Method(s) and Herbicide (Common Product Name Example)	Timing
Japanese barberry (*Berberis thunbergii*)	Northern Dry Forest – Pine Plantation Northern Dry-Mesic Forest Dune and Forested Dune Hardwood Swamp/Forested Seep	Foliar application (Triclopyr) with backpack sprayer or boom sprayer (for dense populations in the Pine Plantation)	When plant is actively growing and fully leafed out
		Forestry mow and conduct foliar application (Triclopyr) with backpack sprayers to resprouts (for dense populations in the Pine Plantation); less potential damage to non-target species and reduces amount of herbicide applied compared to option a.	Mow during the dormant season (fall, winter). Apply herbicide to resprouts when plant is actively growing and fully leafed out the following growing season.
		Cut-stump and treatment (Glyphosate) (feasible for scattered populations)	Conduct any time of year
Reed canary grass (*Phalaris arundinacea*)	Swale Wetland Complex Alder Thicket Wet Meadow – degraded Northern Dry-Mesic Forest	Foliar application (Glyphosate) via backpack sprayer in areas with scattered populations. Control in areas with dense populations is likely not feasible without intensive efforts, reintroduction of native species, and continued management.	Spring (prior to seed production) or fall (may mow first and allow for appropriate regrowth prior to treating)
Honeysuckle species (*Lonicera* spp.)	Interdunal Wetland	Foliar application (Glyphosate)	When plant is actively growing and fully leafed out
		Cut-stump and treatment (Glyphosate) (recommended for medium to large shrubs to reduce overspray)	Conduct any time of year
Garlic mustard (*Alliaria petiolata*)	Northern Dry-Mesic Forest	Foliar application (Glyphosate) via backpack sprayer	Treat rosettes in spring or fall or treat flowering plants
Dame's rocket (*Hesperis matronalis*)	Northern Dry-Mesic Forest Hardwood Swamp/Forested Seep	Foliar application (Glyphosate) via backpack sprayer	Treat rosettes in spring or fall or treat flowering plants
Canada thistle (*Cirsium arvense*)	Northern Dry-Mesic Forest Swale Wetland Complex	Foliar application (Glyphosate) via backpack sprayer	Apply during flower bud to early flowering stage or to rosettes in fall if leaves are green
Spotted knapweed (*Centaurea stoebe*)	Dune	Foliar application (Aminopyralid) via backpack sprayer	Apply to rosettes in the spring or fall, or to plants in the bolting stage

Species	Plant Community	Recommended Treatment Method(s) and Herbicide (Common Product Name Example)	Timing
Black locust (*Robinia pseudoacacia*)	Forested Dune	Cut-stump, basal bark, or girdling (Aminopyralid)	Apply any time of year
Cypress spurge (*Euphorbia cyparissias*)	Dune Northern Dry-Mesic Forest	Foliar application (Glyphosate) via backpack sprayer	Apply twice per year, first to plants when seeds are forming and again in fall before a killing frost

4.2.7 Other

The Kohler Property is dominated by sandy soils with high permeability. This combined with a shallow depth to the surficial groundwater aquifer increases the potential for pesticides and fertilizer to leach into the shallow aquifer. Leaching of pesticides and fertilizers to the aquifer will be minimized through careful implementation of contemporary IPM and irrigation BMPs. See Section 2.3.6 and 2.3.7.

Kohler will operate this golf course in accordance with the latest IPM plan and as recommend by manufacturer's specifications. New IPM practices are being tested and developed on an ongoing basis, and contemporary water and pest management practices reduce environmental impacts significantly compared to twenty years ago (Rossi and Grant, 2009). Precision irrigation management can minimize leaching by scheduling irrigation so that water does not move beyond the active rooting zone. Additionally, careful application of fertilizers at rates that match plant requirements also decreases nitrogen leaching from established turfgrass (Barton and Colmer 2006). Using new pesticide products with lower active ingredient concentrations and lower leaching capabilities reduces the risk of leaching into the groundwater (Kovach et al., 1992).

4.3 CULTURAL

4.3.1 Land Use

The proposed golf course would allow public access to the 247 acre property which is privately owned and currently unavailable to the public. Rezoning of the property is not required as a golf course is allowable within the current zoning of P-1 Parks and Recreation as a conditional use.

In connection with developing the golf course, Kohler would grant a lake access easement for lot owners in the Timberlake Subdivision. This easement will be located in the northeast portion of the Kohler Property and will provide subdivision lot owners direct access to Lake Michigan, which currently does not exist.

4.3.2 Traffic

A study was completed to determine the traffic impacts of the proposed golf course (Excel, 2014b). The State of Wisconsin rates the functionality of intersection movements based upon their Level of Service (LOS). The LOS for an intersection or traffic movement is calculated in a range from A to F. The minimum acceptable value is LOS D.

The traffic study concludes that all proposed traffic movements at the intersection of CTH V and Beach Park Road will operate at a LOS B or better. The study also shows that all movements at the proposed golf course entrance location to Beach Park Road will operate at LOS A. In both cases, the LOS significantly exceeds the minimum acceptable value. The Level of Service calculations were based upon the existing road intersection configuration. Therefore, no additional improvements were recommended as a result of the proposed golf course traffic.

To improve circulation, Kohler is proposing to modify the State Park entrance area by adding a roundabout, east of the existing bridge spanning the Black River. Two lanes would be dedicated for entering State Park visitors while golf course traffic and exiting State Park visitors would utilize the roundabout. Kohler would fund the entire cost of the enhancements.

4.3.3 Socio-economic

Recreation and Tourism

The proposed golf course presents an opportunity to generate significant economic impact and help elevate the State of Wisconsin and Sheboygan County's reputation as the premier golf destination in the United States. The project is expected to create a premier new recreation facility in the Town of Wilson and Sheboygan County.

Sheboygan County is recognized as a premier golf destination to tourists from within the county as well as travelers from out of state. An approximate 23,000 additional rounds of golf are anticipated to be played at the new course, representing an increase of almost 25 percent compared to the existing environment. This positive increase will result in additional tourists that come into the Town of Wilson and Sheboygan County, which will in turn increase the number of users of the recreational amenities offered in the area. An increase in visitors will in turn also generate expenditures from guests and hospitality in Sheboygan County (SB Friedman, 2015).

The Project site is privately owned and currently not available to the public. Upon completion of the Project, the Kohler owned property would be available for recreational use creating a positive public benefit. The Project will also create increased use of the State Park and opportunities for park-users to utilize the golf course and restaurant.

Employment, Labor Force, and Income

SB Friedman Development Advisors (SB Friedman) was retained by Kohler to estimate the economic impact of the Project on three geographies including: the Town of Wilson; Sheboygan County; and an 11-county region consisting of Brown, Calumet, Fond du Lac, Manitowoc, Milwaukee, Outagamie, Ozaukee, Sheboygan, Washington, Waukesha and Winnebago counties.

In their study SB Friedman (2015) measures the total economic impact of the Project on the three geographies mentioned above. The results of the SB Friedman economic study are summarized throughout this section. In order to quantify the impacts, specific data was analyzed using an economic assessment tool.

Sources of direct economic impacts include temporary construction impacts over a three year period, expanding golf as an ongoing economic engine and creating significant public sector tax revenue benefits. When fully operational, the proposed golf course is projected to create 227 full-time equivalent permanent jobs and generate nearly $21 million in annual economic activity for Sheboygan County households and businesses. Quantitative impacts are given in 2014 dollars.

Temporary Construction Impacts

Total development costs of the Project are estimated at $25 million including hard and soft costs. Construction is expected to provide an immediate economic benefit for the three geographic regions analyzed as shown in Table 4-5 below. During the 3-year design and construction period, construction spending is expected to create an average of 67 direct full-time equivalent (FTE) jobs in the Town of Wilson. This equates to an annual increase of $3.9 million in salaries and benefits, and an overall impact of $9 million using economic multipliers.

In Sheboygan County, direct FTE positions are estimated at 95 FTE jobs. And the total labor income is estimated at $5.3 million, with an overall impact of approximately $12.5 million based on economic multipliers. Considering the 11-county region total FTE jobs are estimated at 102, labor income at $5.8 million, and total impact of $13.6 million based on economic multipliers.

Table 4-5. Total Estimated Annual Economic Impact for Construction

	JOBS (FTE)	SALARIES AND BENEFITS	IMPACT
Town of Wilson	67	$3.9M	$9.0M
Sheboygan County	95	$5.3M	$12.5M
11-County Region	102	$5.8M	$13.6M

An Economic Growth Engine for Sheboygan County

Between April and October the proposed course is expected to add 23,000 rounds of golf to the region, increasing the level of economic impact in Sheboygan County (SB Friedman, 2015). When fully operational, Kohler anticipates employing 168 people in full and part-time jobs with approximately $3.6 Million in annual associated salaries and benefits. 88 percent of the positions are expected to be filled by residents of Sheboygan County. Expenditures from guests and hospitality are also expected to increase due to the proposed course, generating an additional $6.5M in lodging and purchases of food, beverage, and retail goods.

Increased Tax Revenue

Using existing data from the Wisconsin Department of Revenue (WDR) and data from Kohler on comparable golf course in the country, SB Friedman evaluated the impact of the Project on tax revenue. Including property, sales, income, motor vehicle fuel, and hotel room taxes it is anticipated that the new golf course will generate $1,116,000 in tax revenue (based on 2013 tax rates).

4.3.4 Historical and Archaeological

The Project was designed to avoid the known burial mounds in the northwest corner of the Kohler Property. No additional human remains or burial mounds were discovered during the 2014 survey. Additional studies are scheduled to resume in spring of 2015, weather permitting. Upon completion, the results of these studies will be sent to the SHPO for evaluation. In accordance with State and Federal statutes, potential impacts to National Register eligible archaeological resources will be avoided, minimized, and/or mitigated.

4.3.5 Visual and Aesthetics

The lakeshore and associated dune habitats are essential to the natural and minimalistic golf course design and will not be modified. The Project will create gaps in the forest canopy and increase sight distances throughout the Property. Greater variations in the landscape (open areas contrasted with forested areas) will add scenic interest to the current forested landscape. The distinctive undulating dune topography will be retained. The Project will introduce several sustainable and aesthetically appealing structures to the Property and increase access to and on the Property via roads and cart paths.

By removing invasive species and actively preserving the natural, native flora, the aesthetic quality of the parcel will be improved. Some trees bordering the beach will be removed, allowing longer sight lines between the Project and Lake Michigan. The majority of the dunes and beach system will remain natural, allowing it to retain its distinctive scenic attractiveness and high scenic integrity. The aesthetics associated with the existing forested landscape will be modified, but enhanced by picturesque golf views.

The viewshed associated with adjacent lands will remain largely unchanged, since the Project will be screened on three sides by woody vegetation, either original to the site or planted. The enhanced views of the property would be visible from Lake Michigan.

The Project will place high value on the landscape integrity and aesthetics: landscape variation and interspersion of native vegetation, long views within the Property and to the lakeshore vista, and natural-appearing topography. Incorporating these landscape features will enhance visual and aesthetic features of the Kohler Property.

4.4 OTHER SPECIAL RESOURCES

Stopover habitat for migratory birds is an important component along the Lake Michigan shoreline. Songbirds utilize the forested habitat along the shoreline during spring and fall migration. The WDNR recognizes a 10-mile zone landward of the shoreline as potential stopover habitat.

Migratory birds that utilize Lake Michigan waters and the beach area along the Kohler Property will not be impacted by the Project, since these areas will remain undisturbed.

The Project design intends to keep 50 percent of the forested habitat on the Kohler Property intact ensuring availability during songbird migration. Following construction of the golf course, forest cover within the Kohler Property will likely provide similar stopover habitat to the adjacent residential areas and the State Park. Analysis of land cover data indicates approximately 54 percent of the State Park property consists of forested or shrub cover. The introduction of an approximately 5 acre irrigation pond will also create a valuable and beneficial stopover habitat for water birds that does not currently exist on the property.

4.5 ADVERSE IMPACTS THAT CANNOT BE AVOIDED

Modifications to the course layout and entrance road location have avoided and minimized impacts to the extent practicable. Impacts that cannot be avoided have been minimized with mitigation measures described in Section 4.6. The following summarizes unavoidable impacts from the Project:

- Impacting of approximately 4 acres of State Park property (primarily utilized for maintenance) with an easement from Beach Park Road, east of the Black River. The

preferred alternative avoids construction of a new Black River crossing and minimizes wetland, stream, and floodplain impacts.

- Conversion of less than 5 acres of wetland habitat. The preferred alternative minimizes wetland impacts from more than 25 acres to less than 5 acres.
- Conversion of the existing forested cover may affect stopover habitat for migratory birds. The preferred alternative minimizes site disturbance ensuring that approximately 50 percent of the forested habitat remains available for migratory stopover habitat.
- Archaeological surveys will resume in 2015, weather permitting. The preferred alternative will be modified in consultation with the SHPO to avoid potential sensitive areas.

4.6 MITIGATIVE MEASURES

Use of State Park LAWCON land to allow Project access will require compensation in accordance with the WDNR and NPS as determined acceptable by such authorities.

Impacts to wetlands from the Project will require wetland mitigation in accordance with the USACE and WDNR requirements. The preferred option for wetland mitigation required by the WDNR and USACE are wetland banking and the Wisconsin Wetland Conservation Trust, also referred to as the In-Lieu Fee (ILF) program. The Project is located in the Northwestern Lake Michigan Bank Service Area (BSA). The preferred option would be to purchase credits from a bank site in the same BSA such as Sheboygan County's proposed Amsterdam Dunes wetland mitigation bank, if available.

Kohler's second option is to purchase mitigation credits from the WDNR's ILF program to mitigate wetland impacts resulting from the Project (at a ratio of 1.45 acres of new wetlands for every 1 acre impacted). The ILF program works similarly to purchasing credits from a bank site; however, the purchase is made through the WDNR which is then responsible for the restoration, establishment, enhancement and/or preservation of aquatic resources.

To avoid and minimize impacts to [redacted] and breeding migratory bird species protected under the federal MBTA, vegetation and tree clearing will be minimized during the peak nesting season which occurs between March and October. Tree clearing activities will be scheduled, to the extent practicable, outside of this time period to minimize disturbance to active nests and avoid the direct take of [redacted] eggs and/or nestlings.

Dust generated during construction will be minimized by applying water to haul roads and high traffic areas.

Kohler will undertake forest management activities to minimize the impact of the Project on the ecosystem. At least 50 percent of the forest habitat will be retained, providing wildlife habitat. Kohler will manage invasive species within the forest habitat with the goal of eradication, and will restore native forest vegetation where appropriate. Kohler will integrate rare species protection into the Project, including avoiding impacts to [redacted], relocating or re-establishing populations of State listed plants, and protecting high quality habitats with educational and "Do Not Disturb" signs and markers.

Kohler will implement storm water BMPs during construction and operation of the Project. Runoff will be treated and allowed to infiltrate into the groundwater.

As part of the Project, Kohler will provide an access easement to the lakeshore for homeowners in the Timberlake Subdivision.

Kohler will develop a program with the Town of Wilson to mitigate potential impacts to adjacent private water supply wells. This program has been successfully implemented at Whistling Straits.

5.0 EVALUATION OF PROJECT SIGNIFICANCE

5.1 ENVIRONMENTAL EFFECTS AND THEIR SIGNIFICANCE

5.1.1 Long- and Short-Term Primary and Secondary Effects

Long Term Primary

Positive Effect

- Increased economic activity for the Town of Wilson, City of Sheboygan, Sheboygan County and the State of Wisconsin
- Preserved distinctive scenic quality
- Invasive species management on Kohler Property
- Preservation of the beach and water for migrating aquatic/shore birds
- Enhancement of area property values
- Increased tax revenue
- Increased employment
- Wildlife habitat creation (irrigation pond)
- Protection of rare species [redacted]
- Opening private property to general public
- Timberlake Subdivision lake access
- Increased scenic interest and views
- Increased exposure to State Park
- Enhancements to the existing State Park entrance
- Wetland habitat replaced in watershed

Negative Effect

- Decreased wooded habitat
- Decreased wetland function (wildlife habitat, floristic integrity, and groundwater)
- Slight traffic increase

Short term Primary

Positive Effect

- Economic benefits from construction employment
- Economic benefits from local business purchases

Negative Effect

- Construction traffic
- Air emissions during construction
- Temporary wildlife displacement

Long and Short Term Secondary

Positive Effect

- Significant employment
- Employee retention in the community

Negative Effect

- Decreased floral diversity
- Wetland type conversion (woody to herbaceous)
- Fragmentation of wildlife movement corridor and modified migratory stopover habitat

5.1.2 Environmental Effects on Geographically Scarce Resources

Geographically scarce resources associated with the Project include the lakeshore and beach habitat located on the east portion of the Kohler Property. Impacts to these habitats will be avoided and minimized. Similar habitats also exist south of the Project on State Park property.

Additional geographically scarce resources on the Property include the Wisconsin NHI communities including [redacted] These habitats also exist south of the Project on State Park property. Although impacts are small, the Project may impact these [redacted] The acreage of wetland impacts will be estimated during the golf course design and permitting phase. The wetland impacts have been reduced significantly to less than 5 acres and will be mitigated through programs administered by WDNR and USACE. Opportunities to further minimize wetland impacts will continue to be evaluated.

The Project is designed to protect regulated rare plant [redacted] present along the lakeshore. These habitats also exist south of the Project on State Park property.

The Project schedule will be implemented to minimize impacts to breeding bird and migratory stopover habitat. Tree clearing will be minimized during the peak migratory and nesting seasons.

5.1.3 Irreversible Impacts

Irreversible impacts include Project effects that would take a long period (over 50 years) to replace or result in removal of a feature known only to exist on the Kohler Property. Field studies do not indicate any natural or cultural resources unique to the Kohler Property.

Removal of 50 percent of the existing wooded habitat is considered irreversible. Construction of the irrigation pond is also considered irreversible, however, this pond will provide a large inland open water habitat currently lacking in the local area.

5.2 SIGNIFICANCE OF CUMULATIVE EFFECTS

Cumulative impacts are those that result when the effects of an action are added to or interact with other effects in a particular place and within a particular time. The creation of a world-class golf course will add to the existing golf course in Sheboygan County and reinforce the area as a golf destination, resulting in further development of golf-related services. This will have significant economic benefits for the area. Development pressure within the immediate vicinity of the Property will be low, given that the surrounding State Park is protected land. This will allow for continued protection of habitat and endangered resources in the area, reducing the cumulative effects to regional populations of flora and fauna.

Opening the Property for public recreation and Timberlake residents' lake access will increase the recreational use value of the area, building on the popularity of the adjacent State Park.

There is not expected to be any cumulative impacts from irrigation to the water supply or water quality.

Development of the high-visibility, environmentally sensitive, world-class golf course may result in the Project serving as a model for future golf courses.

Ecological cumulative effects from this Project include partial conversion of undisturbed habitat. Kohler intends to continue to work cooperatively with Federal and State agencies to reduce the cumulative effects of the Project.

5.3 SIGNIFICANCE OF RISK

The Project is located along the Lake Michigan shoreline and adjacent to the State Park property. Avoidance and minimization measures have been considered to minimize impacts. Implementation of mitigative measures will minimize the risk associated with this Project. Adjoining lands provide similar habitats to those found on the Kohler Property therefore the risk to the local ecosystem is minimized.

5.4 SIGNIFICANCE OF CONTROVERSY OVER ENVIRONMENTAL EFFECTS

The public has been informed of the Project since its introduction on April 7, 2014 at the Town of Wilson Board meeting, and the Project has been discussed in local newspapers and other local forums since then. Table 5-1 contains information on public involvement for the Project. At the conclusion of the July 16, 2014 plan commission meeting, the Town of Wilson Plan Commission requested that State and Federal permits for the Project be pursued before consideration of the conditional use permit application resumes. Additional public meetings with the Town of Wilson will occur after Federal and State permitting has progressed.

Table 5-1. Public Meetings for the Project

DATE	AGENCY	TOPIC	COMMENTS
April 7, 2014	Town of Wilson Town Board	Project Introduction	Initial presentation during a public meeting to the Town of Wilson Town Board
May 12, 2014	Town of Wilson Plan Commission	Conditional use permit public hearing	Presentation to the Town of Wilson Plan Commission as part of the conditional use permit application process
July 1, 2014	Black River First Responders, Black River Fire Department	Emergency services	Meeting to review project and develop recommendations to improve emergency response
July 16, 2014	Town of Wilson Plan Commission	Public Input on project on conditional use permit application	Meeting to gather public input on project. Plan Commission requested Kohler to obtain Federal and State permits before continuing Plan Commission process

5.5 AGENCY CONSULTATION

Table 5-2 contains information on consultations conducted with State and Federal agencies regarding various topics on the permitting process and requirements. Consultations will continue as needed to complete the permitting process.

Table 5-2. Agency Consultation for the Project

DATE	AGENCY	TOPIC	COMMENTS
July 31, 2014	WDNR	Site Visit	Site visit with WDNR officials to view property
August 6, 2014	WDNR	Permitting process	Meeting with WDNR to discuss required permits and timelines
August 26, 2014	WDNR	t Resources	Request submitted for review of endangered resources
September 18, 2014	USACE	Permitting process	Meeting with USACE to discuss required permits and timelines
September 29, 2014	WDNR/USACE	Entrance options	Meeting with WDNR & USACE to review and discuss entrance options
October 1, 2014	WDNR	Monitoring wells	Onsite visit by WDNR to view installation of monitoring wells.
October 3, 2014	USFWS	Endangered Resources	Request submitted for review of endangered resources
October 8, 2014	WDNR	Wetland Concurrence	Onsite meeting with WDNR to obtain concurrence on wetland delineation
October 17, 2014	WDNR/USACE	Wetland Concurrence	Onsite meeting with WDNR and USACE to obtain concurrence on wetland delineation

6.0 LIST OF PREPARERS

Kohler Company
444 Highland Drive
Kohler, WI 53044

Stantec Consulting Services Inc.
1165 Scheuring Road
De Pere, WI 54115

Excel Engineering
100 Camelot Drive
Fond du Lac, WI 54935

Commonwealth Cultural Resource Group
P.O. Box 1061
Minocqua, WI 54548

SB Friedman Development Advisors
221 North LaSalle Street
Suite 820
Chicago, IL 60601-1317

7.0 REFERENCES

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FIGURES

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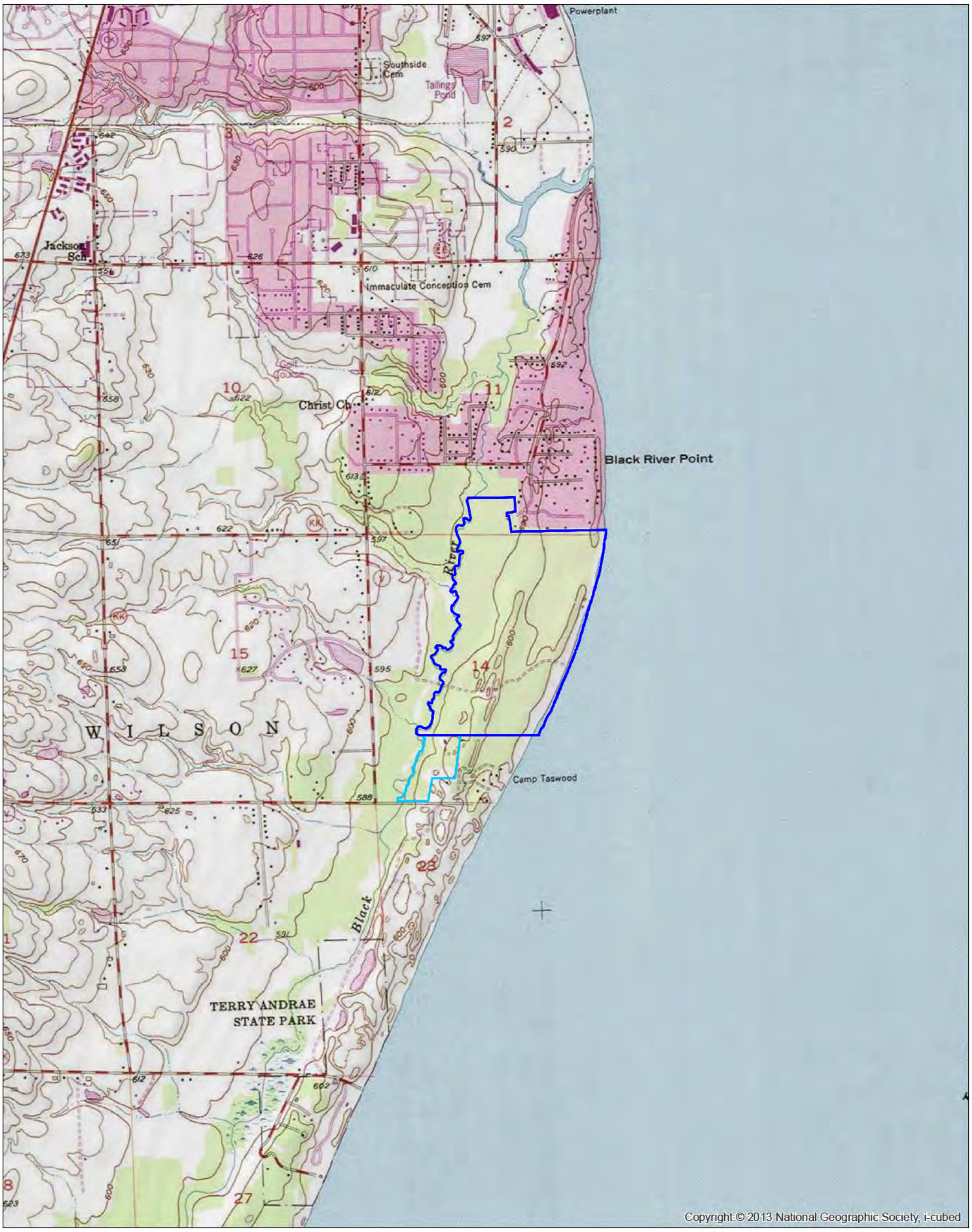

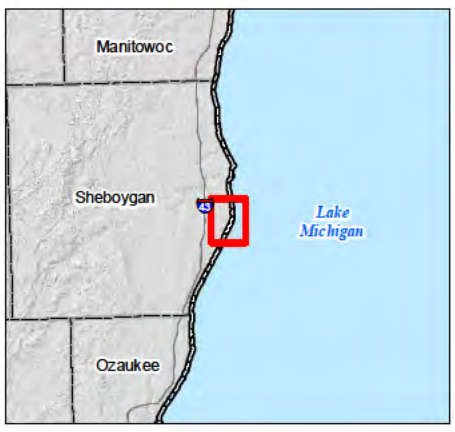

Legend

- Approximate Project Boundary - Kohler Co. Property
- Approximate Project Boundary - State Park Property

Notes

1. Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet
2. Data Sources Include: Stantec Kohler Esri
3. Background: USGS 7 5' Topographic Quadrangles

Figure No.

1

Title

Project Location and Topography

Client/Project

Kohler Company
Proposed Golf Course - Town of Wilson

Project Location
T14N R23E S11; 14
T of Wilson Sheboygan Co WI

193703078
Prepared by MCP on 2014-11-17
Technical Review by JD on 2014-12-15
Independent Review by JG on 2015-03-17

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Stantec

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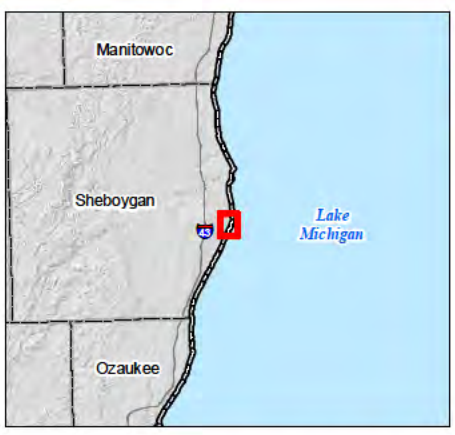

Legend

- Approximate Project Boundary - Kohler Co. Property
- Approximate Project Boundary - State Park Property

Notes

1. Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet
2. Data Sources Include: Stantec Kohler
3. Orthophotography: 2010 WROC

Figure No.

2

Title

Project Location and Orthophotography

Client/Project

Kohler Company
Proposed Golf Course - Town of Wilson

Project Location
T14N R23E S11; 14
T of Wilson Sheboygan Co WI

193703078
Prepared by MCP on 2015-02-11
Technical Review by MR on 2015-03-17
Independent Review by JG on 2015-03-17

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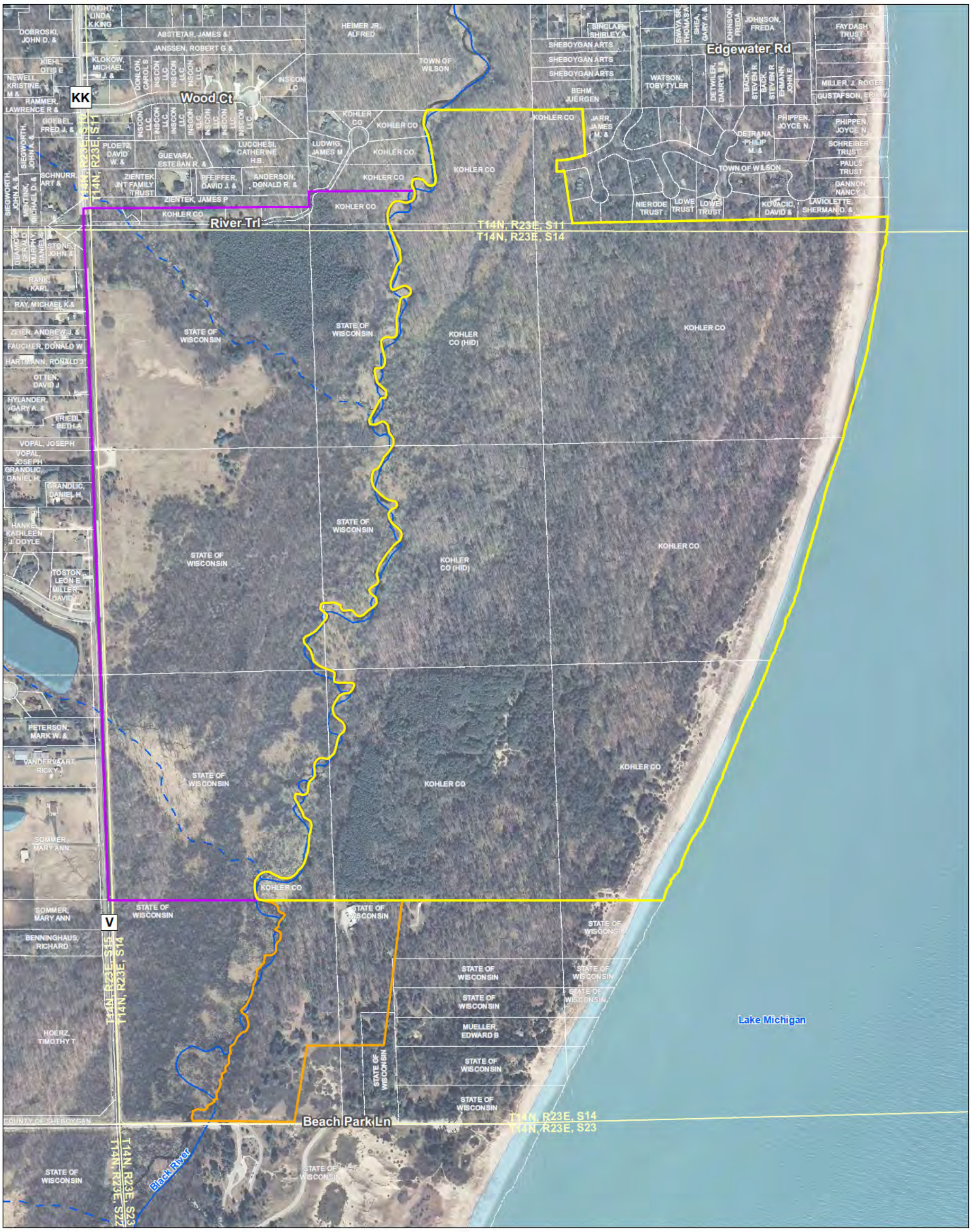
Stantec



Notes

1. Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet
2. Data Sources Include: Stantec Kohler WDNR WDOT Sheboygan County
3. Orthophotography: 2010 WROC

Legend

- Approximate Project Boundary Kohler Co. Property
- Approximate Project Boundary State Park Property
- Additional Study Area

DNR 24k Hydrography

- Perennial Stream
- Intermittent Stream
- Waterbody

Figure No.
3

Title
Plat Map

Client/Project
Kohler Company
Proposed Golf Course - Town of Wilson

Project Location
T14N R23E S11; 14
T of Wilson Sheboygan Co WI

193703078
Prepared by MCP on 2015-02-24
Technical Review by MR on 2015-03-17
Independent Review by JG on 2015-03-17

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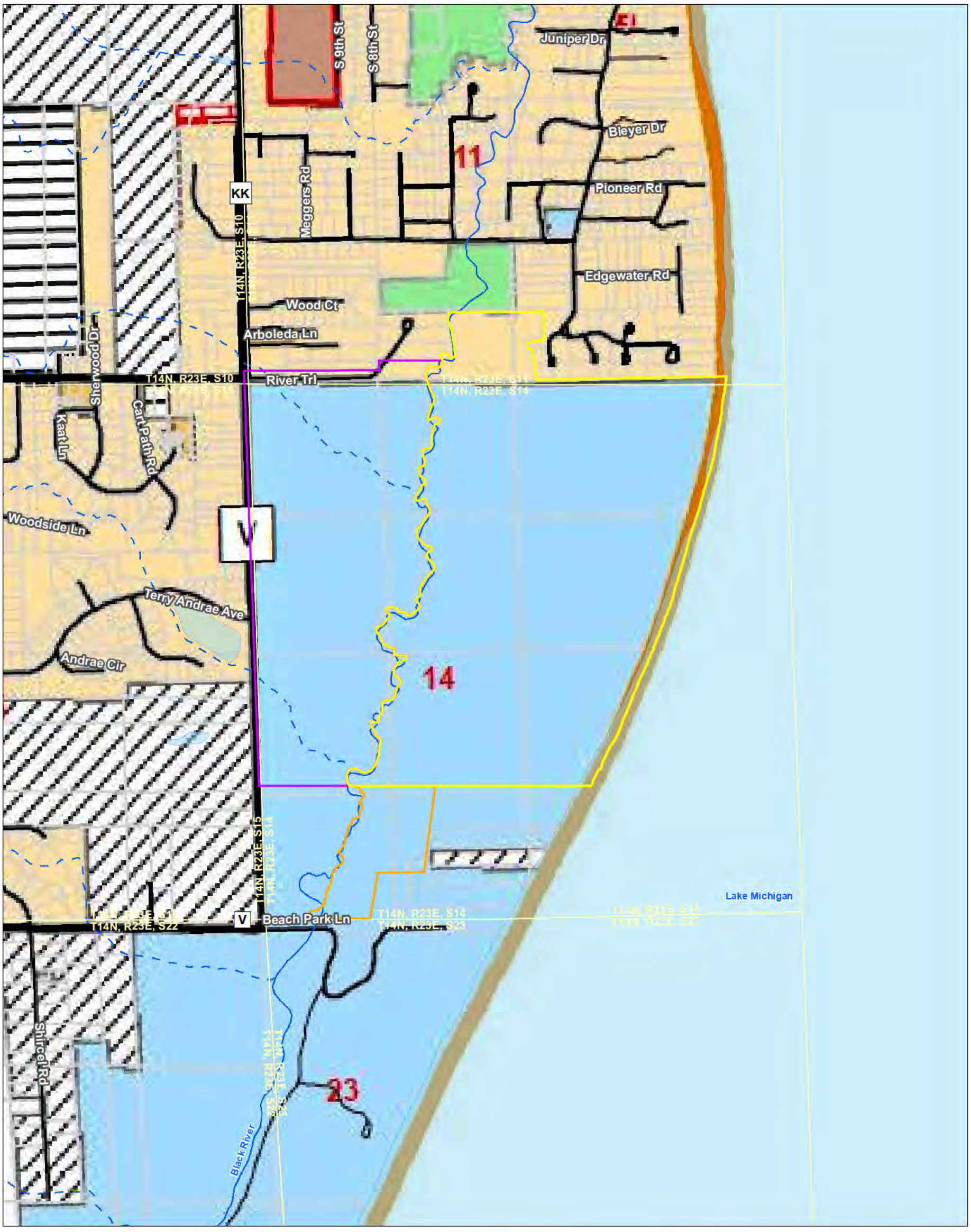

Notes

1. Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet
2. Data Sources Include: Stantec Kohler WDNR WDOT Sheboygan County
3. Orthophotography: 2010 WROC

Legend

- Approximate Project Boundary Kohler Co. Property
- Approximate Project Boundary State Park Property
- Additional Study Area

Town of Wilson Zoning

- A-2
- A-3
- CON
- P-1
- R-1
- R-2

DNR 24k Hydrography

- Perennial Stream
- Intermittent Stream
- Waterbody

Figure No.
4

Title
Zoning Map

Client/Project
Kohler Company
Proposed Golf Course - Town of Wilson

Project Location
T14N R23E S11; 14
T of Wilson Sheboygan Co WI

193703078
Prepared by MCP on 2015-02-24
Technical Review by MR on 2015-03-17
Independent Review by JG on 2015-03-17

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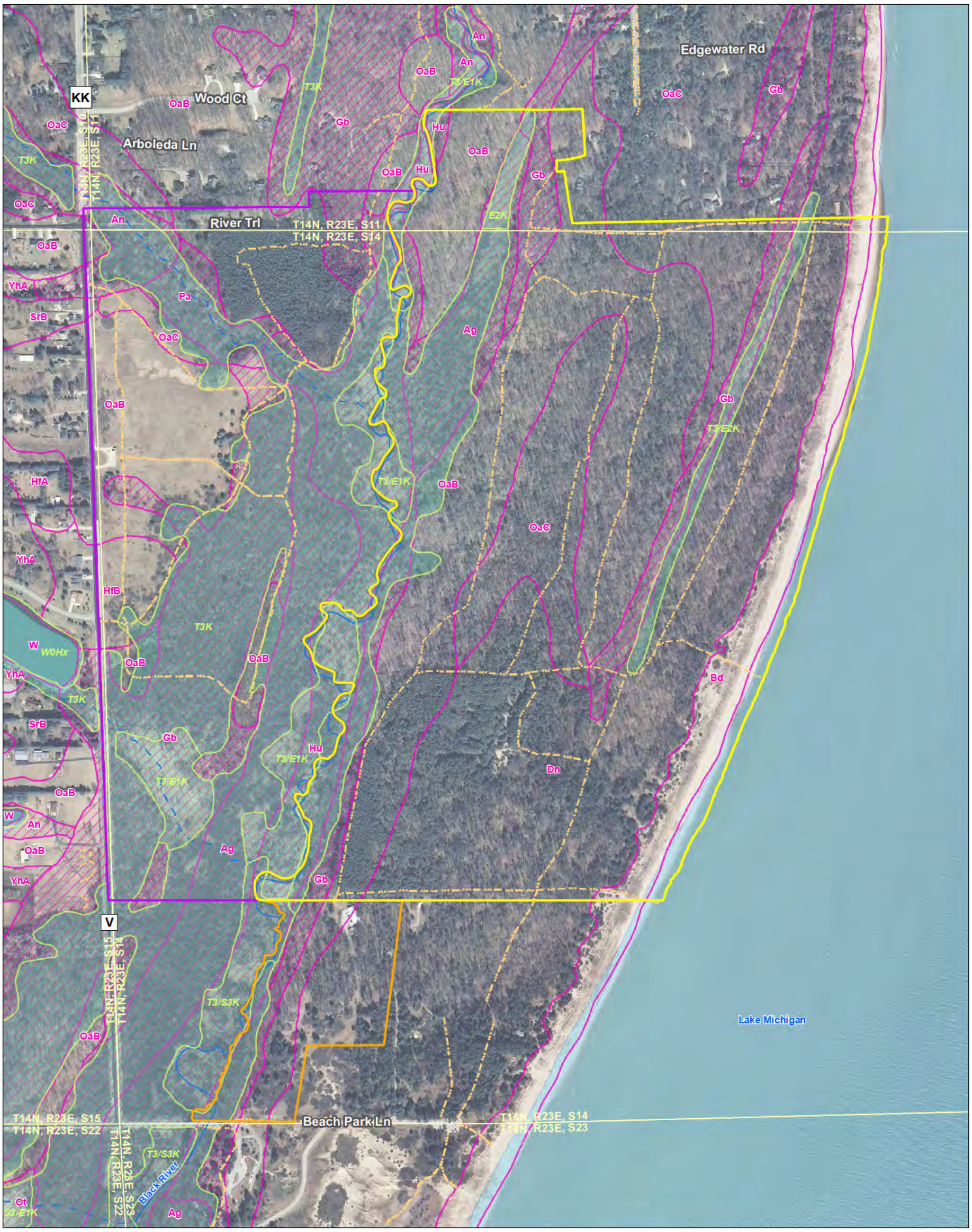

Legend

- Approximate Project Boundary Kohler Co. Property
- Approximate Project Boundary State Park Property
- Additional Study Area
- Existing Trail
- Wisconsin Wetland Inventory

NRCS Soil Survey Data
- Predominantly Hydric Soils
- Partially Hydric Soils
- Non-Hydric Soils

DNR 24k Hydrography
- Perennial Stream
- Intermittent Stream
- Waterbody

Notes
1. Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet
2. Data Sources Include: Stantec Kohler WDNR NRCS WDOT
3. Orthophotography: 2010 WROC

Figure No.
5

Title
Wisconsin Wetland Inventory and NRCS Soil Survey Data

Client/Project
Kohler Company
Proposed Golf Course - Town of Wilson

Project Location
T14N R23E S11; 14
T of Wilson Sheboygan Co WI

193703078
Prepared by MCP on 2015-02-11
Technical Review by MR on 2015-03-17
Independent Review by JG on 2015-03-17

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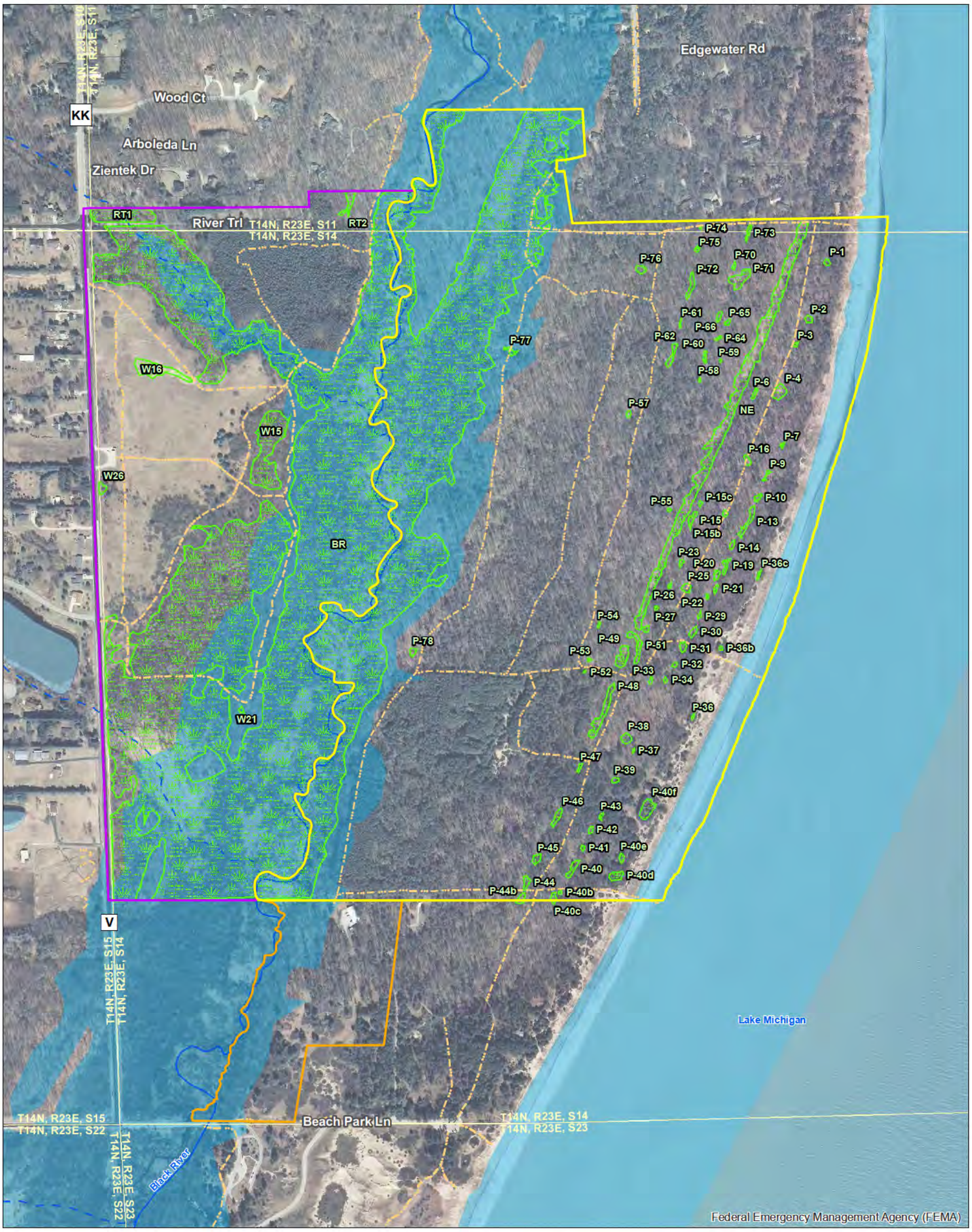

Notes

1. Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet
2. Data Sources Include: Stantec Kohler WDNR WDOT FEMA
3. Orthophotography: 2010 WROC

Legend

- Approximate Project Boundary Kohler Co. Property
- Approximate Project Boundary State Park Property
- Additional Study Area
- Existing Trail
- Field Delineated Wetland
- FEMA 100 Year Flood Zone

DNR 24k Hydrography

- Perennial Stream
- Intermittent Stream
- Waterbody

Figure No.

6

Title

Wetland Delineation and Floodplain Map

Client/Project

Kohler Company
Proposed Golf Course - Town of Wilson

Project Location

T14N R23E S11; 14
T of Wilson Sheboygan Co WI

193703078
Prepared by MCP on 2015-02-11
Technical Review by MR on 2015-03-17
Independent Review by JG on 2015-03-17

0 300 600 Feet

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Stantec

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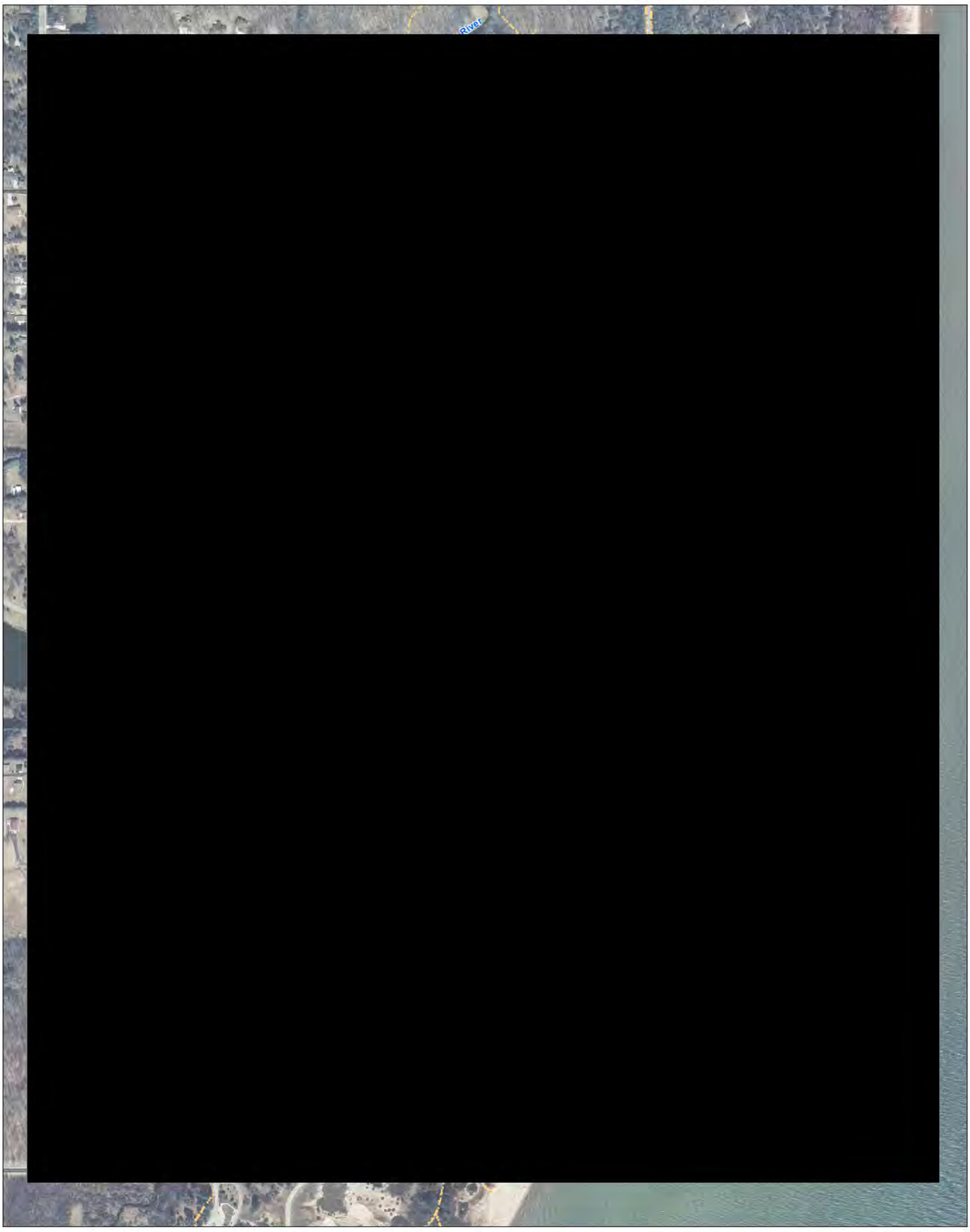

Notes
1. Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet
2. Data Sources Include: Stantec WDNR WDOT
3. Orthophotography: 2010 WROC

Legend

- Approx. Project Boundary Kohler Co. Property
- Approx. Project Boundary State Park Property
- Additional Study Area
- Degraded Area (d)
- Existing Trail

Botanical Community

Figure No.
7

Title
Plant Communities Map

Client/Project
Kohler Company
Proposed Golf Course - Town of Wilson

Project Location
T14N R23E S11; 14
T of Wilson Sheboygan Co WI

193703078
Prepared by MCP on 2014-10-30
Technical Review by MMP on 2014-10-30
Independent Review by JG on 2015-03-17

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1 6 600 (At Original document size of 11x17)

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Arboleda Ln
Zientek Dr
River Trl
Black River
Timberlake Rd
Beach Park Ln
Lake Michigan

Japanese Knotweed: 90% cover
Garlic Mustard: 30% cover
Dame's Rocket: 20% cover
Reed Canary Grass: 10% cover
Japanese barberry: 10% cover
Japanese barberry: 60% cover
Honeysuckle: 20% cover
Multiflora rose: 10% cover
RCG: 10-15% cover
RCG: 20% cover
Reed Canary Grass: 20% cover
Multiflora Rose: 30% cover
Japanese Barberry: 20% cover
Honeysuckle: 10% cover
Japanese barberry: 5-10% cover
Japanese barberry: 20% cover
Mul iflora rose: 20% cover
RCG: 5-10% cover
Japanese barberry: 30% cover
Japanese barberry: 10% cover
Japanese barberry: 70% cover
RCG: 10-15% cover
Japanese barberry: 20% cover

HS, HS(d), NDM/NM, AT, AT(d), NDF (PP), HS/FS, WM, WM(d), OF, NMF(d), D, F.Dune, NDF (PP), NDF, IW, SWC, Dune, GLB

Botanical Community

AT - Alder Thicket	NDF(PP) - Northern Dry Forest (Pine Plantation)
Dune	NDM/NM - Northern Dry-Mesic/Northern Mesic Complex
F. Dune - Forested Dune	NMF - Northern Mesic Forest
GLB - Great Lakes Beach	OF - Old Field
HS - Hardwood Swamp	OW - Open Water
HS/FS - Hardwood Swamp/Forested Seep	SWC - Swale Wetland Complex
IW - Interdunal Wetland	WM - Wet Meadow
NDF - Northern Dry Forest	*(d) denotes degraded community

Notes
1. Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet
2. Data Sources Include: Stantec Excel WDNR WDOT
3. Orthophotography: 2010 WROC

Legend

- Approximate Project Boundary Kohler Co. Property
- Approximate Project Boundary State Park Property (Not Surveyed for Invasive Plants)
- Additional Study Area
- Existing Trail
- Botanical Community

DNR 24k Hydrography
- Perennial Stream
- Intermittent Stream
- Waterbody

Invasive Species Area
- Garlic Mustard (*Alliaria petiolata*) Dame's Rocket (*Hesperis matronalis*) Reed Canary Grass (*Phalaris arundinacea*)
- Honeysuckle (*Lonicera spp.*) Multiflora Rose (*Rosa multiflora*)
- Japanese Barberry (*Berberis thunbergii*) Multiflora Rose (*Rosa multiflora*)
- Japanese Barberry (*Berberis thunbergii*)
- Japanese Knotweed (*Polygonum cuspidatum*)
- Reed Canary Grass (*Phalaris arundinacea*) Multiflora Rose (*Rosa multiflora*) Japanese Barberry (*Berberis thunbergii*) Honeysuckle (*Lonicera spp.*)
- Reed Canary Grass (*Phalaris arundinacea*)

*All degraded wet meadow communities have 90% reed canary grass cover

Figure No.
8

Title
Invasive Plant Species Map

Client/Project
Kohler Company
Proposed Golf Course - Town of Wilson

Project Location
T14N R23E S11; 14
T of Wilson Sheboygan Co WI

193703078
Prepared by MCP on 2014-10-30
Technical Review by MMP on 2014-10-30
Independent Review by JG on 2015-03-17

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Stantec

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Hole Number	Par	Angle	Hole Direction	Hazard	Distance
1	4	LEFT	WEST		424
2	4	LEFT	NORTH		434
3	5	RIGHT	SOUTH		592
4	4	RIGHT	NORTH		366
5	3	STRAIGHT	EAST		218
6	4	LEFT	SOUTH		525
7	5	RIGHT	NORTH		650
8	3	LEFT	SOUTH		253
9	4	LEFT	SOUTH		516
Total Front Nine	36				3888
10	4	RIGHT	WEST		430
11	4	RIGHT	SOUTH		461
12	4	LEFT	SOUTH		377
13	5	LEFT	EAST		486
14	3	STRAIGHT	SOUTH		266
15	4	LEFT	WEST		428
16	5	RIGHT	EAST		591
17	3	STRAIGHT	NORTH		214
18	4	RIGHT	NORTH		503
Total Back Nine	36				3710
Total	72				7658

Figure No.

9A

Title

Project Alternative A

Client/Project

Kohler Company
Proposed Golf Course - Town of Wilson

Project Location

T14N R23E S11; 14
T of Wilson Sheboygan Co WI

193703078
Prepared by MCP on 2015-02-11
Technical Review by MR on 2015-04-09
Independent Review by JG on 2015-04-09

Stantec

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Figure No.

9B-1

Title

Project Alternative B-1

Client/Project

Kohler Company
Proposed Golf Course - Town of Wilson

Project Location

T14N R23E S11; 14
T of Wilson Sheboygan Co WI

193703078
Prepared by MCP on 2015-02-11
Technical Review by MR on 2015-04-09
Independent Review by JG on 2015-04-09

Stantec

N

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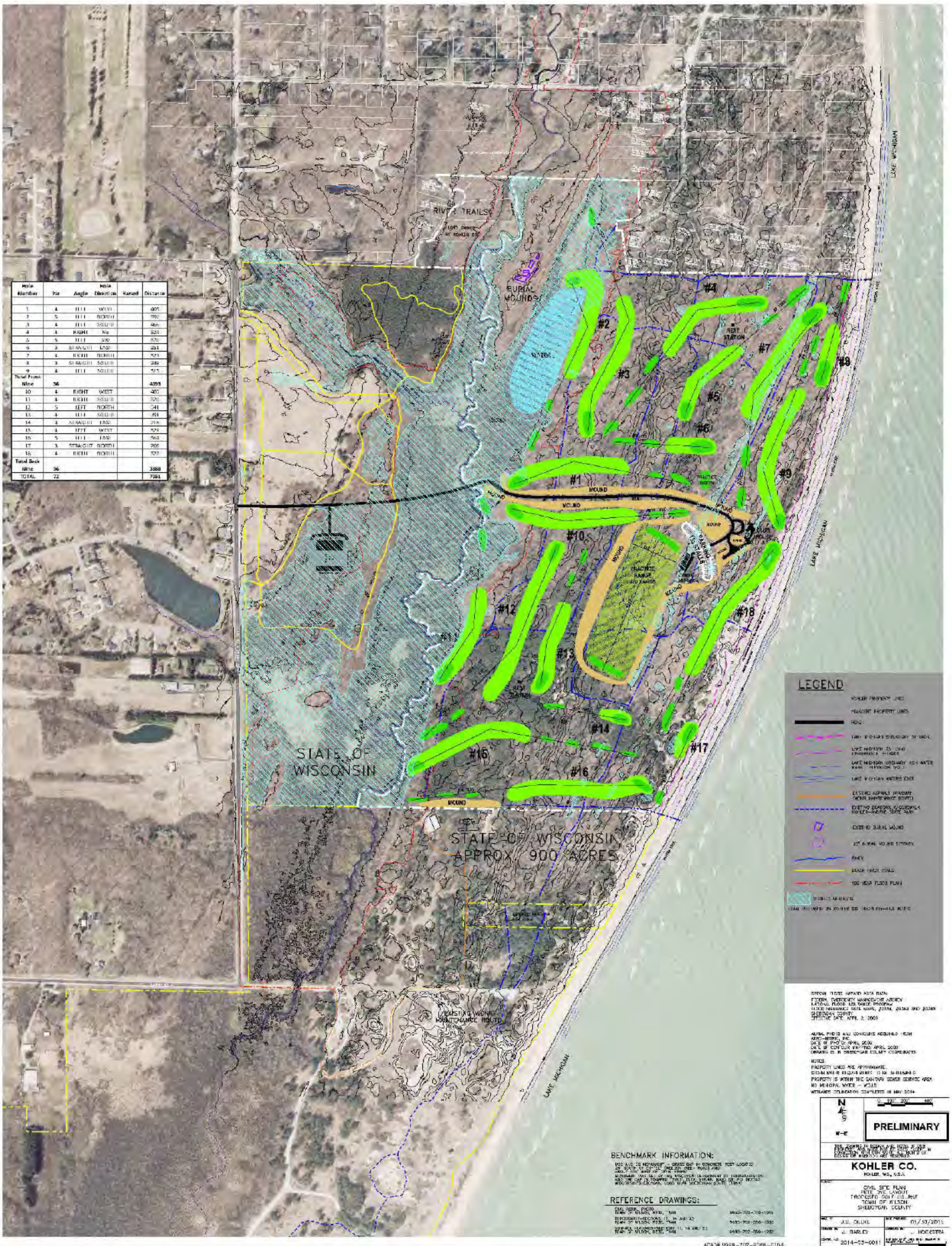

Hole Number	Par	Angle	Hole Direction	Hazard	Distance
1	4	LEFT	WEST		405
2	5	LEFT	NORTH		580
3	4	LEFT	SOUTH		465
4	4	RIGHT	NE		525
5	5	LEFT	SW		570
6	3	STRAIGHT	EAST		251
7	4	RIGHT	NORTH		525
8	3	STRAIGHT	SOUTH		248
9	4	LEFT	SOUTH		515
Total Front Nine	36				4093
10	4	RIGHT	WEST		405
11	4	RIGHT	SOUTH		520
12	5	LEFT	NORTH		541
13	4	LEFT	SOUTH		401
14	3	STRAIGHT	EAST		215
15	4	LEFT	WEST		525
16	5	LEFT	EAST		560
17	3	STRAIGHT	NORTH		205
18	4	RIGHT	NORTH		522
Total Back Nine	36				3888
TOTAL	72				7981

Figure No.

9B-2

Title

Project Alternative B-2

Client/Project

Kohler Company
Proposed Golf Course - Town of Wilson

Project Location

T14N R23E S11; 14
T of Wilson Sheboygan Co WI

193703078
Prepared by MCP on 2015-02-11
Technical Review by MR on 2015-04-09
Independent Review by JG on 2015-04-09

Stantec

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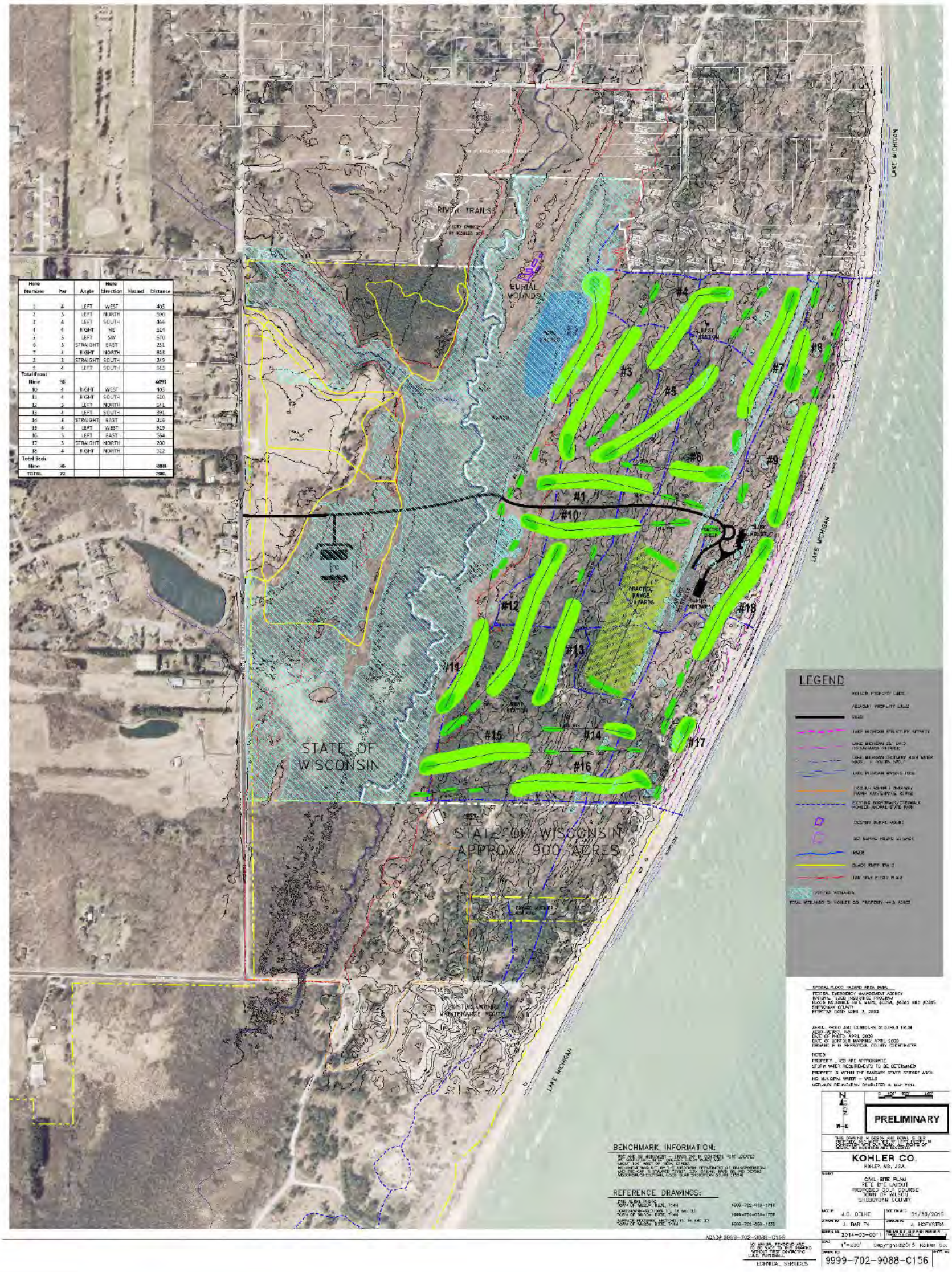

Hole Number	Par	Angle	Hole Direction	Hazard	Distance
1	4	LEFT	WEST		405
2	5	LEFT	NORTH		590
3	4	LEFT	SOUTH		466
4	4	RIGHT	NE		424
5	5	LEFT	SW		570
6	3	STRAIGHT	EAST		251
7	4	RIGHT	NORTH		412
8	3	STRAIGHT	SOUTH		249
9	4	LEFT	SOUTH		343
Total Front Nine	36				4091
10	4	RIGHT	WEST		405
11	4	RIGHT	SOUTH		420
12	5	LEFT	NORTH		541
13	4	LEFT	SOUTH		395
14	3	STRAIGHT	EAST		229
15	4	LEFT	WEST		429
16	5	LEFT	EAST		564
17	3	STRAIGHT	NORTH		200
18	4	RIGHT	NORTH		522
Total Back Nine	36				3905
TOTAL	72				7996

Figure No.

9C

Title

Project Alternative C

Client/Project

Kohler Company
Proposed Golf Course - Town of Wilson

Project Location

T14N R23E S11; 14
T of Wilson Sheboygan Co WI

193703078

Prepared by MCP on 2015-02-11
Technical Review by MR on 2015-04-09
Independent Review by JG on 2015-04-09

Stantec

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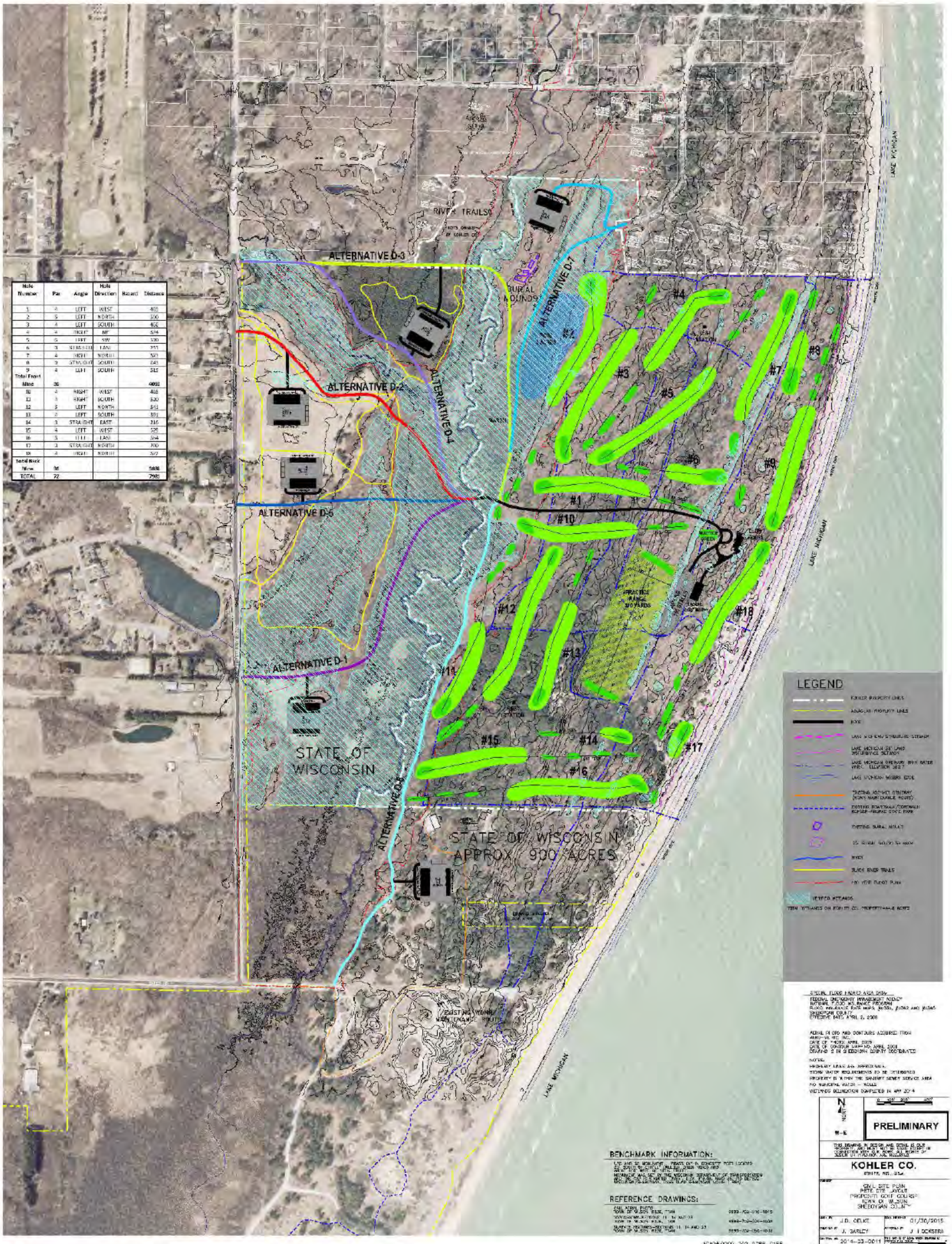

Hole Number	Par	Angle	Hole Direction	Hazard	Distance
1	4	LEFT	WEST		405
2	5	LEFT	NORTH		500
3	4	LEFT	SOUTH		405
4	4	RIGHT	NE		394
5	5	LEFT	SW		520
6	3	STRAIGHT	EAST		257
7	4	RIGHT	NORTH		321
8	3	STRAIGHT	SOUTH		243
9	4	LEFT	SOUTH		515
Total Front Nine	36				4093
10	4	RIGHT	WEST		405
11	5	RIGHT	SOUTH		520
12	5	LEFT	NORTH		543
13	4	LEFT	SOUTH		391
14	3	STRAIGHT	EAST		216
15	4	LEFT	WEST		395
16	5	LEFT	EAST		564
17	3	STRAIGHT	NORTH		200
18	4	RIGHT	NORTH		372
Total Back Nine	36				3808
TOTAL	72				7901

Figure No.

9D

Title

Project Alternatives D1 - D7

Client/Project

Kohler Company
Proposed Golf Course - Town of Wilson

Project Location

T14N R23E S11; 14
T of Wilson Sheboygan Co WI

193703078

Prepared by MCP on 2015-02-11
Technical Review by MR on 2015-04-09
Independent Review by JG on 2015-04-09

Stantec

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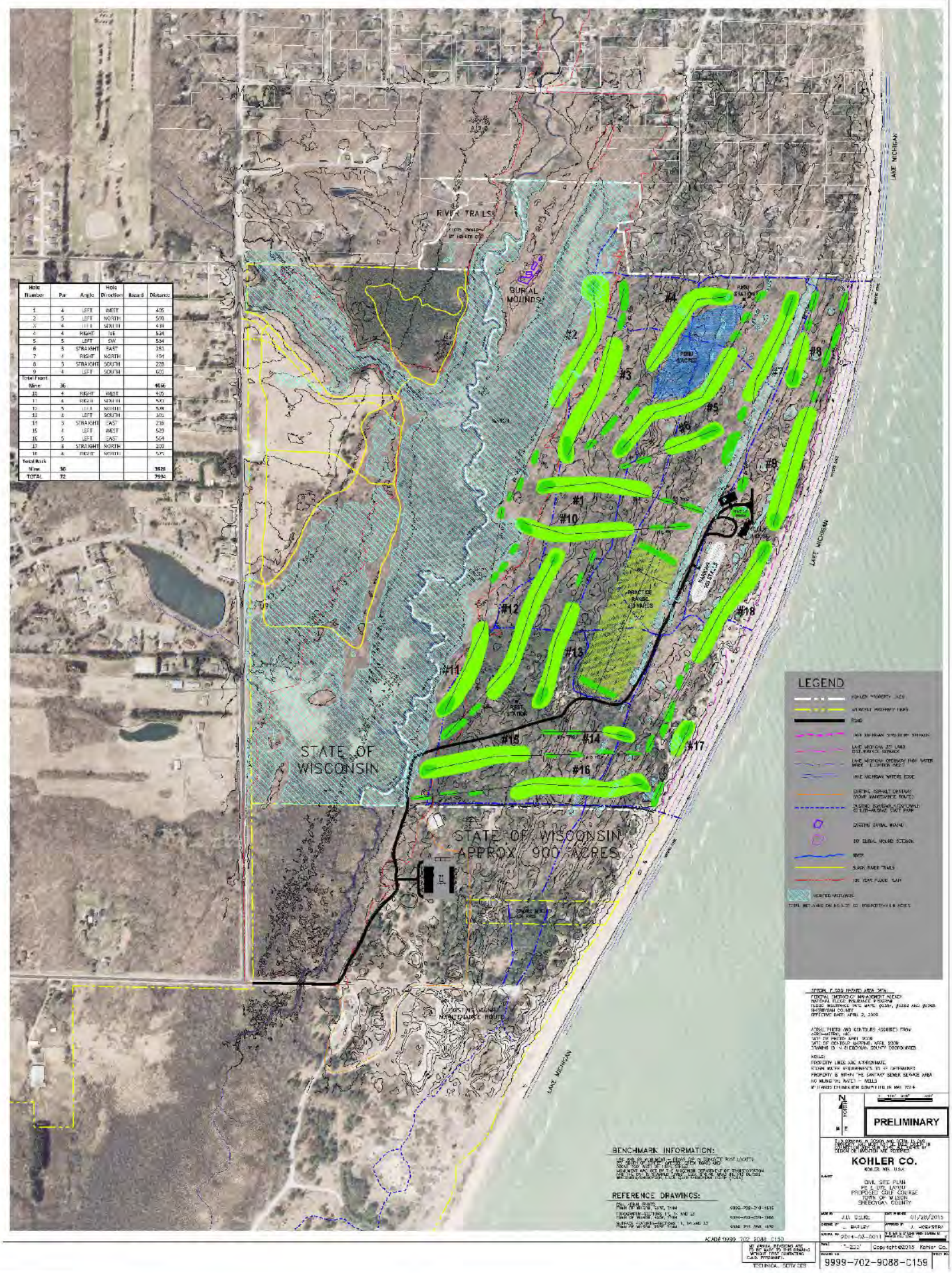
Hole Number	Par	Angle	Hole Direction	Bearing	Distance
1	4	LEFT	WEST		435
2	5	LEFT	NORTH		590
3	4	LEFT	SOUTH		418
4	4	RIGHT	NE		524
5	5	LEFT	SW		584
6	3	STRAIGHT	EAST		183
7	4	RIGHT	NORTH		454
8	3	STRAIGHT	SOUTH		228
9	4	LEFT	SOUTH		500
Total Front Nine	36				4096
10	4	RIGHT	WEST		435
11	4	RIGHT	SOUTH		500
12	5	LEFT	NORTH		508
13	4	LEFT	SOUTH		395
14	3	STRAIGHT	EAST		216
15	4	LEFT	WEST		520
16	5	LEFT	EAST		564
17	3	STRAIGHT	NORTH		200
18	4	RIGHT	NORTH		535
Total Back Nine	36				3828
TOTAL	72				7924



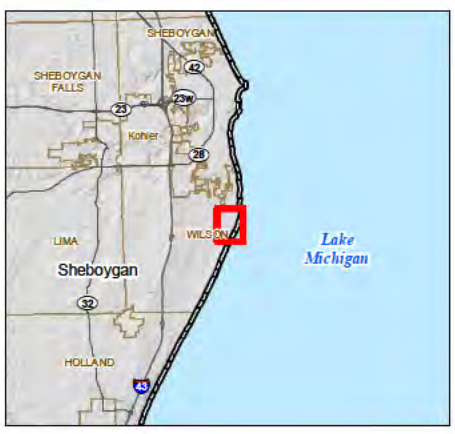


Figure No.

9E

Title

Project Alternative E (Preferred)

Client/Project

Kohler Company
Proposed Golf Course - Town of Wilson

Project Location

T14N R23E S11; 14
T of Wilson Sheboygan Co WI

193703078
Prepared by MCP on 2015-02-11
Technical Review by MR on 2015-04-09
Independent Review by JG on 2015-04-09

Stantec

N

Wetland Delineation Report

Kohler Company Proposed Golf Course
Town of Wilson
Sheboygan County, Wisconsin
Stantec Project #: 193703078

Prepared for:
Jess Barley
Senior Project Manager
Kohler Company
444 Highland Drive
Kohler, WI 53044

Prepared by:
Stantec Consulting Services Inc.
209 Commerce Parkway,
Cottage Grove, Wisconsin 53527
Phone: (608) 839-1998
Fax: (608) 839-1995

Jeff Kraemer W.P.I.T.

Principal Scientist, Environmental Management

April 9, 2015

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INTRODUCTION

Stantec Consulting Services Inc. (Stantec) performed an assured wetland determination and delineation of the Kohler Company Proposed Golf Course (the "Project Area") on behalf of Kohler Company (Kohler). The Project Area consists of two parcels including one 247-acre parcel adjacent to Lake Michigan which is owned by Kohler and one 135-acre parcel owned by the State of Wisconsin (State), located adjacent to the west limits of the Kohler parcel. The State of Wisconsin parcel is being evaluated for possible entrance road and maintenance facility alternative locations. More specifically, the Project Area is located in Sections 11 and 14, Township 14 North, Range 23 East, Town of Wilson, Sheboygan County, Wisconsin (Figure 1).

Prior to conducting the assured wetland determination and delineation, past wetland delineations conducted during the 2014 growing season by Excel Engineering, Inc. (Excel) in May 2014, (Excel, 2014) and delineations completed by Stantec staff in August 2014 were reviewed and considered during the assured wetland delineation. However, all wetland delineation work completed by Mr. Kraemer was done independent of previous wetland delineations, including completion of wetland/upland sample points. This report summarizes the results of the assured wetland delineation completed by Mr. Kraemer, a WDNR approved Assured Wetland Delineator.

The purpose and objective of the assured wetland determination and delineation was to identify the extent and spatial arrangement of wetlands within the Project Area. The wetland delineation was conducted over eight days (Sept, 19, 22, 29-30 and Oct. 13-14, 22- 23, 2014) by Jeff Kraemer, with assistance from Chuck Herrmann, Mark Remington and Everett Grosskopf. Eighty one wetland areas were identified within the Project Area. Wetland types and functional values within the Project Area were evaluated using WDNR Wetland Rapid Assessment Methodology (WRAM) version 2.0.

Wetlands and waterways that are considered waters of the U.S. are subject to regulation under Section 404 of the Clean Water Act (CWA) and the jurisdictional regulatory authority lies with the U.S. Army Corps of Engineers (USACE). Additionally, the Wisconsin Department of Natural Resources (WDNR) has regulatory authority over wetlands, navigable waters, and adjacent lands under Chapters 30 and 281 Wisconsin State Statutes, and Wisconsin Administrative Codes NR 103, 299, 350 and 353. Stantec recommends this report be submitted to local authorities, the WDNR and USACE for final jurisdictional review and concurrence.

1.0 METHODS

1.1 WETLANDS

Wetland determinations were based on the criteria and methods outlined in the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (2011), United States Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1 (1987), and subsequent guidance documents (USACE 1991, 1992), Guidelines for Submitting Wetland Delineations in Wisconsin to the St. Paul District Corps of Engineers (USACE 1996), and the Basic Guide to Wisconsin's Wetlands and their Boundaries (Wisconsin Department of Administration Coastal Management Program 1995). Wetlands were grouped into categories based on the community classification of Eggers & Reed, version 3.1 (2014).

The wetland determination involved the use of available resources to assist in the assessment such as U.S. Geological Survey (USGS) topographic maps, U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) soil survey, WDNR Wisconsin Wetland Inventory (WWI) mapping, aerial photography and previous 2014 wetland delineation data completed by Excel and Stantec.

On-site wetland determinations were made using the three criteria (vegetation, soil, and hydrology) and technical approach defined in the USACE 1987 Manual and applicable Regional Supplement. According to procedures described in the 1987 Manual and applicable Regional Supplement, areas that under normal circumstances reflect a predominance of hydrophytic vegetation, hydric soils, and wetland hydrology (e.g., inundated or saturated soils) are considered wetlands.

Additionally, as climate plays an important role in the formation and identification of wetlands, the antecedent precipitation in the months leading up to the field investigations was reviewed. The current year's precipitation data was compared to long-term (30-year) precipitation averages and standard deviation to determine if precipitation was normal, wet, or dry for the area using a WETS analysis as developed by the NRCS.

The uppermost wetland boundary and sampling points were flagged and surveyed with a Global Positioning System (GPS) capable of sub-meter accuracy and mapped using Geographical Information System (GIS) software.

1.2 WETLAND FUNCTIONAL ASSESSMENT

Wetland types and functional values within the Project Area were evaluated using WDNR Wetland Rapid Assessment Methodology (WRAM) version 2.0. Qualified botanists collected vegetation community data to support completion of the wetland functional assessment during site visits on September 22, 24 and October 2, 2014. In order to evaluate functional values among wetland types, wetlands were grouped into categories based on the community classification of Eggers & Reed, version 3.1 (2014), and WDNR-NHI Wetland Communities of Wisconsin (2014), taking into account species diversity and/or modification due to current or past land uses.

2.0 RESULTS

2.1 SITE DESCRIPTION

The Project Area consists of a mix of upland and a variety of wetland habitats including, alder thicket, beach, dunes, interdunal, ridge and swale, floodplain forest, wet meadow, mosaic beech/maple wetland/upland complex, old field, upland forest, and pine plantations. The Black River is located in the central portion of the Project Area in a north-south orientation and delineates the parcel boundary between the Kohler and State-owned parcel. The Kohler parcel consists of nearly level to undulating terrain characterized by the Lake Michigan beach, dunes, and alternating ridges and swales oriented parallel to the Lake Michigan shoreline. With the exception of the open beach and dune areas located adjacent to the lake, most of the Kohler parcel is forested, with smaller areas of shrub and herbaceous vegetation located in the west portion of the parcel within the Black River floodplain. The State parcel, which is part of Kohler-Andrae State Park, consists of nearly level to gently rolling terrain generally sloping from a topographic high on the west to the Black River on the east. Two intermittent streams flowing from northwest to southeast cross the State Property, and discharge into the Black River. The State parcel is comprised of forested, shrub, and herbaceous vegetation.

Soils mapped within the Project Area by the NRCS Soil Survey of Sheboygan County are listed below in Table 2.1.1 and are shown on Figure 2. The hydric soil status along with drainage classification of each soil unit, as indicated by the NRCS List of Hydric Soils for Sheboygan County, is also included in the table. Wetlands identified during the field investigation are located primarily within areas mapped as hydric soils, with the exception of most wetlands located within the depressions associated with the interdunal and ridge and swale complex.

TABLE 2.1.1: Soil Survey Map Units within Project Area

Sheboygan County, Wisconsin Soil Survey Name and Map Unit	Drainage Classification	Hydric Rating
Adrian muck (Ag)	Very poorly drained	Predominantly Hydric
Alluvial land, wet (An)	Poorly drained	Predominantly Hydric
Beaches, sandy (Bd)	Moderately well drained	Non- Hydric
Dune land (Dn)	Excessively drained	Non- Hydric
Granby loamy fine sand (Gb)	Very poorly drained	Predominantly Hydric
Hebron sandy loam, sandy subsoil variant, 2 to 6 percent slopes (HfB)	Moderately well drained	Non- Hydric
Houghton muck (Hu)	Very poorly drained	Predominantly Hydric
Oakville loamy fine sand, 0 to 6 percent slopes (OaB)	Moderately well drained	Non- Hydric
Oakville loamy fine sand, 6 to 12 percent slopes (OaC)	Well drained	Non- Hydric
Palms muck (Pa)	Very poorly drained	Predominantly Hydric
Sisson very fine sandy loam, 2 to 6 percent slopes (SrB)	Well drained	Non- Hydric

The Wisconsin Wetland Inventory (WWI) map identifies two wetland areas within the Project Area (Figure 3). One T3/E2K (broad-leaved deciduous/emergent palustrine) wetland is located on the northeast portion of the property and one T3/E1K (broad-leaved deciduous/emergent palustrine) wetland associated with the Black River floodplain and tributary streams located within the central portion of the site (Figure 3). The field delineated wetlands on the State parcel and along the Black River are located within the same vicinity as wetlands identified on the WWI map. In addition to the wetlands identified on the WWI map for the Kohler parcel, numerous small depressional wetlands were delineated.

Precipitation data was obtained from the Sheboygan weather station and used for the WETS analysis (Appendix B). Based on the WETS analysis, conditions were drier than normal to normal.

2.2 WETLANDS

Eighty one wetlands were identified and delineated within the Project Area. Wetland determination data forms were completed for 238 sample points along transects through the wetlands and adjacent lands and contained in Appendix C. Representative photographs of the wetlands and adjacent uplands are contained in Appendix D along with a CD of photos from each sample point. The wetland boundary and sample point locations are shown on Figure 4.

The wetland boundary was determined based on distinct differences in vegetation, hydrology, soils and topography consisting of the following: 1) Transition from, alder thicket, hardwood swamp, seasonally flooded basin, or wet meadow wetland communities dominated by hydrophytic vegetation to upland communities including dune, fallow old field, or woodlands (dune or Northern dry, dry-mesic, mesic); 2) Transition from saturated soils within the wetland to lack of wetland hydrology indicators within the adjacent upland; and 3) Transition from poorly drained hydric soils to non-hydric soils. Please note that numerous seasonally flooded basins on the Kohler Property did not contain primary indicators of wetland hydrology during the fall 2014 delineation; however, data collected during spring 2014 field delineations indicate that wetland hydrology was observed. In these cases, wetlands were identified as containing naturally problematic hydrology due to seasonal limitations of observing saturated or inundated soils. The transition from wetland to upland characteristics generally correlated with a well-defined topographic break.

Wetland characteristics are summarized in Appendix E (Table 1) and communities are described in detail in the following sections. Please note that multiple wetlands within the Project Area contain more than one wetland community.

2.2.1 Alder Thicket

Alder Thicket wetland communities are present in extensive areas within the Black River floodplain and tributary streams (Wetland BR) and are also present in portions of the contiguous linear wetland (Wetland NE) located within the Kohler parcel. This community is characterized by the dominant shrub species, speckled alder (*Alnus incana*), and a perennially saturated substrate. Occasional green ash (*Fraxinus pennsylvanica*) and box elder (*Acer negundo*) occur within the alder thicket. Common ground layer species include blue-joint grass (*Calamagrostis canadensis*), common lake sedge (*Carex lacustris*), fowl manna grass (*Glyceria striata*), and reed canary grass (*Phalaris arundinacea*).

2.2.2 Hardwood Swamp

Hardwood Swamp wetland communities occur within the floodplain of the Black River, along tributary streams, and in depressions within the State parcel and Kohler parcel. The community is characterized by a relatively open tree canopy with 50 to 75% cover, dominated by green ash and sugar maple (*Acer saccharum*). The understory varies from brushy to relatively open. Speckled alder and Japanese barberry (*Berberis thunbergii*) are dominant in the shrub layer. Common herbaceous species include common tussock sedge (*Carex stricta*), blue-joint grass, white avens (*Geum candense*), giant goldenrod (*Solidago gigantea*), blue iris (*Iris virginica*), skunk cabbage (*Symplocarpus foetidus*) and sensitive fern (*Onoclea sensibilis*). In addition, small shrub-carr components commonly are located within this community, primarily dominated by red osier dogwood (*Cornus alba*).

2.2.3 Mosaic Beech/Maple Complex

A mosaic of upland and wetland Beech/Maple woodland occurs within the northeast portion of Black River floodplain (Wetland BR) from the north property line extending south to sample point BR-8AW. The community is approximately 3.88 acres and is characterized by a moderately closed tree canopy with 50-75% cover, dominated by American beech (*Fagus grandifolia*), and sugar maple. Sample points BR-9AU and BR-10BU represent typical upland cradle–knolls conditions present within this community. The wetland boundary within this community was identified to incorporate all wetland components of the mosaic area, which includes many upland knolls that were too small and numerous to identify individually. Using best professional judgment, this community was estimated to be comprised of approximately 90 percent wetland, although extensive sampling was not conducted within the area to quantify wetland/upland percentages.

2.2.4 Seasonally Flooded Basin

Seasonally Flooded Basin wetland communities include two complexes of wetland types; Great Lakes Ridge and Swale complex along with linear interdunal swale landforms located parallel to the lakeshore that alternate with stabilized dune ridges. 56 ridge and swale wetlands occur within the Northern Dry-Mesic and Mesic Forest communities of the Kohler parcel. Approximately 4 linear interdunal wetlands occur within a matrix of forested dune and dune communities near the Lake shore on the Kohler parcel. The majority of these wetlands consist of small depressions comprised predominantly of wet meadow vegetation, with occasional components of alder thicket, forested wetland, and vernal pools represented. Tree canopy coverage within these wetlands is minimal, though occasional trees are present within the wetlands. Hydrology varies from dry to seasonal saturation. Generally, the wetlands are widely-spaced farther to the west. Dominant vegetation includes blue-joint grass, northern water-horehound (*Lycopus uniflorus*), tussock sedge, fowl manna grass, stinging nettle (*Urtica dioica*), and Baltic rush (*Juncus arcticus*) in the herbaceous layer; speckled alder, Japanese barberry, and red raspberry (*Rubus idaeus var. strigosus*) in the shrub layer; and green ash in the tree layer.

2.2.5 Wet Meadow

The wet meadow communities primarily exist within the Black River floodplain, primarily along the river banks. This community is also present in Wetland NE located within the Kohler Property. Dominant vegetation includes blue-joint grass, reed canary grass, giant goldenrod, Canada goldenrod (*Solidago canadensis*), common lake sedge, common tussock sedge, and Canadian wood-nettle (*Laportea canadensis*). Scattered within portions of the wet meadow community are speckled alder in the shrub stratum along with green ash and boxelder in the tree stratum.

2.3 UPLAND

Uplands within the Project Area consist of dune, beach, forest dune, Northern forest (dry, dry-mesic, mesic), fallow old field and pine plantation. Common species include sand-reed grass (*Calamovilfa longifolia var. magna*), common juniper (*Juniperus communis*) creeping junipers (*Juniperus horizontalis*), sugar maple, American beech, red oak (*Quercus rubra*), black cherry (*Prunus serotina*), green ash, quaking aspen (*Populus tremuloides*), paper birch (*Betula papyrifera*), Japanese barberry, multifloral rose (*Rosa multiflora*), Pennsylvania sedge (*Carex pensylvanica*), wood fern (*Dryopteris carthusiana*), smooth brome (*Bromus inermis*), timothy (*Phleum pretense*), quackgrass (*Elymus repens*), Canada goldenrod and common milkweed (*Asclepias syriaca*). The uplands lack field indicators of hydric soil, and are not located in landscape positions that typically support wetland communities. Consequently these areas were not delineated as wetland.

2.4 FLORISTIC QUALITY ASSESMENT

Wetland functional quality assessments were completed, for a total of nine wetland types, consisting of six distinct natural communities and three additional degraded components of those communities. WRAM forms and associated species lists are included in Appendix F. A map depicting the Assessment Area and the 100-m Buffer is included in Figure 5.

Wetland functional values identified for the wetlands within the Project Area include human use values, floristic integrity, wildlife habitat, shoreline protection, flood and stormwater storage, water quality protection, and groundwater processes. Of these, the most significant wetland functional values within the Project Area were wildlife habitat, floristic integrity, and groundwater processes.

2.5 OTHER ENVIRONMENTAL CONSIDERATIONS

This report is limited to the identification of state and/or federally regulated wetlands within the Project Area. Kohler Company is completing other site specific-studies applicable to Federal, state, or local authority.

2.6 AGENCY FIELD REVIEW

Stantec and Kohler staff met with WDNR and USACE staff on the Project Area on October 8 and October 17, 2014 to review the Project Area, wetland delineation approach and findings. WDNR and USACE staff was in agreement with the assured wetland delineation approach and preliminary results presented by Stantec during the October 8 and 17, 2014 meeting. Table 2.6.1 summarizes attendees for each meeting.

Table 2.6.1 On Site Agency Field Review Meetings

Staff Present	October 8, 2014	October 17, 2014
Jeff Kraemer, Stantec	X	X
Mark Remington, Stantec	X	
Pat Trochlell, WDNR	X	
Kathi Kramasz, WDNR	X	X
Jay Schiefelbein, WDNR	X	
Jess Barley, Kohler	X	X
Jay Hoekstra, Kohler	X	X
Jeff Voltz, WDNR	X	X
Joey Shoemaker, USACE		X

3.0 CONCLUSION

Stantec performed an assured wetland determination and delineation of the Project Area on behalf of Kohler Company. The Project Area includes parcels owned by Kohler Company and the State of Wisconsin, totaling 382 acres located in Sections 11 and 14, Township 14 North, Range 23 East, Town of Wilson, Sheboygan County, Wisconsin. The purpose and objective of the assured wetland determination and delineation was to identify the extent and spatial arrangement of wetlands within the Project Area.

Eighty one (81) wetlands were identified and delineated on the State and Kohler parcels in accordance with state and federal guidelines and were subsequently flagged, surveyed with GPS, and mapped using GIS software. There were 44.91 acres of wetlands identified on the Kohler parcel and 79.21 acres of wetlands identified on the State parcel. Wetlands are composed of alder thicket, hardwood swamp, seasonally flooded basins, and wet meadow. Adjacent uplands are composed of dune, Great Lakes beach, forest dune, Northern forest (dry, dry-mesic, mesic), fallow old field and pine plantation.

The USACE has regulatory authority over Waters of the U.S. including adjacent wetlands, and the WDNR has regulatory authority over wetlands, navigable waters, and adjacent lands under Chapters 30 and 281 Wisconsin State Statutes, and Wisconsin Administrative Codes NR 103, 299, 350 and 353.

Prior to beginning work at this site or disturbing or altering wetlands, waterways, or adjacent lands in any way, Stantec recommends that the owner obtain the necessary permits or other agency regulatory review and concurrence with regard to the proposed work to comply with applicable regulations.

The information provided by Stantec regarding wetland boundaries is a scientific-based analysis of the wetland and upland conditions present on the site at the time of the fieldwork. The delineation was performed by experienced and qualified professionals using standard practices and sound professional judgment. The ultimate decision on wetland boundaries rests with the USACE and, in some cases, the WDNR or a local unit of government. As a result, there may be adjustments to boundaries based upon review by a regulatory agency. An agency determination can vary from time to time depending on various factors including, but not limited to recent precipitation patterns and the season of the year. In addition, the physical characteristics of the site can change over time, depending on the weather, vegetation patterns, drainage activities on adjacent parcels, or other events. Any of these factors can change the nature and extent of wetlands within the Project Area.

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APPENDICES

Appendix A – Figures

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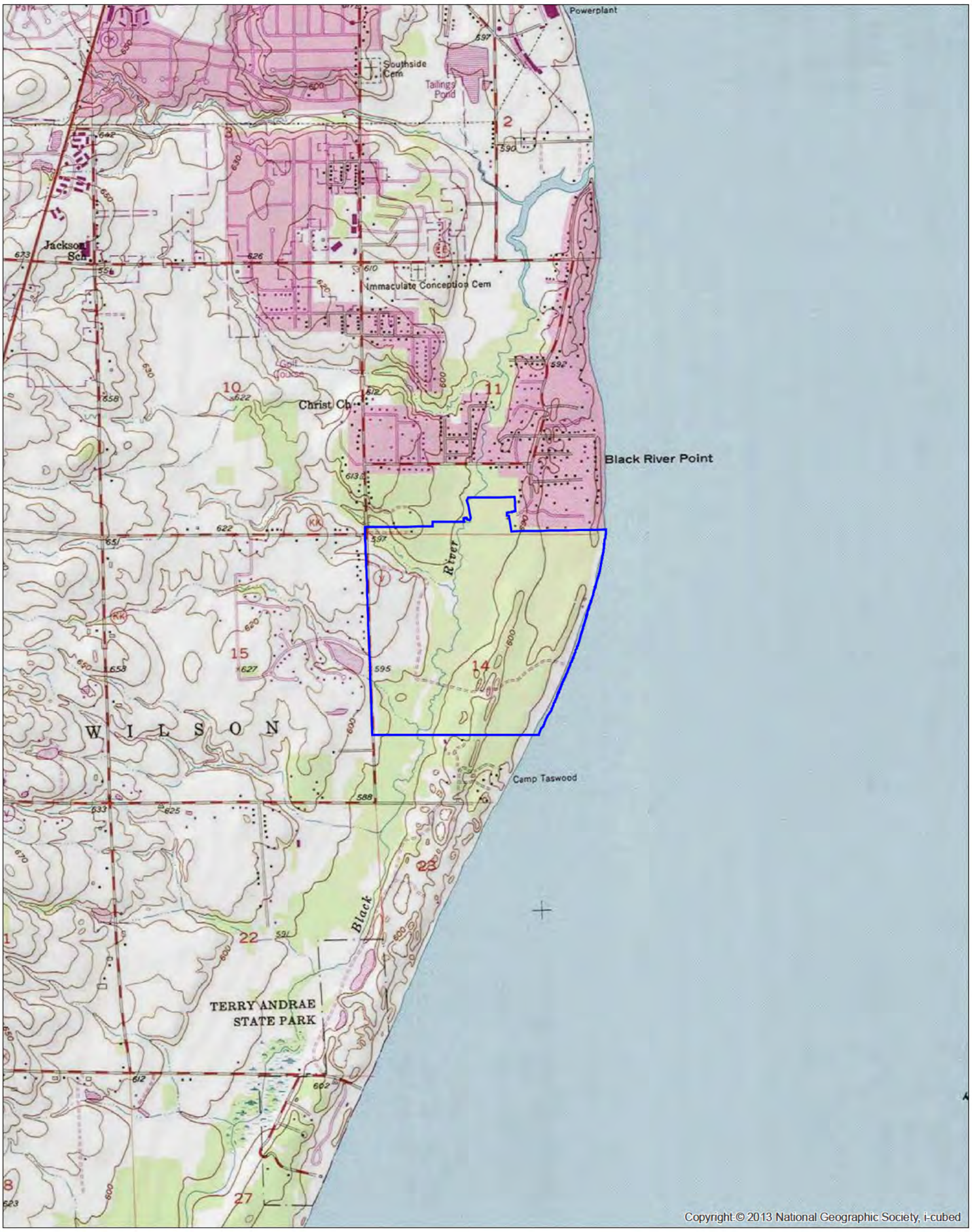

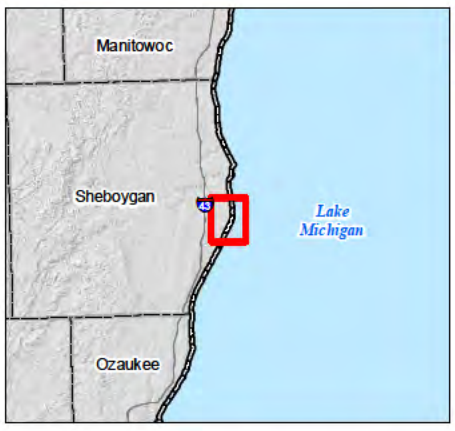

Legend

Approximate Project Boundary

Notes

1. Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet
2. Data Sources Include: Stantec Kohler Esri
3. Background: USGS 7 5' Topographic Quadrangles

Figure No.

1

Title

Project Location and Topography

Client/Project

Kohler Company
Proposed Golf Course - Town of Wilson

Project Location
T14N R23E S11; 14
T of Wilson Sheboygan Co WI

193703078
Prepared by MCP on 2014-11-17
Technical Review by JD on 2014-12-15
Independent Review by JG on 2015-03-19

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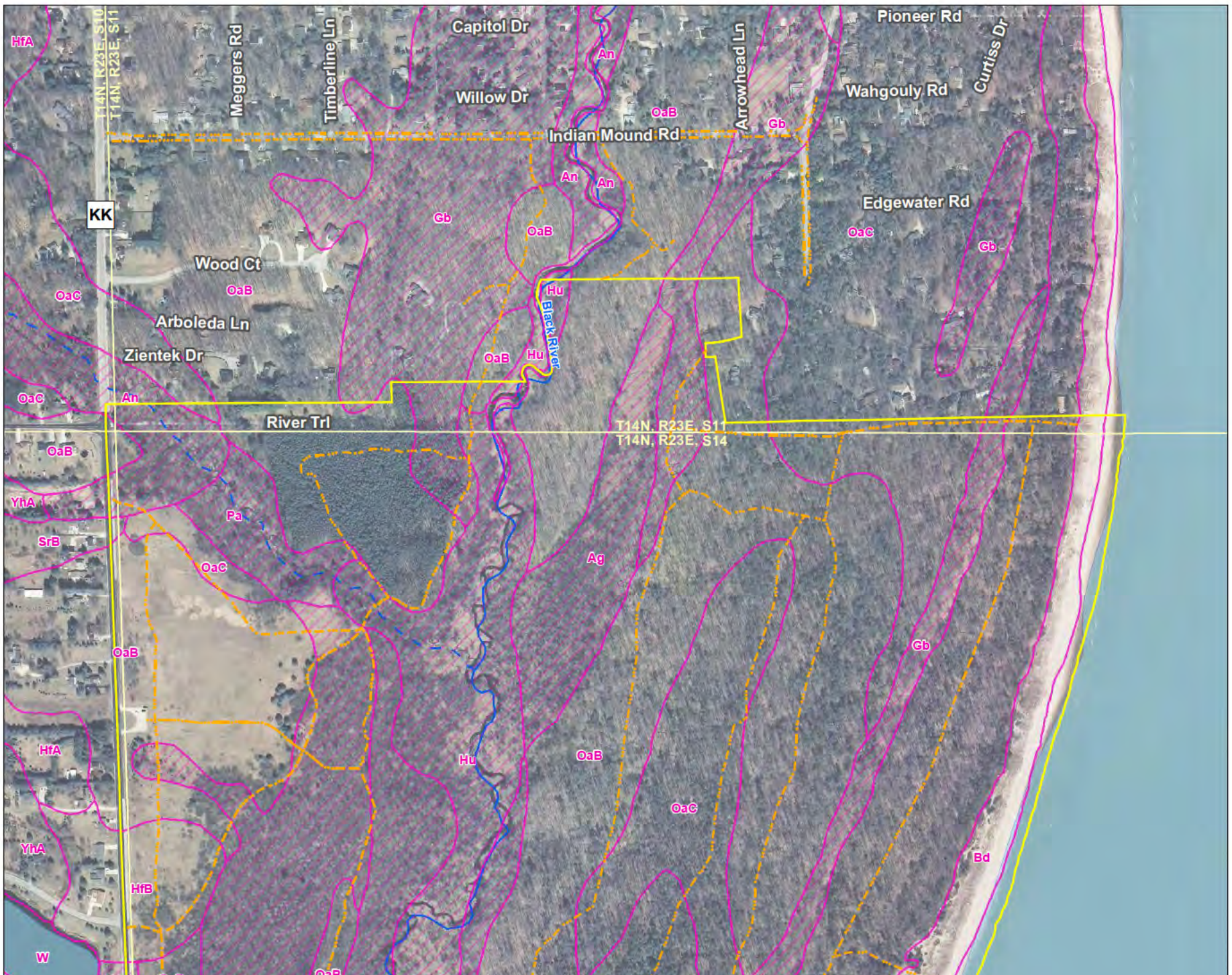
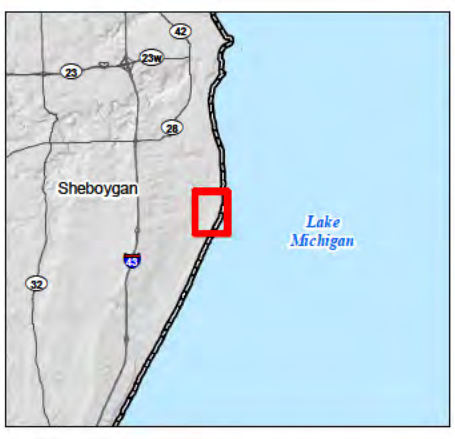
Stantec





Notes

1. Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet
2. Data Sources Include: Stantec Kohler WDNR WDOT NRCS
3. Orthophotography: 2010 WROC

Legend

- Approximate Project Boundary
- Existing Trail

NRCS Soil Survey Data

- Predominantly Hydric Soils
- Partially Hydric Soils
- Non-Hydric Soils

DNR 24k Hydrography

- Perennial Stream
- Intermittent Stream
- Waterbody

Figure No.

2

Title

NRCS Soil Survey Data

Client/Project

Kohler Company
Proposed Golf Course - Town of Wilson

Project Location
T14N R23E S11; 14
T of Wilson Sheboygan Co WI

193703078
Prepared by MCP on 2014-11-17
Technical Review by JD on 2014-12-15
Independent Review by JG on 2015-03-19

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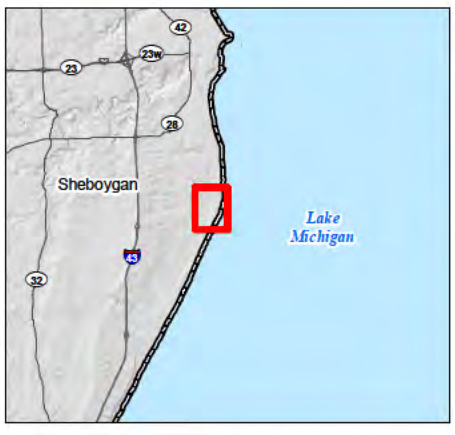
Stantec



Legend

- Approximate Project Boundary
- Existing Trail
- Wisconsin Wetland Inventory

DNR 24k Hydrography

- Perennial Stream
- Intermittent Stream
- Waterbody

Notes

1. Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet
2. Data Sources Include: Stantec Kohler WDNR WDOT
3. Orthophotography: 2010 WROC

Figure No.
3

Title
Wisconsin Wetland Inventory

Client/Project
Kohler Company
Proposed Golf Course - Town of Wilson

Project Location
T14N R23E S11; 14
T of Wilson Sheboygan Co WI

193703078
Prepared by MCP on 2014-11-17
Technical Review by JD on 2014-12-15
Independent Review by JG on 2015-03-19

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Stantec

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Zientek Dr

KK

V

River Trl

RT1

RT2

BR

BR

W16

W15

W26

rt-2a-u

rt-6a-w

rt-6a-u

rt-6b-u

rt-6b-w

rt-6c-u

rt-6c-w

17du

17dw

17cw

17cu

17bw

17bu

16w

16bu

17/18u

18w

17w

14bw

14bu

13/14u

14w

15u

15w

13w

15cw

15bw

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19bw

25bu

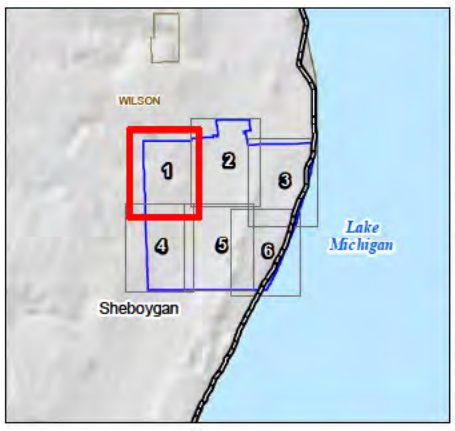
25bw

25cu

19/20u

20w

19w



Legend

- Approximate Project Boundary
- Existing Trail
- Sample Point
- Field Delineated Wetland
- Mosaic Beech/Maple Complex
- Aerially Identified Perennial Stream
- Aerially Identified Intermittent Stream
- Aerially Identified Stream Area

DNR 24k Hydrography

- Perennial Stream
- Intermittent Stream
- Waterbody

Figure No.

4

Title

Field Collected Data

Client/Project

Kohler Company
Proposed Golf Course - Town of Wilson

Project Location
T14N R23E S11; 14
T of Wilson Sheboygan Co WI

193703078
Prepared by MCP on 2014-11-17
Technical Review by DG on 2014-12-15
Independent Review by JG on 2015-03-19

0 100 200 Feet

1 2 400 (At Original document size of 11x17)

N

Stantec

Notes

1. Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet
2. Data Sources Include: Stantec Kohler WDNR WDOT
3. Orthophotography: 2010 WROC

River Trl
Timberlake Rd
RT2
BR
Black River
Mosaic Beech/Maple Wetland Complex
br-14a-w
br-14a-u
br-12a-u
br-12a-w
br-11-w
br-11-u
br-11b-u
br-10b-w
br-10c-w
br-10b-u
br-10c-u
br-10d-u
rt-2a-u
rt-2a-w
rt-6e-u
rt-6e-w
br-14b-w
br-14b-u
br-13a-u
br-13a-w
br-9a-w
br-9b-u
br-9b-w
br-9a-u
rt-6d-u
rt-6d-w
br-14c-u
br-14c-w
P-77
p-77w
p-77u
br-8a-w
br-8a-u
p-57u
P-57
p-57w
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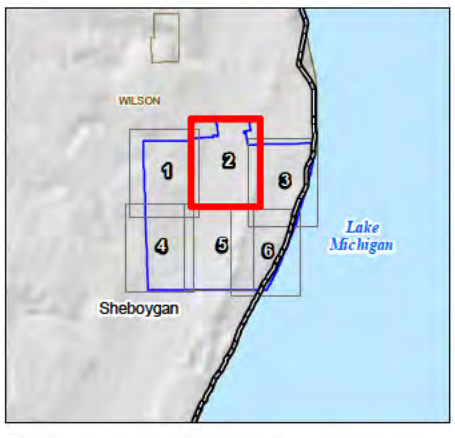
br-6a-u
p-56u



Notes
1. Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet
2. Data Sources Include: Stantec Kohler WDNR WDOT
3. Orthophotography: 2010 WROC

Legend

- Approximate Project Boundary
- Existing Trail
- Sample Point
- Field Delineated Wetland
- Mosaic Beech/Maple Complex
- Aerially Identified Perennial Stream
- Aerially Identified Intermittent Stream
- Aerially Identified Stream Area

DNR 24k Hydrography

- Perennial Stream
- Intermittent Stream
- Waterbody

Figure No.
4

Title
Field Collected Data

Client/Project
Kohler Company
Proposed Golf Course - Town of Wilson

Project Location
T14N R23E S11; 14
T of Wilson Sheboygan Co WI

193703078
Prepared by MCP on 2014-11-17
Technical Review by DG on 2014-12-15
Independent Review by JG on 2015-03-19

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Stantec

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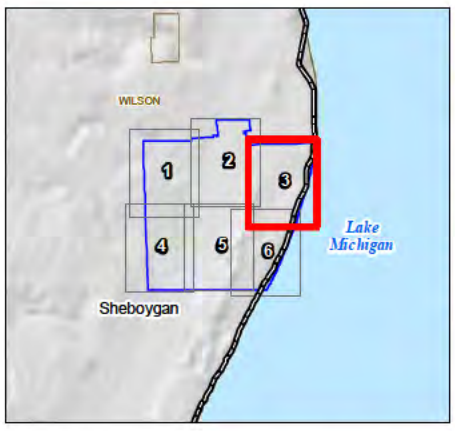

Notes
1. Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet
2. Data Sources Include: Stantec Kohler WDNR WDOT
3. Orthophotography: 2010 WROC

Legend

- Approximate Project Boundary
- Existing Trail
- Sample Point
- Field Delineated Wetland
- Mosaic Beech/Maple Complex
- Aerially Identified Perennial Stream
- Aerially Identified Intermittent Stream
- Aerially Identified Stream Area

DNR 24k Hydrography

- Perennial Stream
- Intermittent Stream
- Waterbody

Figure No.
4

Title
Field Collected Data

Client/Project
Kohler Company
Proposed Golf Course - Town of Wilson

Project Location
T14N R23E S11; 14
T of Wilson Sheboygan Co WI

193703078
Prepared by MCP on 2014-11-17
Technical Review by DG on 2014-12-15
Independent Review by JG on 2015-03-19

0 100 200 Feet
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Stantec

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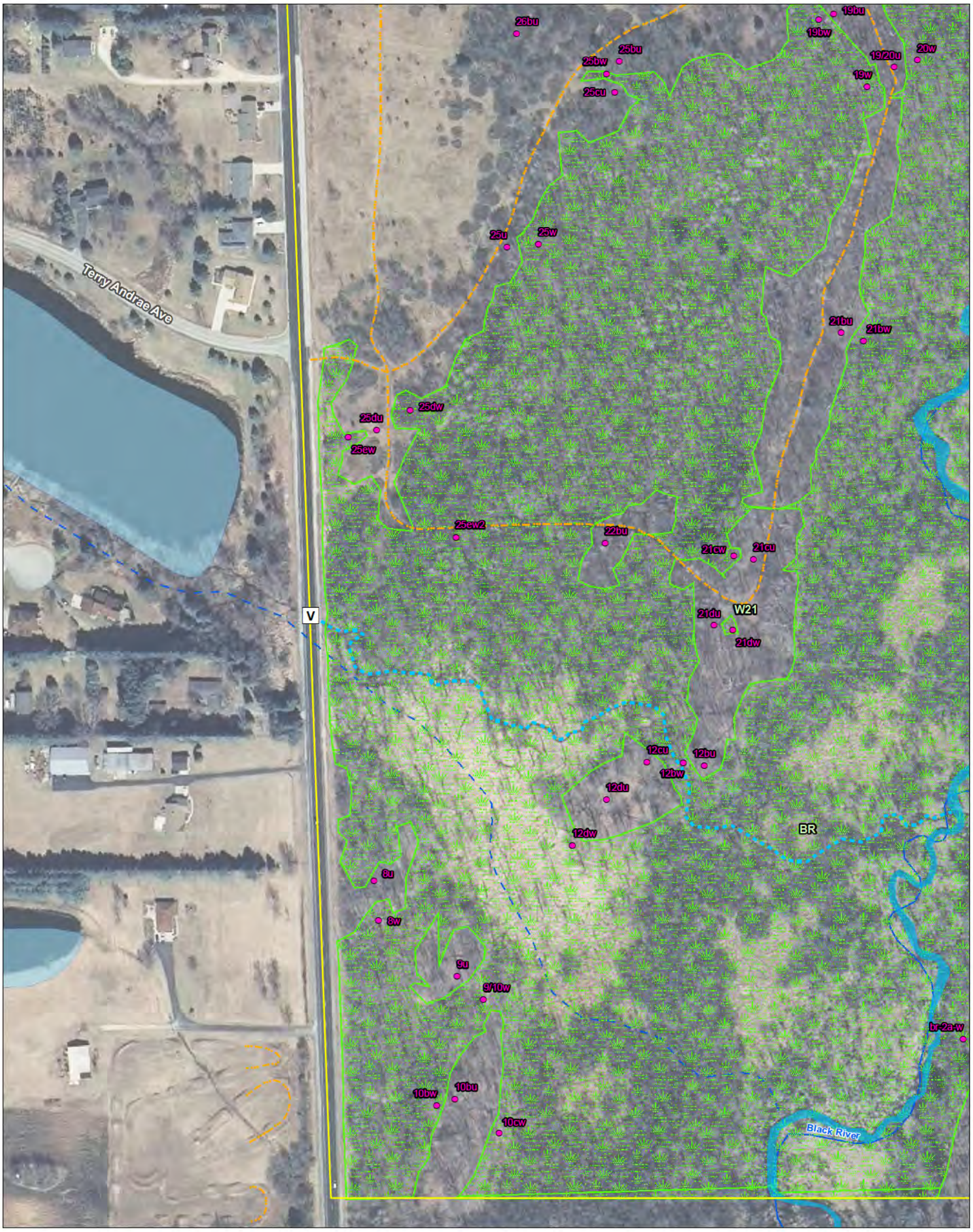

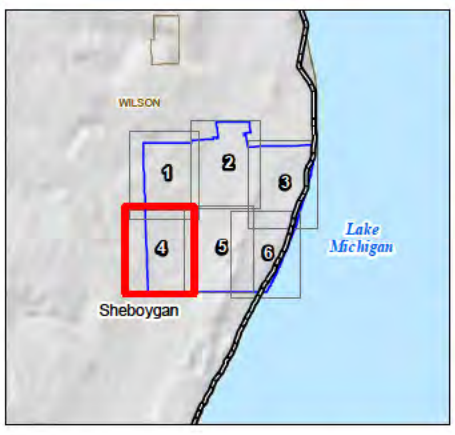

Notes
1. Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet
2. Data Sources Include: Stantec Kohler WDNR WDOT
3. Orthophotography: 2010 WROC

Legend

- Approximate Project Boundary
- Existing Trail
- Sample Point
- Field Delineated Wetland
- Mosaic Beech/Maple Complex
- Aerially Identified Perennial Stream
- Aerially Identified Intermittent Stream
- Aerially Identified Stream Area

DNR 24k Hydrography
- Perennial Stream
- Intermittent Stream
- Waterbody

Figure No.
4

Title
Field Collected Data

Client/Project
Kohler Company
Proposed Golf Course - Town of Wilson

Project Location
T14N R23E S11; 14
T of Wilson Sheboygan Co WI

193703078
Prepared by MCP on 2014-11-17
Technical Review by DG on 2014-12-15
Independent Review by JG on 2015-03-19

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Stantec

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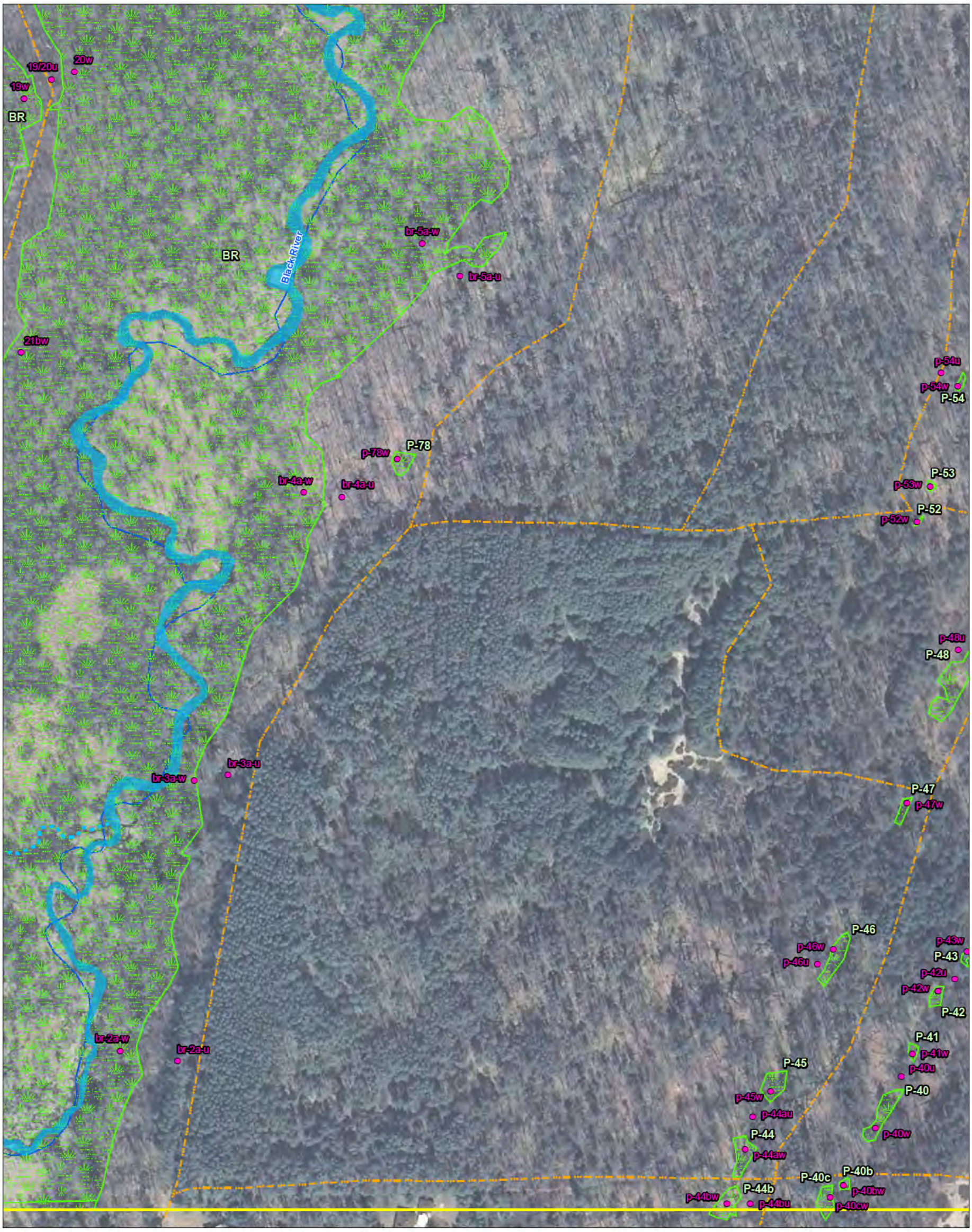

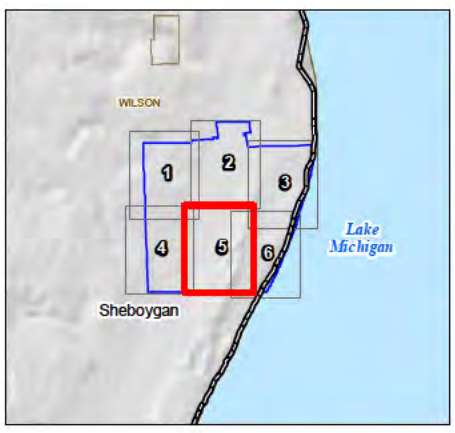

Notes
1. Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet
2. Data Sources Include: Stantec Kohler WDNR WDOT
3. Orthophotography: 2010 WROC

Legend

- Approximate Project Boundary
- Existing Trail
- Sample Point
- Field Delineated Wetland
- Mosaic Beech/Maple Complex
- Aerially Identified Perennial Stream
- Aerially Identified Intermittent Stream
- Aerially Identified Stream Area

DNR 24k Hydrography

- Perennial Stream
- Intermittent Stream
- Waterbody

Figure No.
4

Title
Field Collected Data

Client/Project
Kohler Company
Proposed Golf Course - Town of Wilson

Project Location
T14N R23E S11; 14
T of Wilson Sheboygan Co WI

193703078
Prepared by MCP on 2014-11-17
Technical Review by DG on 2014-12-15
Independent Review by JG on 2015-03-19

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Stantec

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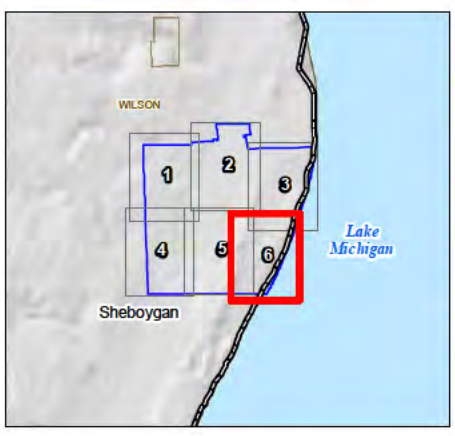

Notes
1. Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet
2. Data Sources Include: Stantec Kohler WDNR WDOT
3. Orthophotography: 2010 WROC

Legend

- Approximate Project Boundary
- Existing Trail
- Sample Point
- Field Delineated Wetland
- Mosaic Beech/Maple Complex
- Aerially Identified Perennial Stream
- Aerially Identified Intermittent Stream
- Aerially Identified Stream Area

DNR 24k Hydrography

- Perennial Stream
- Intermittent Stream
- Waterbody

Figure No.
4

Title
Field Collected Data

Client/Project
Kohler Company
Proposed Golf Course - Town of Wilson

Project Location
T14N R23E S11; 14
T of Wilson Sheboygan Co WI

193703078
Prepared by MCP on 2014-11-17
Technical Review by DG on 2014-12-15
Independent Review by JG on 2015-03-19

0 100 200 Feet
1 2 400 (At Original document size of 11x17)

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Stantec

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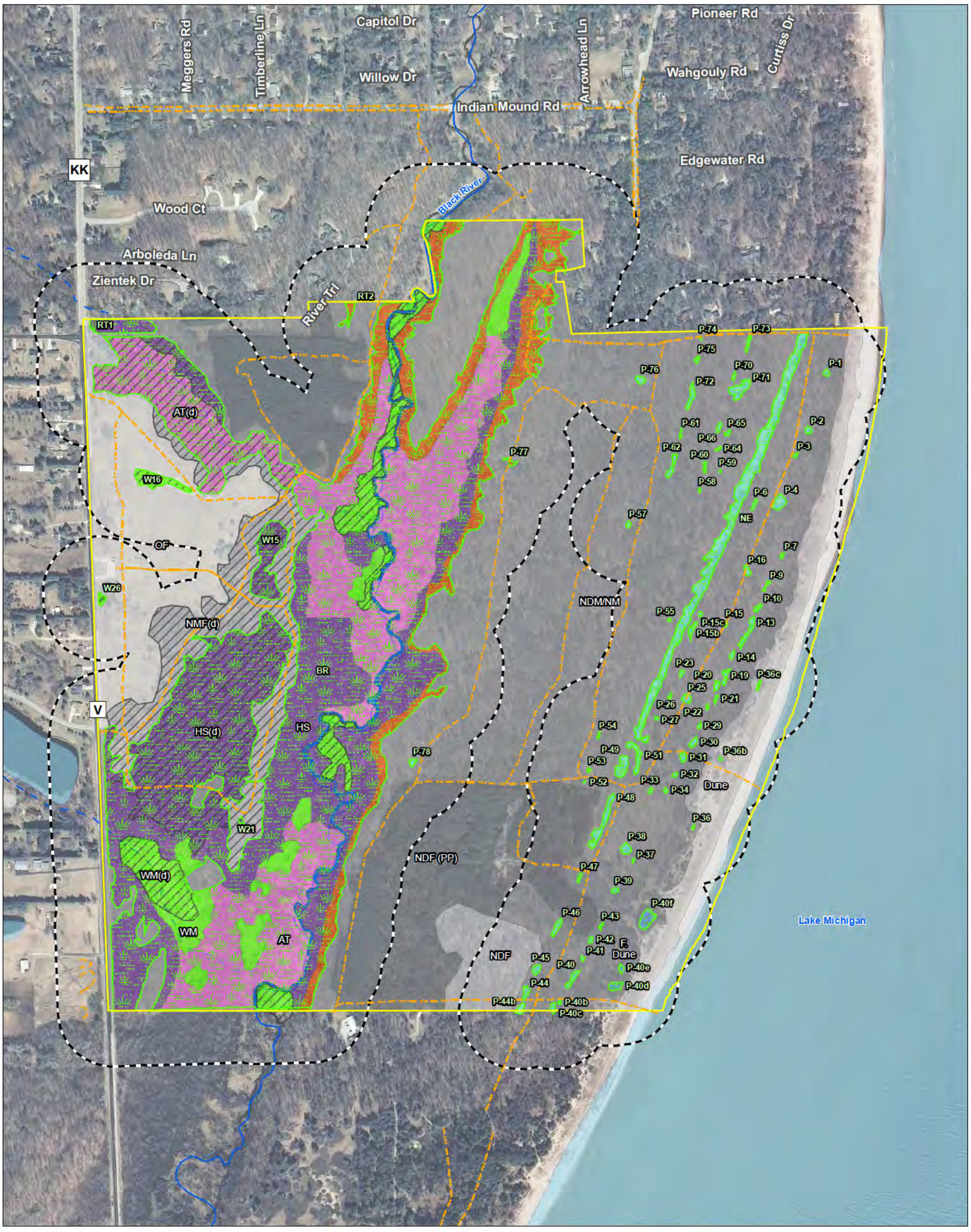

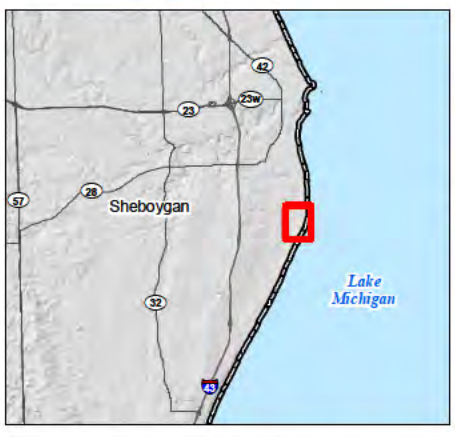

Notes
1. Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet
2. Data Sources Include: Stantec Excel WDNR WDOT
3. Orthophotography: 2010 WROC

Legend

- Approximate Project Boundary
- Existing Trail
- Field Delineated Wetland
- 100m Wetland Buffer

Botanical Community (total acres [degraded acres])

- AT - Alder Thicket (38.4ac [7.7ac degraded])
- HS - Hardwood Swamp (50.1ac [18.9ac degraded])
- HS/FS - Hardwood Swamp/Forested Seep (13.1ac)
- IW - Interdunal Wetland (0.3ac)
- OW - Open Water (2.9ac)
- SWC - Swale Wetland Complex (5.3ac)
- WM - Wet Meadow (13.8ac [8.1ac degraded])
- Degraded Area (d)*

DNR 24k Hydrography

- Perennial Stream
- Intermittent Stream
- Waterbody

Figure No.
5

Title
Wisconsin Wetland Rapid Assessment Area and 100-m Buffer

Client/Project
Kohler Company
Proposed Golf Course - Town of Wilson

Project Location
T14N R23E S11; 14
T of Wilson Sheboygan Co WI

193703078
Prepared by MCP on 2014-11-06
Technical Review by JS on 2014-11-06
Independent Review by JG on 2015-03-19

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Stantec

Appendix B – WETS Analysis

WETS Analysis Worksheet

Project Name: Kohler Golf Course
Project Number: 193703078
Period of interest: July-September 19th
Station: Sheboygan 7725
County: Sheboygan County

Long-term rainfall records (from WETS table)

	Month	3 years in 10 less than	Normal	3 years in 10 greater than
1st month prior:	Sept 1-19	1.73 (1.06)	3.29	4.01 (2.48)
2nd month prior:	August	2.58	4.08	4.92
3rd month prior:	July	2.3	3.19	3.76
		Sum =	**10.56**	

Site determination

Site Rainfall (in)	Condition Dry/Normal*/Wet	Condition** Value	Month Weight	Product
1.29	Normal	2	3	6
2.72	Normal	2	2	4
1.64	Dry	1	1	1
Sum = **5.65**			Sum*** =	**11**

*Normal precipitation with 30% to 70% probability of occurrence

Determination:
_____ Wet
_____ Dry
X Normal

**Condition value:
Dry = 1
Normal = 2
Wet = 3

***If sum is:

6 to 9	then period has been drier than normal
10 to 14	then period has been normal
15 to 18	then period has been wetter than normal

Precipitation data source: http://agacis.rcc-acis.org/55117/wets/results

Reference: Donald E.Woodward, ed. 1997. *Hydrology Tools for Wetland Determination* , Chapter 19. Engineering Field Handbook. U.S. Department of Agriculture, Natural Resources Conservation Service, Fort Worth, TX.

WETS Analysis Worksheet

Project Name: Kohler Golf Course
Project Number: 193703078
Period of interest: July-September 22th
Station: Sheboygan 7725
County: Sheboygan County

Long-term rainfall records (from WETS table)

	Month	3 years in 10 less than	Normal	3 years in 10 greater than
1st month prior:	Sept 1-22	1.73 (1.27)	3.29	4.01 (2.94)
2nd month prior:	August	2.58	4.08	4.92
3rd month prior:	July	2.3	3.19	3.76
		Sum =	**10.56**	

Site determination

Site Rainfall (in)	Condition Dry/Normal*/Wet	Condition** Value	Month Weight	Product
1.38	Normal	2	3	6
2.72	Normal	2	2	4
1.64	Dry	1	1	1
Sum = **5.74**			Sum*** =	**11**

*Normal precipitation with 30% to 70% probability of occurrence

Determination:
_____ Wet
_____ Dry
X Normal

**Condition value:
Dry = 1
Normal = 2
Wet = 3

***If sum is:

6 to 9	then period has been drier than normal
10 to 14	then period has been normal
15 to 18	then period has been wetter than normal

Precipitation data source: http://agacis.rcc-acis.org/55117/wets/results

Reference: Donald E.Woodward, ed. 1997. *Hydrology Tools for Wetland Determination* , Chapter 19. Engineering Field Handbook. U.S. Department of Agriculture, Natural Resources Conservation Service, Fort Worth, TX.

WETS Analysis Worksheet

Project Name: Kohler Golf Course
Project Number: 193703078
Period of interest: July-September 29th
Station: Sheboygan 7725
County: Sheboygan County

Long-term rainfall records (from WETS table)

	Month	3 years in 10 less than	Normal	3 years in 10 greater than
1st month prior:	Sept 1-29	1.73 (1.67)	3.29	4.01 (3.78)
2nd month prior:	August	2.58	4.08	4.92
3rd month prior:	July	2.3	3.19	3.76
		Sum =	**10.56**	

Site determination

Site Rainfall (in)	Condition Dry/Normal*/Wet	Condition** Value	Month Weight	Product
1.47	Dry	1	3	3
2.72	Normal	2	2	4
1.64	Dry	1	1	1
Sum = **5.83**			Sum*** =	**8**

*Normal precipitation with 30% to 70% probability of occurrence

Determination:

	Wet
X	Dry
	Normal

**Condition value:

Dry =	1
Normal =	2
Wet =	3

***If sum is:

6 to 9	then period has been drier than normal
10 to 14	then period has been normal
15 to 18	then period has been wetter than normal

Precipitation data source: http://agacis.rcc-acis.org/55117/wets/results

Reference: Donald E.Woodward, ed. 1997. *Hydrology Tools for Wetland Determination* , Chapter 19. Engineering Field Handbook. U.S. Department of Agriculture, Natural Resources Conservation Service, Fort Worth, TX.

WETS Analysis Worksheet

Project Name: Kohler Golf Course
Project Number: 193703078
Period of interest: July-September
Station: Sheboygan 7725
County: Sheboygan County

Long-term rainfall records (from WETS table)

	Month	3 years in 10 less than	Normal	3 years in 10 greater than
1st month prior:	Sept	1.73	3.29	4.01
2nd month prior:	August	2.58	4.08	4.92
3rd month prior:	July	2.3	3.19	3.76
		Sum =	**10.56**	

Site determination

Site Rainfall (in)	Condition Dry/Normal*/Wet	Condition** Value	Month Weight	Product
1.47	Dry	1	3	3
2.72	Normal	2	2	4
1.64	Dry	1	1	1
Sum = **5.83**			Sum*** =	**8**

*Normal precipitation with 30% to 70% probability of occurrence

Determination:

	Wet
X	Dry
	Normal

**Condition value:

Dry =	1
Normal =	2
Wet =	3

***If sum is:

6 to 9	then period has been drier than normal
10 to 14	then period has been normal
15 to 18	then period has been wetter than normal

Precipitation data source: http://agacis.rcc-acis.org/55117/wets/results

Reference: Donald E.Woodward, ed. 1997. *Hydrology Tools for Wetland Determination* , Chapter 19. Engineering Field Handbook. U.S. Department of Agriculture, Natural Resources Conservation Service, Fort Worth, TX.

WETS Analysis Worksheet

Project Name: Kohler Golf Course
Project Number: 193703078
Period of interest: August-October 13th
Station: Sheboygan 7725
County: Sheboygan County

Long-term rainfall records (from WETS table)

	Month	3 years in 10 less than	Normal	3 years in 10 greater than
1st month prior:	Oct 1-13	1.68 (0.70)	2.51	3.00 (1.26)
2nd month prior:	September	1.73	3.29	4.01
3rd month prior:	August	2.58	4.08	4.92
		Sum =	**9.88**	

Site determination

Site Rainfall (in)	Condition Dry/Normal*/Wet	Condition** Value	Month Weight	Product
2.69	Wet	3	3	9
1.47	Dry	1	2	2
2.72	Normal	1	1	1
Sum = **6.88**			Sum*** =	**12**

*Normal precipitation with 30% to 70% probability of occurrence

Determination:
_____ Wet
_____ Dry
X Normal

**Condition value:
Dry = 1
Normal = 2
Wet = 3

***If sum is:

6 to 9	then period has been drier than normal
10 to 14	then period has been normal
15 to 18	then period has been wetter than normal

Precipitation data source: http://agacis.rcc-acis.org/55117/wets/results

Reference: Donald E.Woodward, ed. 1997. *Hydrology Tools for Wetland Determination* , Chapter 19. Engineering Field Handbook. U.S. Department of Agriculture, Natural Resources Conservation Service, Fort Worth, TX.

WETS Analysis Worksheet

Project Name: Kohler Golf Course
Project Number: 193703078
Period of interest: August-October 14th
Station: Sheboygan 7725
County: Sheboygan County

Long-term rainfall records (from WETS table)

	Month	3 years in 10 less than	Normal	3 years in 10 greater than
1st month prior:	Oct 1-14	1.68 (0.76)	2.51	3.00 (1.35)
2nd month prior:	September	1.73	3.29	4.01
3rd month prior:	August	2.58	4.08	4.92
		Sum =	**9.88**	

Site determination

Site Rainfall (in)	Condition Dry/Normal*/Wet	Condition** Value	Month Weight	Product
3.10	Wet	3	3	9
1.47	Dry	1	2	2
2.72	Normal	1	1	1
Sum = **7.29**			Sum*** =	**12**

*Normal precipitation with 30% to 70% probability of occurrence

Determination:
_____ Wet
_____ Dry
X Normal

**Condition value:
Dry = 1
Normal = 2
Wet = 3

***If sum is:

6 to 9	then period has been drier than normal
10 to 14	then period has been normal
15 to 18	then period has been wetter than normal

Precipitation data source: http://agacis.rcc-acis.org/55117/wets/results

Reference: Donald E.Woodward, ed. 1997. *Hydrology Tools for Wetland Determination* , Chapter 19. Engineering Field Handbook. U.S. Department of Agriculture, Natural Resources Conservation Service, Fort Worth, TX.

WETS Analysis Worksheet

Project Name: Kohler Golf Course
Project Number: 193703078
Period of interest: August-October 22nd
Station: Sheboygan 7725
County: Sheboygan County

Long-term rainfall records (from WETS table)

	Month	3 years in 10 less than	Normal	3 years in 10 greater than
1st month prior:	Oct 1-22	1.68 (1.19)	2.51	3.00 (2.13)
2nd month prior:	September	1.73	3.29	4.01
3rd month prior:	August	2.58	4.08	4.92
		Sum =	**9.88**	

Site determination

Site Rainfall (in)	Condition Dry/Normal*/Wet	Condition** Value	Month Weight	Product
3.29	Wet	3	3	9
1.47	Dry	1	2	2
2.72	Normal	1	1	1
Sum = **7.48**			Sum*** =	**12**

*Normal precipitation with 30% to 70% probability of occurrence

Determination:
_____ Wet
_____ Dry
X Normal

**Condition value:
Dry = 1
Normal = 2
Wet = 3

***If sum is:

6 to 9	then period has been drier than normal
10 to 14	then period has been normal
15 to 18	then period has been wetter than normal

Precipitation data source: http://agacis.rcc-acis.org/55117/wets/results

Reference: Donald E.Woodward, ed. 1997. *Hydrology Tools for Wetland Determination* , Chapter 19. Engineering Field Handbook. U.S. Department of Agriculture, Natural Resources Conservation Service, Fort Worth, TX.

WETS Analysis Worksheet

Project Name: Kohler Golf Course
Project Number: 193703078
Period of interest: August-October 23rd
Station: Sheboygan 7725
County: Sheboygan County

Long-term rainfall records (from WETS table)

	Month	3 years in 10 less than	Normal	3 years in 10 greater than
1st month prior:	Oct 1-23	1.68 (1.25)	2.51	3.00 (2.22)
2nd month prior:	September	1.73	3.29	4.01
3rd month prior:	August	2.58	4.08	4.92
		Sum =	**9.88**	

Site determination

Site Rainfall (in)	Condition Dry/Normal*/Wet	Condition** Value	Month Weight	Product
3.42	Wet	3	3	9
1.47	Dry	1	2	2
2.72	Normal	1	1	1
Sum = **7.61**			Sum*** =	**12**

*Normal precipitation with 30% to 70% probability of occurrence

Determination:
_____ Wet
_____ Dry
X Normal

**Condition value:
Dry = 1
Normal = 2
Wet = 3

***If sum is:

6 to 9	then period has been drier than normal
10 to 14	then period has been normal
15 to 18	then period has been wetter than normal

Precipitation data source: http://agacis.rcc-acis.org/55117/wets/results

Reference: Donald E.Woodward, ed. 1997. *Hydrology Tools for Wetland Determination* , Chapter 19. Engineering Field Handbook. U.S. Department of Agriculture, Natural Resources Conservation Service, Fort Worth, TX.

Appendix C – Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703195
Applicant:	Excel Engineering		
Investigator #1:	Chuck Herrmann	Investigator #2:	Mark Remington
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	T3K
Landform:	Terrace	Local Relief:	Linear
Slope (%):	0-2	Latitude: N/A	Longitude: N/A
Datum:	N/A		

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	08/13/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	W1
Sample Point:	8u
Community ID:	upland deciduous forest
Section:	14
Township:	14N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ Yes ☑ No

Remarks: Sample plot is located in an upland deciduous forest. WETS analysis determined that the antecedent precipitation conditions were drier than normal.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☐ Yes ☑ No	Depth:	>28	(in.)
Saturation Present?	☐ Yes ☑ No	Depth:	>28	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Mottles Color (Moist)	Mottles Color (Moist)	Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	9	A	10YR	3/1	100	--			--	--	loamy sand
9	10	E	10YR	6/1	95	7.5YR	3/4	5	C	M	loamy sand
10	28	B	7.5YR	3/4	100	--			--	--	loamy sand
--	--	--	--	--	--	--		--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ F1 - Loamy Muck Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years. Matrix not depleted, presense of E horizon.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: W1 | Sample Point 8u

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Betula papyrifera*	40	Y	FACU
2.	*Prunus serotina*	30	Y	FACU
3.	*Hamamelis virginiana*	10	N	FACU
4.	*Carpinus caroliniana*	10	N	FAC
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	90		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*BERBERIS THUNBERGII*	10	Y	FACU
2.	*Carpinus caroliniana*	5	Y	FAC
3.	*LONICERA TATARICA*	2	N	FACU
4.	–		–	–
5.	–		–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	17		

Herb Stratum (Plot size: 2 meter radius)

1.	*Aster macrophyllus*	25	Y	UPL
2.	*Carex pensylvanica*	20	Y	UPL
3.	*Solidago gigantea*	10	N	FACW
4.	*Caulophyllum thalictroides*	10	N	UPL
5.	*Trillium cernuum*	5	N	FAC
6	*ARCTIUM MINUS*	2	N	FACU
7.	–		–	–
8.	–		–	–
9.	–		–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	72		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–		–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 16.7% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	10	x 2 =	20
FAC spp.	20	x 3 =	60
FACU spp.	94	x 4 =	376
UPL spp.	55	x 5 =	275
Total	179 (A)		731 (B)

Prevalence Index = B/A = 4.084

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703195
Applicant:	Excel Engineering		
Investigator #1:	Chuck Herrmann	Investigator #2:	Mark Remington
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	T3K
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	08/13/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	W1
Sample Point:	8W
Community ID:	Forested Wetland
Section:	14
Township:	14N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a forested wetland. WETS analysis determined that the antecedent precipitation conditions were drier than normal.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 18	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 12	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 1 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Mottles Color (Moist)	Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	6	A	10YR 2/1	100	--	--	--	--	loamy sand
6	16	B	10YR 6/1	100	--	--	--	--	loamy sand
16	20	B	10YR 6/1	80	10YR 4/4	20	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ F1 - Loamy Muck Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 Indicator described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: W1 | Sample Point 8W

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	30	Y	FACW
2.	*Betula papyrifera*	15	Y	FACU
3.	*Hamamelis virginiana*	5	N	FACU
4.	*Prunus serotina*	2	N	FACU
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	52		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*BERBERIS THUNBERGII*	20	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	20		

Herb Stratum (Plot size: 2 meter radius)

1.	*PHALARIS ARUNDINACEA*	40	Y	FACW
2.	*Onoclea sensibilis*	30	Y	FACW
3.	*Solidago gigantea*	5	N	FACW
4.	*Symplocarpus foetidus*	5	N	OBL
5.	*Lycopus virginicus*	2	N	OBL
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	82		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	7	x 1 =	7
FACW spp.	105	x 2 =	210
FAC spp.	0	x 3 =	0
FACU spp.	42	x 4 =	168
UPL spp.	0	x 5 =	0
Total	154 (A)		385 (B)

Prevalence Index = B/A = 2.500

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703195	Date:	08/13/14
Applicant:	Excel Engineering			County:	Sheboygan
Investigator #1:	Chuck Herrmann	Investigator #2:	Mark Remington	State:	Wisconsin
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	T3K	Wetland ID:	W1
Landform:	Depression	Local Relief:	Concave	Sample Point:	9/10w
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Forested Wetland
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☐ Yes ☑ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in a forested wetland. WETS analysis determined that the antecedent precipitation conditions were drier than normal.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	16	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	12	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 1 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Mottles Color (Moist)	Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	8	A	10YR	2/1	100	--	--	--	--	--	sandy muck
8	20	B	10YR	5/1	100	--	--	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
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NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☑ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ F1 - Loamy Muck Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the S1 and A11 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: W1 | Sample Point 9/10w

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	40	Y	FACW
2.	*Betula alleghaniensis*	25	Y	FAC
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	65		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Fraxinus pennsylvanica*	5	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	5		

Herb Stratum (Plot size: 2 meter radius)

1.	*Onoclea sensibilis*	30	Y	FACW
2.	*Symplocarpus foetidus*	20	Y	OBL
3.	*Impatiens capensis*	15	Y	FACW
4.	*Dryopteris intermedia*	5	N	FAC
5.	*Solidago gigantea*	5	N	FACW
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	75		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *100.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	20	x 1 =	20
FACW spp.	95	x 2 =	190
FAC spp.	30	x 3 =	90
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	145 (A)		300 (B)

Prevalence Index = B/A = *2.069*

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703195
Applicant:	Excel Engineering		
Investigator #1:	Chuck Herrmann	Investigator #2:	Mark Remington
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	T3K
Landform:	Terrace	Local Relief:	Convex
Slope (%):	0-2	Latitude: N/A	Longitude: N/A
Datum:	N/A		

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	08/13/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	W1
Sample Point:	9u
Community ID:	upland deciduous forest
Section:	14
Township:	14N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ Yes ☑ No

Remarks: Sample plot is located in an upland deciduous forest. WETS analysis determined that the antecedent precipitation conditions were drier than normal.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☐ Yes ☑ No	Depth:	>28	(in.)
Saturation Present?	☐ Yes ☑ No	Depth:	>28	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Mottles Color (Moist)	Mottles Color (Moist)	Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	9	A	10YR	3/1	100	--		--	--	loamy sand
9	10	E	10YR	6/1	95	7.5YR	3/4	5	C	M	loamy sand
10	28	B	7.5YR	3/4	100	--		--	--	--	loamy sand
--	--	--	--	--	--	--		--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
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--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ F1 - Loamy Muck Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years. Depleted matrix not present, low chroma due to presence of E horizon

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: W1 | Sample Point 9u

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer saccharum*	10	Y	FACU
2.	*Fraxinus pennsylvanica*	5	Y	FACW
3.	*Fagus grandifolia*	5	Y	FACU
4.	–		–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	20		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*BERBERIS THUNBERGII*	15	Y	FACU
2.	–		–	–
3.	–		–	
4.	–		–	–
5.	–		–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	15		

Herb Stratum (Plot size: 2 meter radius)

1.	*Caulophyllum thalictroides*	25	Y	UPL
2.	*Solidago gigantea*	20	Y	FACW
3.	*Aster macrophyllus*	15	N	UPL
4.	*Acer saccharum*	5	N	FACU
5.	*Viola palmata*	5	N	FACU
6	*Galium boreale*	5	N	FAC
7.	*RUBUS IDAEUS VAR. IDAEUS*	2	N	FAC
8.	–		–	–
9.	–		–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	77		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–		–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *33.3%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	25	x 2 =	50
FAC spp.	7	x 3 =	21
FACU spp.	40	x 4 =	160
UPL spp.	40	x 5 =	200
Total	112 (A)		431 (B)

Prevalence Index = B/A = *3.848*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/14/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf	State:	Wisconsin
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	N/A	Wetland ID:	10B
Landform:	Terrace	Local Relief:	Convex	Sample Point:	10BU
Slope (%):	2-6	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Mesic forest
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		☑ Yes ☐ No		Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: Sample plot is located in a mesic forest. Recent rain even of 1.65 inches in last 24 hours. WETS analysis determined that the antecedent precipitation conditions were normal. 2.78 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR	3/2	100	--	--	--	sandy loam
4	5	2	10YR	5/2	100	--	--	--	sandy loam
5	24	3	10YR	5/6	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: 10B Sample Point 10BU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Ulmus americana*	20	Y	FACW
2.	*Betula papyrifera*	30	Y	FACU
3.	*Carpinus caroliniana*	10	N	FAC
4.	*Acer rubrum*	10	N	FAC
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	70		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Carpinus caroliniana*	5	Y	FAC
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	5		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex pensylvanica*	85	Y	UPL
2.	*BERBERIS THUNBERGII*	5	N	FACU
3.	*Solidago gigantea*	2	N	FACW
4.	*Ulmus americana*	2	N	FACW
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	94		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *50.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	24	x 2 =	48
FAC spp.	25	x 3 =	75
FACU spp.	35	x 4 =	140
UPL spp.	85	x 5 =	425
Total	169 (A)		688 (B)

Prevalence Index = B/A = *4.071*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/14/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf	State:	Wisconsin
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	T3K	Wetland ID:	10B
Landform:	Depression	Local Relief:	Concave	Sample Point:	10BW
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Hardwood swamp
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: The sample plot is located in a hardwood swamp. Recent rain even of 1.65 inches in last 24 hours. WETS analysis determined that the antecedent precipitation conditions were normal. 2.78 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☑ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☑ Yes ☐ No	Depth:	4	(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	surface	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	surface	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 3 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	11	1	10YR 2/1	100	--	--	--	--	mucky loam
11	18	2	10YR 4/1	88	10YR 5/6	12	C	M	sandy loam
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 Indicator described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: 10B | Sample Point **10BW**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	60	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	60		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Fraxinus pennsylvanica*	10	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	10		

Herb Stratum (Plot size: 2 meter radius)

1.	*PHALARIS ARUNDINACEA*	2	N	FACW
2.	*Solidago gigantea*	5	Y	FACW
3.	*Iris virginica*	5	Y	OBL
4.	*Carex stricta*	10	Y	OBL
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	22		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	15	x 1 =	15
FACW spp.	77	x 2 =	154
FAC spp.	0	x 3 =	0
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	92 (A)		169 (B)

Prevalence Index = B/A = ***1.837***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/14/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf	State:	Wisconsin
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	N/A	Wetland ID:	10C
Landform:	Depression	Local Relief:	Concave	Sample Point:	10CW
Slope (%):	0-2 Latitude: N/A	Longitude:	N/A	Datum: N/A	Community ID: Wet meadow
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: The sample plot is located in a wet meadow. Recent rain even of 1 65 inches in last 24 hours. WETS analysis determined that the antecedent precipitation conditions were normal. 2.78 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth: -	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 1	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: surface	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	15	1	10YR 2/1	95	10YR 4/6	5	C	M	silt loam
15	18	2	10YR 3/2	90	10YR 5/6	10	C	M	sandy loam
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☑ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the F6 Indicator described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: 10C | Sample Point **10CW**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	5	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	5		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Symplocarpus foetidus*	2	N	OBL
2.	*Thelypteris palustris*	5	N	FACW
3.	*Carex stricta*	30	Y	OBL
4.	*Solidago gigantea*	5	N	FACW
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	42		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	32	x 1 =	32
FACW spp.	15	x 2 =	30
FAC spp.	0	x 3 =	0
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	47 (A)		62 (B)

Prevalence Index = B/A = ***1.319***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/14/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf	State:	Wisconsin
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	N/A	Wetland ID:	12B
Landform:	Side slope	Local Relief:	Convex	Sample Point:	12BU
Slope (%):	2-6	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Mesic forest
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: Sample plot is located in a mesic forest. Recent rain even of 1 65 inches in last 24 hours. WETS analysis determined that the antecedent precipitation conditions were normal. 2.78 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 2 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	8	1	10YR	3/2	100	--	--	--	sandy loam
8	20	2	10YR	4/4	100	--	--	--	loamy sand
20	24	3	10YR	5/4	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: 12B Sample Point 12BU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Prunus serotina*	20	Y	FACU
2.	*Fraxinus pennsylvanica*	10	N	FACW
3.	*Quercus rubra*	40	Y	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	70		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Prunus serotina*	5	N	FACU
2.	*Prunus virginiana*	5	N	FACU
3.	*BERBERIS THUNBERGII*	20	Y	FACU
4.	*Carpinus caroliniana*	15	Y	FAC
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	45		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex pensylvanica*	80	Y	UPL
2.	*BERBERIS THUNBERGII*	15	N	FACU
3.	*Carex blanda*	2	N	FAC
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	97		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 20.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	10	x 2 =	20
FAC spp.	17	x 3 =	51
FACU spp.	105	x 4 =	420
UPL spp.	80	x 5 =	400
Total	212 (A)		891 (B)

Prevalence Index = B/A = 4.203

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/14/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	12B
Sample Point:	12BW
Community ID:	Hardwood swamp
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: the sample plot is located in a hardwood swamp. Recent rain even of 1 65 inches in last 24 hours. WETS analysis determined that the antecedent precipitation conditions were normal. 2.78 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation. Seasonal flow 6 feet to south of point, with 10" of water depth and 5 feet wide.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth: -	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 6	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 2	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 2 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 2 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Granby loamy fine sand Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	10	1	10YR 3/1	95	10YR 4/6	5	C	M	silt loam
10	20	2	10YR 6/2	95	10YR 5/6	5	C	M	sandy loam
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☑ F3 - Depleted Matrix
- ☑ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, F3 and F6 Indicator descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: 12B Sample Point **12BW**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	40	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	40		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*BERBERIS THUNBERGII*	10	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	10		

Herb Stratum (Plot size: 2 meter radius)

1.	*PHALARIS ARUNDINACEA*	30	Y	FACW
2.	*BERBERIS THUNBERGII*	15	Y	FACU
3.	*Solidago gigantea*	10	N	FACW
4.	*Thelypteris palustris*	5	N	FACW
5.	*Iris virginica*	5	N	OBL
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	65		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***50.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	5	x 1 =	5
FACW spp.	85	x 2 =	170
FAC spp.	0	x 3 =	0
FACU spp.	25	x 4 =	100
UPL spp.	0	x 5 =	0
Total	115 (A)		275 (B)

Prevalence Index = B/A = ***2.391***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the prevalence index. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Terrace	Local Relief:	Convex
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/14/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	12C
Sample Point:	12CU
Community ID:	Mesic forest
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ Yes ☑ No

Remarks: Sample plot is located in a mesic forest. Recent rain even of 1 65 inches in last 24 hours. WETS analysis determined that the antecedent precipitation conditions were normal. 2.78 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 2 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR 3/2	100	--	--	--	--	sandy loam
4	6	2	10YR 5/2	100	--	--	--	--	sandy loam
6	15	3	10YR 4/4	100	--	--	--	--	loamy sand
15	20	4	10YR 5/4	100	--	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: 12C Sample Point 12CU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer rubrum*	20	Y	FAC
2.	*Prunus serotina*	10	N	FACU
3.	*Quercus rubra*	60	Y	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	90		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*BERBERIS THUNBERGII*	30	Y	FACU
2.	*Crataegus crus-galli*	5	N	FAC
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	35		

Herb Stratum (Plot size: 2 meter radius)

1.	*BERBERIS THUNBERGII*	20	Y	FACU
2.	*Carex pensylvanica*	30	Y	UPL
3.	*Solidago gigantea*	2	N	FACW
4.	*POA PRATENSIS*	30	Y	FACU
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	82		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 16.7% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	2	x 2 =	4
FAC spp.	25	x 3 =	75
FACU spp.	150	x 4 =	600
UPL spp.	30	x 5 =	150
Total	207 (A)		829 (B)

Prevalence Index = B/A = 4.005

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/14/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf	State:	Wisconsin
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	N/A	Wetland ID:	12D
Landform:	Shoulder	Local Relief:	Convex	Sample Point:	12DU
Slope (%):	2-6 Latitude: N/A	Longitude:	N/A	Datum: N/A	Community ID: Mesic forest
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: Sample plot is located in mesic forest. Recent rain even of "1.65 inches in last 24 hours. WETS analysis determined that the antecedent precipitation conditions were normal. 2.78 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 2 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR	3/2	100	--	--	--	sandy loam
3	7	2	10YR	5/2	100	--	--	--	sandy loam
7	17	3	10YR	5/6	100	--	--	--	loamy sand
17	24	4	10YR	5/4	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: 12D Sample Point 12DU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer rubrum*	60	Y	FAC
2.	*Fraxinus pennsylvanica*	10	N	FACW
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	70		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*BERBERIS THUNBERGII*	30	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	30		

Herb Stratum (Plot size: 2 meter radius)

1.	*BERBERIS THUNBERGII*	40	Y	FACU
2.	*PHALARIS ARUNDINACEA*	5	N	FACW
3.	*Solidago gigantea*	5	N	FACW
4.	*Carex pensylvanica*	30	Y	UPL
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	80		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	20	x 2 =	40
FAC spp.	60	x 3 =	180
FACU spp.	70	x 4 =	280
UPL spp.	30	x 5 =	150
Total	180 (A)		650 (B)

Prevalence Index = B/A = 3.611

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/14/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf	State:	Wisconsin
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	T3/E1K	Wetland ID:	12D
Landform:	Depression	Local Relief:	Concave	Sample Point:	12DW
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Wet meadow
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: The sample plot is located in a wet meadow. Recent rain even of 1 65 inches in last 24 hours. WETS analysis determined that the antecedent precipitation conditions were normal. 2.78 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth: -	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 3	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: surface	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 2 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR 3/2	100	--	--	--	--	silt loam
4	9	2	10YR 3/2	95	10YR 4/1	5	C	M	silt loam
9	18	3	10YR 4/4	88	10YR 5/6	12	C	M	sandy loam
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☑ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the F6 Indicator described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: 12D Sample Point **12DW**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	10	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	10		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Carpinus caroliniana*	2	N	FAC
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	2		

Herb Stratum (Plot size: 2 meter radius)

1.	*PHALARIS ARUNDINACEA*	60	Y	FACW
2.	*Eutrochium maculatum*	5	N	OBL
3.	*CIRSIUM ARVENSE*	2	N	FACU
4.	*Thelypteris palustris*	10	N	FACW
5.	*BERBERIS THUNBERGII*	2	N	FACU
6	*Solidago gigantea*	5	N	FACW
7.	*Symphyotrichum ontarionis*	2	N	FAC
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	86		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	5	x 1 =	5
FACW spp.	85	x 2 =	170
FAC spp.	4	x 3 =	12
FACU spp.	4	x 4 =	16
UPL spp.	0	x 5 =	0
Total	98 (A)		203 (B)

Prevalence Index = B/A = ***2.071***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703195	Date:	08/14/14
Applicant:	Excel Engineering			County:	Sheboygan
Investigator #1:	Chuck Herrmann	Investigator #2:	Mark Remington	State:	Wisconsin
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	T3K	Wetland ID:	W1
Landform:	Terrace	Local Relief:	Convex	Sample Point:	13/14u
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: upland deciduous forest
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☐ Yes ☑ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: Sample plot is located in an upland deciduous forest. WETS analysis determined that the antecedent precipitation conditions were drier than normal.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	36	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	31	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Mottles Color (Moist)	Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	8	A	10YR 3/2	100	--		--	--	loamy sand
8	18	B	10YR 5/3	100	--		--	--	loamy sand
18	24	B	10YR 6/1	100	--		--	--	loamy sand
24	36	B	10YR 6/1	80	10YR 5/6	20	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ F1 - Loamy Muck Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: W1 Sample Point 13/14u

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Prunus serotina*	30	Y	FACU
2.	*Fraxinus pennsylvanica*	30	Y	FACW
3.	*Crataegus mollis*	10	N	FAC
4.	–		–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	70		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Rubus allegheniensis*	30	Y	FACU
2.	*RUBUS IDAEUS VAR. IDAEUS*	30	Y	FAC
3.	*Prunus serotina*	20	Y	FACU
4.	*ROSA MULTIFLORA*	20	Y	FACU
5.	–		–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	100		

Herb Stratum (Plot size: 2 meter radius)

1.	*POA PRATENSIS*	30	Y	UPL
2.	*GLECHOMA HEDERACEA*	20	Y	UPL
3.	*TARAXACUM OFFICINALE*	10	Y	UPL
4.	*TRIFOLIUM REPENS*	10	Y	FACU
5.	*PLANTAGO MAJOR*	10	Y	FACU
6	*Viola palmata*	5	N	FACU
7.	*Galium boreale*	5	N	FAC
8.	*Solidago gigantea*	5	N	FACW
9.	*Fragaria virginiana*	5	N	FACU
10.	*HESPERIS MATRONALIS*	5	N	FACU
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	105		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–		–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 11 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *18.2%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	35	x 2 =	70
FAC spp.	45	x 3 =	135
FACU spp.	135	x 4 =	540
UPL spp.	60	x 5 =	300
Total	275 (A)		1045 (B)

Prevalence Index = B/A = *3.800*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703195	Date:	08/13/14
Applicant:	Excel Engineering			County:	Sheboygan
Investigator #1:	Chuck Herrmann	Investigator #2:	Mark Remington	State:	Wisconsin
Soil Unit:	Adrian muck	NWI/WWI Classification:	T3K	Wetland ID:	W1
Landform:	Depression	Local Relief:	Concave	Sample Point:	13W
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Forested Wetland
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☐ Yes ☑ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in a forested wetland. WETS analysis determined that the antecedent precipitation conditions were drier than normal.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	8	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	surface	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology.

SOILS

Map Unit Name: Adrian muck — Series Drainage Class: very poorly

Taxonomy (Subgroup): Terric Haplosaprists

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Mottles Color (Moist)	Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	24	Oa	10YR 2/1	100	--	--	--	--	organic muck
24	28	B	10YR 6/1	90	10YR 5/6	10	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☑ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ F1 - Loamy Muck Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A1 Indicator descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: W1 | Sample Point 13W

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Betula papyrifera*	10	Y	FACU
2.	*Fraxinus pennsylvanica*	5	Y	FACW
3.	–		–	–
4.	–		–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	15		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Alnus incana*	10	Y	FACW
2.	*Fraxinus pennsylvanica*	5	Y	FACW
3.	*ROSA MULTIFLORA*	5	Y	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	20		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex stricta*	35	Y	OBL
2.	*Onoclea sensibilis*	20	Y	FACW
3.	*Solidago gigantea*	15	N	FACW
4.	*Symplocarpus foetidus*	15	N	OBL
5.	*RUBUS IDAEUS VAR. IDAEUS*	5	N	FAC
6	*Dryopteris intermedia*	5	N	FAC
7.	*Symphyotrichum pilosum*	5	N	FACU
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	100		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71.4% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	50	x 1 =	50
FACW spp.	55	x 2 =	110
FAC spp.	10	x 3 =	30
FACU spp.	20	x 4 =	80
UPL spp.	0	x 5 =	0
Total	135 (A)		270 (B)

Prevalence Index = B/A = 2.000

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/13/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Mark Remington	State:	Wisconsin
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	N/A	Wetland ID:	14
Landform:	Shoulder	Local Relief:	Convex	Sample Point:	14BU
Slope (%):	2-6 Latitude: N/A	Longitude:	N/A	Datum: N/A	Community ID: old fallow field
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: Sample plot is located in a fallow field. WETS analysis determined that the antecedent precipitation conditions were normal. 1.13 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 8 to 10 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	6	1	10YR	3/2	100	--	--	--	sandy loam
6	13	2	10YR	4/4	100	--	--	--	loamy sand
13	20	3	10YR	5/6	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
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NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: 14 | Sample Point 14BU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Solidago canadensis*	2	N	FACU
2.	*POA PRATENSIS*	80	Y	FACU
3.	*Solidago gigantea*	20	N	FACW
4.	*Asclepias syriaca*	2	N	UPL
5.	*Spiraea alba*	2	N	FACW
6	*Rubus idaeus var. strigosus*	2	N	FAC
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	108		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	22	x 2 =	44
FAC spp.	2	x 3 =	6
FACU spp.	82	x 4 =	328
UPL spp.	2	x 5 =	10
Total	108 (A)		388 (B)

Prevalence Index = B/A = *3.593*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Houghton muck	NWI/WWI Classification:	T3K
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/14/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	14B
Sample Point:	14BW
Community ID:	Hardwood swamp
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: The sample plot is located in a hardwood swamp. Recent rain even of 1.65 inches in last 24 hours. WETS analysis determined that the antecedent precipitation conditions were normal. 2.78 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth: -	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 5	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: surface	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Houghton muck — Series Drainage Class: very poorly

Taxonomy (Subgroup): Typic Haplosaprists

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	8	1	10YR 3/2	100	--	--	--	--	silt loam
8	11	2	10YR 3/2	97	10YR 4/6	3	C	M	silt loam
11	18	3	10YR 4/1	88	10YR 5/6	12	C	M	silty clay loam
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
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--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 Indicator described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: 14B | Sample Point 14BW

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	25	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	25		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Alnus incana*	70	Y	FACW
2.	*ROSA MULTIFLORA*	10	N	FACU
3.	*BERBERIS THUNBERGII*	5	N	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	85		

Herb Stratum (Plot size: 2 meter radius)

1.	*ROSA MULTIFLORA*	5	N	FACU
2.	*BERBERIS THUNBERGII*	10	Y	FACU
3.	*Thelypteris palustris*	10	Y	FACW
4.	*Solidago gigantea*	5	N	FACW
5.	*Carex blanda*	10	Y	FAC
6	*Impatiens capensis*	5	N	FACW
7.	*Geum canadense*	10	Y	FAC
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	55		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *83.3%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	115	x 2 =	230
FAC spp.	20	x 3 =	60
FACU spp.	30	x 4 =	120
UPL spp.	0	x 5 =	0
Total	165 (A)		410 (B)

Prevalence Index = B/A = *2.485*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703195
Applicant:	Excel Engineering		
Investigator #1:	Chuck Herrmann	Investigator #2:	Mark Remington
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	T3K
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☑ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	08/13/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	W1
Sample Point:	14W
Community ID:	Forested Wetland
Section:	14
Township:	14N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a forested wetland. WETS analysis determined that the antecedent precipitation conditions were drier than normal.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 28	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 23	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 3 secondary indicators at the sample plot provides evidence of wetland hydrology. Hydrology identified as naturally problematic due to seasonal occurrence of saturation/inundation.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Mottles Color (Moist)	Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	6	A	10YR 3/1	100	--	--	--	--	loamy sand
6	30	B	10YR 5/2	80	10YR 5/6	20	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ F1 - Loamy Muck Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 and S5 Indicator described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: W1 | Sample Point 14W

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	65	Y	FACW
2.	–		–	–
3.	–		–	–
4.	–		–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	65		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*ROSA MULTIFLORA*	20	Y	FACU
2.	*Alnus incana*	15	Y	FACW
3.	*BERBERIS THUNBERGII*	15	Y	FACU
4.	*RHAMNUS CATHARTICA*	5	N	FAC
5.	*Cornus alba*	5	N	FACW
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	60		

Herb Stratum (Plot size: 2 meter radius)

1.	*Laportea canadensis*	25	Y	FACW
2.	*Spiraea alba*	10	Y	FACW
3.	*Solidago gigantea*	5	N	FACW
4.	*Acer rubrum*	2	N	FAC
5.	–		–	–
6	–		–	–
7.	–		–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	42		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	*Vitis riparia*	10	Y	FAC
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	10		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71.4% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	125	x 2 =	250
FAC spp.	17	x 3 =	51
FACU spp.	35	x 4 =	140
UPL spp.	0	x 5 =	0
Total	177 (A)		441 (B)

Prevalence Index = B/A = 2.492

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/13/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Mark Remington	State:	Wisconsin
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	T3K	Wetland ID:	15
Landform:	Toeslope	Local Relief:	Concave	Sample Point:	15BU
Slope (%):	2-6 Latitude: N/A	Longitude:	N/A	Datum: N/A	Community ID: upland shrub
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: Sample plot is located in upland shrubs. WETS analysis determined that the antecedent precipitation conditions were normal. 1.13 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 2 to 3 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	9	1	10YR	3/2	100	--	--	--	sandy loam
9	20	2	10YR	4/3	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: 15 | Sample Point 15BU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Prunus serotina*	10	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	10		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Rubus idaeus var. strigosus*	15	Y	FAC
2.	*LONICERA X BELLA*	10	N	FACU
3.	*Rubus allegheniensis*	35	Y	FACU
4.	*Fraxinus pennsylvanica*	2	N	FACW
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	62		

Herb Stratum (Plot size: 2 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	0		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	2	x 2 =	4
FAC spp.	15	x 3 =	45
FACU spp.	55	x 4 =	220
UPL spp.	0	x 5 =	0
Total	72 (A)		269 (B)

Prevalence Index = B/A = 3.736

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/13/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Mark Remington	State:	Wisconsin
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	T3K	Wetland ID:	15
Landform:	Depression	Local Relief:	Concave	Sample Point:	15BW
Slope (%):	2-6	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Hardwood swamp
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☑ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in a hardwood swamp. The hydrology of this sample plot is naturally problematic due to lack of primary hydrology indicators during the normal dry season. WETS analysis determined that the antecedent precipitation conditions were normal. 1.13 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☐ Yes ☑ No	Depth:	>34	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	34	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 2 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	8	1	10YR 3/2	95	10YR 4/6	5	C	M	sandy loam
8	24	2	10YR 5/3	85	10YR 4/6	15	C	M	loamy sand
24	34	3	10YR 5/2	95	10YR 5/6	5	C	M	sand
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☑ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, F6, and S5 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: 15 Sample Point **15BW**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer rubrum*	15	Y	FAC
2.	*Fraxinus pennsylvanica*	20	Y	FACW
3.	*Prunus serotina*	5	N	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	40		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Alnus incana*	25	Y	FACW
2.	*ROSA MULTIFLORA*	10	Y	FACU
3.	*BERBERIS THUNBERGII*	2	N	FACU
4.	*LONICERA X BELLA*	10	Y	FACU
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	47		

Herb Stratum (Plot size: 2 meter radius)

1.	*PHALARIS ARUNDINACEA*	10	Y	FACW
2.	*Rubus idaeus var. strigosus*	3	N	FAC
3.	*Symphyotrichum ontarionis*	5	Y	FAC
4.	*Solidago gigantea*	2	N	FACW
5.	*BERBERIS THUNBERGII*	2	N	FACU
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	22		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71.4% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	57	x 2 =	114
FAC spp.	23	x 3 =	69
FACU spp.	29	x 4 =	116
UPL spp.	0	x 5 =	0
Total	109 (A)		299 (B)

Prevalence Index = B/A = 2.743

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/13/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Mark Remington	State:	Wisconsin
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	T3K	Wetland ID:	15
Landform:	Toeslope	Local Relief:	Concave	Sample Point:	15CU
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Mesic forest
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		☑ Yes ☐ No		Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: Sample plot is located in a mesic forest. WETS analysis determined that the antecedent precipitation conditions were normal. 1.13 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 2 to 3 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	10	1	10YR	3/2	100	–	–	–	–	loamy sand
10	17	2	10YR	4/4	100	–	–	–	–	loamy sand
17	24	3	10YR	5/3	100	–	–	–	–	loamy sand
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: 15 | Sample Point 15CU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Prunus serotina*	70	Y	FACU
2.	*Fraxinus pennsylvanica*	5	N	FACW
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	75		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*ROSA MULTIFLORA*	2	N	FACU
2.	*Prunus serotina*	10	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	12		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex pensylvanica*	15	Y	UPL
2.	*Geum canadense*	5	Y	FAC
3.	*Rubus allegheniensis*	5	Y	FACU
4.	*Rubus occidentalis*	5	Y	UPL
5.	*ROSA MULTIFLORA*	5	Y	FACU
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	35		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 14.3% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	5	x 2 =	10
FAC spp.	5	x 3 =	15
FACU spp.	92	x 4 =	368
UPL spp.	20	x 5 =	100
Total	122 (A)		493 (B)

Prevalence Index = B/A = 4.041

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/13/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Mark Remington	State:	Wisconsin
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	T3K	Wetland ID:	15
Landform:	Depression	Local Relief:	Concave	Sample Point:	15CW
Slope (%):	0-2 Latitude: N/A	Longitude:	N/A	Datum: N/A	Community ID: Hardwood swamp
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☑ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in a hardwood swamp. WETS analysis determined that the antecedent precipitation conditions were normal. 1.13 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation. Wetland hydrology is seasonally and denoted as naturally problematic given the time of year of the delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☐ Yes ☑ No	Depth:	>24	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	24	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 2 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	9	1	10YR 2/1	100	--	--	--	--	loam
9	15	2	10YR 4/2	95	10YR 4/6	5	C	M	loamy sand
15	24	3	10YR 5/3	90	10YR 5/6	10	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
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NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 Indicator described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: 15 Sample Point **15CW**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	45	Y	FACW
2.	*Betula papyrifera*	5	N	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	50		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Betula papyrifera*	15	Y	FACU
2.	*LONICERA X BELLA*	20	Y	FACU
3.	*ROSA MULTIFLORA*	5	N	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	40		

Herb Stratum (Plot size: 2 meter radius)

1.	*Solidago gigantea*	5	Y	FACW
2.	*Rubus idaeus var. strigosus*	10	Y	FAC
3.	*Symphyotrichum ontarionis*	2	N	FAC
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	17		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***60.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	50	x 2 =	100
FAC spp.	12	x 3 =	36
FACU spp.	45	x 4 =	180
UPL spp.	0	x 5 =	0
Total	107 (A)		316 (B)

Prevalence Index = B/A = ***2.953***

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/13/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Mark Remington	State:	Wisconsin
Soil Unit:	Adrian muck	NWI/WWI Classification:	T3K	Wetland ID:	15
Landform:	Depression	Local Relief:	Concave	Sample Point:	15DW
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Hardwood swamp
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in a hardwood swamp. WETS analysis determined that the antecedent precipitation conditions were normal. 1.13 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	10	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	4	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 2 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Adrian muck — Series Drainage Class: very poorly

Taxonomy (Subgroup): Terric Haplosaprists

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	8	1	10YR 2/1	100	--	--	--	--	mucky loam
8	20	2	10YR 5/1	97	10YR 4/6	3	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
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NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☑ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 and F1 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: 15 | Sample Point **15DW**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	20	Y	FACW
2.	*Prunus serotina*	10	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	30		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*LONICERA X BELLA*	2	N	FACU
2.	*Alnus incana*	50	Y	FACW
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	52		

Herb Stratum (Plot size: 2 meter radius)

1.	*Solidago gigantea*	5	N	FACW
2.	*Rubus idaeus var. strigosus*	2	N	FAC
3.	*PHALARIS ARUNDINACEA*	10	Y	FACW
4.	*Carex stricta*	10	Y	OBL
5.	*Dryopteris carthusiana*	2	N	FACW
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	29		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***80.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	10	x 1 =	10
FACW spp.	87	x 2 =	174
FAC spp.	2	x 3 =	6
FACU spp.	12	x 4 =	48
UPL spp.	0	x 5 =	0
Total	111 (A)		238 (B)

Prevalence Index = B/A = ***2.144***

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703195
Applicant:	Excel Engineering		
Investigator #1:	Chuck Herrmann	Investigator #2:	Mark Remington
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	T3K
Landform:	Side slope	Local Relief:	Convex
Slope (%):	2-6	Latitude: N/A	Longitude: N/A
Datum:	N/A		

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	08/14/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	W1
Sample Point:	15u
Community ID:	upland deciduous forest
Section:	14
Township:	14N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ Yes ☑ No

Remarks: Tthe sample plot is located in an upland forest. WETS analysis determined that the antecedent precipitation conditions were drier than normal.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☐ Yes ☑ No	Depth:	>24	(in.)
Saturation Present?	☐ Yes ☑ No	Depth:	>24	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Mottles Color (Moist)	Mottles Color (Moist)	Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	7	A	10YR	3/2	100	--		--	--	loamy sand
7	20	B	10YR	5/4	100	--		--	--	loamy sand
20	24	Bt	10YR	4/4	80	10YR	5/6	20	C	M	sandy clay loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ F1 - Loamy Muck Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: W1 | Sample Point: 15u

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind. Status
1.	*Prunus serotina*	25	Y	FACU
2.	*Fraxinus pennsylvanica*	15	Y	FACW
3.	*PYRUS MALUS*	10	N	UPL
4.	*Hamamelis virginiana*	15	Y	FACU
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	65		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*ROSA MULTIFLORA*	30	Y	FACU
2.	*Alnus incana*	15	Y	FACW
3.	*BERBERIS THUNBERGII*	10	N	FACU
4.	*LONICERA TATARICA*	10	N	FACU
5.	*RUBUS IDAEUS VAR. IDAEUS*	5	N	FAC
6.	*Rubus allegheniensis*	5	N	FACU
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	75		

Herb Stratum (Plot size: 2 meter radius)

1.	*RUBUS IDAEUS VAR. IDAEUS*	30	Y	FAC
2.	*ROSA MULTIFLORA*	15	Y	UPL
3.	*Viola palmata*	10	N	UPL
4.	*Trillium cernuum*	5	N	FAC
5.	*Galium boreale*	5	N	FAC
6	*Geum aleppicum*	2	N	FAC
7.	–		–	–
8.	–		–	–
9.	–		–	–
10.	–		–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	67		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–		–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 42.9% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	30	x 2 =	60
FAC spp.	47	x 3 =	141
FACU spp.	95	x 4 =	380
UPL spp.	35	x 5 =	175
Total	207 (A)		756 (B)

Prevalence Index = B/A = 3.652

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703195	Date:	08/14/14
Applicant:	Excel Engineering			County:	Sheboygan
Investigator #1:	Chuck Herrmann	Investigator #2:	Mark Remington	State:	Wisconsin
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	T3K	Wetland ID:	W1
Landform:	Depression	Local Relief:	Concave	Sample Point:	15W
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Forested Wetland
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☐ Yes ☑ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14N
Are Vegetation ☐, Soil ☐, or Hydrology ☑ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in a forested wetland. WETS analysis determined that the antecedent precipitation conditions were drier than normal.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☐ Yes ☑ No	Depth:	>24	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	16	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 3 secondary indicators at the sample plot provides evidence of wetland hydrology. Hydrology identified as natural problematic due to seasonal occurrence of inundation/saturation.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Mottles Color (Moist)	Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	8	A	10YR 3/1	100	--	--	--	--	sandy loam
8	16	B	10YR 5/2	90	10YR 5/4	10	C	M	loamy sand
16	24	Bt	7.5YR 4/4	85	7.5YR 5/8	15	C	M	sandy clay loam
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ F1 - Loamy Muck Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A1 Indicator descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: W1 | Sample Point 15W

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	40	Y	FACW
2.	*Acer rubrum*	10	Y	FAC
3.	–		–	–
4.	–		–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	50		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Alnus incana*	40	Y	FACW
2.	*ROSA MULTIFLORA*	15	Y	FACU
3.	*BERBERIS THUNBERGII*	15	Y	FACU
4.	*Prunus serotina*	5	N	FACU
5.	–		–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	75		

Herb Stratum (Plot size: 2 meter radius)

1.	*Laportea canadensis*	55	Y	FACW
2.	*PHALARIS ARUNDINACEA*	30	Y	FACW
3.	*Geum aleppicum*	5	N	FAC
4.	–		–	–
5.	–		–	–
6	–		–	–
7.	–		–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	90		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–		–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71.4% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	165	x 2 =	330
FAC spp.	15	x 3 =	45
FACU spp.	35	x 4 =	140
UPL spp.	0	x 5 =	0
Total	215 (A)		515 (B)

Prevalence Index = B/A = 2.395

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Toeslope	Local Relief:	Concave
Slope (%):	2-6	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/14/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	16B
Sample Point:	16BU
Community ID:	Fallow field
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ Yes ☑ No

Remarks: Sample plot is located in on a toe slope of an upland fallow field swale. Recent rain even of 1.65 inches in last 24 hours. WETS analysis determined that the antecedent precipitation conditions were normal. 2.78 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 2 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	5	1	10YR	3/2	100	–	–	–	–	loam
5	10	2	10YR	3/3	100	–	–	–	–	sandy loam
10	18	3	10YR	4/6	100	–	–	–	–	loamy sand
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: 16B Sample Point 16BU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*BROMUS INERMIS*	100	Y	UPL
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	100		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	0	x 4 =	0
UPL spp.	100	x 5 =	500
Total	100 (A)		500 (B)

Prevalence Index = B/A = *5.000*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703195
Applicant:	Excel Engineering		
Investigator #1:	Chuck Herrmann	Investigator #2:	Mark Remington
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A
Datum:	N/A		

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☑ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	08/13/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	W2
Sample Point:	16W
Community ID:	Wet Meadow
Section:	14
Township:	14N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a wet meadow. WETS analysis determined that the antecedent precipitation conditions were drier than normal.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth: >30	(in.)
Saturation Present?	☐ Yes	☑ No	Depth: >30	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 secondary indicators at the sample plot provides evidence of wetland hydrology. Hydrology identified as naturally problematic due to seasonal occurrence of inundation/saturation.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Mottles Color (Moist)	Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	8	A	10YR 2/1	100	--	--	--	--	loamy sand
8	18	B	10YR 5/2	90	10YR 5/4	10	C	M	loamy sand
18	30	B	10YR 5/4	85	10YR 5/6	15	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ F1 - Loamy Muck Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A1 Indicator descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: W2 Sample Point 16W

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–		–	–
2.	–		–	–
3.	–		–	–
4.	–		–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–		–	–
2.	–		–	–
3.	–		–	–
4.	–		–	–
5.	–		–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	PHALARIS ARUNDINACEA	100	Y	FACW
2.	–		–	–
3.	–		–	–
4.	–		–	–
5.	–		–	–
6	–		–	–
7.	–		–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	100		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–		–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	100	x 2 =	200
FAC spp.	0	x 3 =	0
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	100 (A)		200 (B)

Prevalence Index = B/A = 2.000

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703195	Date:	08/14/14
Applicant:	Excel Engineering			County:	Sheboygan
Investigator #1:	Chuck Herrmann	Investigator #2:	Mark Remington	State:	Wisconsin
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A	Wetland ID:	W2
Landform:	Flat hill top	Local Relief:	Convex	Sample Point:	17/18u
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: upland fallow field/trail
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☐ Yes ☑ No	Section:	14
Are Vegetation ☑, Soil ☑, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: The sample plot is located in an upland fallow field and a mowed trail that have been filled. WETS analysis determined that the antecedent precipitation conditions were drier than normal.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	30	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	26	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Mottles Color (Moist)	Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	16	1	7.5YR 5/4	91	10YR 5/6	6	C	M	clay loam fill material
–	–	–	–		10YR 5/1	3	D	M	–
16	22	Ab	10YR 3/1	95	10YR 5/6	5	C	M	loamy sand
22	30	B	10YR 4/1	95	10YR 5/6	5	C	M	loamy sand
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ F1 - Loamy Muck Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years. 16" of clay fill was placed to stabilize a wet spot in the trail.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: W2 Sample Point 17/18u

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–		–	–
2.	–		–	–
3.	–		–	
4.	–		–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–		–	–
2.	–		–	–
3.	–		–	–
4.	–		–	
5.	–		–	–
6.	–		–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*PLANTAGO MAJOR*	30	Y	FAC
2.	*TRIFOLIUM REPENS*	20	N	UPL
3.	*POA PRATENSIS*	30	Y	FACU
4.	*DAUCUS CAROTA*	15	N	UPL
5.	*TARAXACUM OFFICINALE*	5	N	FACU
6	*PHLEUM PRATENSE*	5	N	FACU
7.	–		–	–
8.	–		–	–
9.	–		–	–
10.	–		–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	105		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–		–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *50.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	30	x 3 =	90
FACU spp.	40	x 4 =	160
UPL spp.	35	x 5 =	175
Total	105 (A)		425 (B)

Prevalence Index = B/A = *4.048*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

Vegetation appears to be mowed on a regualar basis as trail maintenance.

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Palms muck	NWI/WWI Classification:	T3K
Landform:	Side slope	Local Relief:	Linear
Slope (%):	2-6	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/14/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	17B
Sample Point:	17BU
Community ID:	Mesic forest
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: Sample plot is located in a mesic forest. Recent rain even of 1.65 inches in last 24 hours. WETS analysis determined that the antecedent precipitation conditions were normal. 2.78 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 2 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Palms muck Series Drainage Class: very poorly

Taxonomy (Subgroup): Terric Haplosaprists

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	12	1	10YR 3/2	100	--	--	--	--	sandy loam
12	14	2	10YR 5/2	100	--	--	--	--	sandy loam
14	24	3	10YR 4/6	100	--	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: 17B Sample Point 17BU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Prunus serotina*	30	Y	FACU
2.	*Acer rubrum*	10	Y	FAC
3.	*MALUS PUMILA*	5	N	UPL
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	45		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*LONICERA X BELLA*	25	Y	FACU
2.	*BERBERIS THUNBERGII*	15	Y	FACU
3.	*Prunus virginiana*	10	N	FACU
4.	*Rubus idaeus var. strigosus*	5	N	FAC
5.	*ROSA MULTIFLORA*	5	N	FACU
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	60		

Herb Stratum (Plot size: 2 meter radius)

1.	*Solidago gigantea*	5	N	FACW
2.	*PHALARIS ARUNDINACEA*	5	N	FACW
3.	*Rubus idaeus var. strigosus*	10	N	FAC
4.	*BERBERIS THUNBERGII*	50	Y	FACU
5.	*Geum canadense*	10	N	FAC
6	*HESPERIS MATRONALIS*	2	N	FACU
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	82		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *20.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	10	x 2 =	20
FAC spp.	35	x 3 =	105
FACU spp.	137	x 4 =	548
UPL spp.	5	x 5 =	25
Total	187 (A)		698 (B)

Prevalence Index = B/A = *3.733*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/14/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf	State:	Wisconsin
Soil Unit:	Palms muck	NWI/WWI Classification:	T3K	Wetland ID:	17B
Landform:	Depression	Local Relief:	Concave	Sample Point:	17BW
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Hardwood swamp
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: The sample plot is located in a hardwood swamp. Recent rain even of 1 65 inches in last 24 hours. WETS analysis determined that the antecedent precipitation conditions were normal. 2.78 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:	-	(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	10	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	7	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Palms muck — Series Drainage Class: very poorly

Taxonomy (Subgroup): Terric Haplosaprists

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	9	1	N 2.5/0	100	--	--	--	--	mucky silt loam
9	12	2	N 2.5/0	97	10YR 4/6	3	C	M	mucky silt loam
12	18	3	10YR 4/2	90	10YR 5/6	10	C	M	mucky silt loam
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☑ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the F1 and A11 Indicator descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: 17B | Sample Point 17BW

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	50	Y	FACW
2.	*Thuja occidentalis*	5	N	FACW
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	55		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Alnus incana*	10	Y	FACW
2.	*BERBERIS THUNBERGII*	5	Y	FACU
3.	*LONICERA X BELLA*	2	N	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	17		

Herb Stratum (Plot size: 2 meter radius)

1.	*Solidago gigantea*	10	N	FACW
2.	*Carex stricta*	50	Y	OBL
3.	*Thelypteris palustris*	5	N	FACW
4.	*LONICERA X BELLA*	2	N	FACU
5.	*BERBERIS THUNBERGII*	2	N	FACU
6	*Geum canadense*	5	N	FAC
7.	*Equisetum arvense*	2	N	FAC
8.	*Laportea canadensis*	5	N	FACW
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	81		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *75.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	50	x 1 =	50
FACW spp.	85	x 2 =	170
FAC spp.	7	x 3 =	21
FACU spp.	11	x 4 =	44
UPL spp.	0	x 5 =	0
Total	153 (A)		285 (B)

Prevalence Index = B/A = *1.863*

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Side slope	Local Relief:	Linear
Slope (%):	2-6	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/14/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	17C
Sample Point:	17CU
Community ID:	Mesic forest
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ Yes ☑ No

Remarks: Sample plot is located in a mesic forest. Recent rain even of 1.65 inches in last 24 hours. WETS analysis determined that the antecedent precipitation conditions were normal. 2.78 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	8	1	10YR	3/2	100	--	--	--	sandy loam
8	24	2	10YR	5/6	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: 17C Sample Point 17CU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Populus tremuloides*	40	Y	FAC
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	40		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*LONICERA X BELLA*	5	Y	FACU
2.	*Picea glauca*	5	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	10		

Herb Stratum (Plot size: 2 meter radius)

1.	*Populus tremuloides*	15	N	FAC
2.	*POA PRATENSIS*	70	Y	FACU
3.	*Rubus idaeus var. strigosus*	2	N	FAC
4.	*Symphyotrichum ontarionis*	5	N	FAC
5.	*BROMUS ERECTUS*	20	N	UPL
6	*Solidago gigantea*	5	N	FACW
7.	*Euthamia graminifolia*	2	N	FAC
8.	*Asclepias syriaca*	5	N	UPL
9.	*DAUCUS CAROTA*	2	N	UPL
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	126		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	5	x 2 =	10
FAC spp.	64	x 3 =	192
FACU spp.	80	x 4 =	320
UPL spp.	27	x 5 =	135
Total	176 (A)		657 (B)

Prevalence Index = B/A = 3.733

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Alluvial land, wet	NWI/WWI Classification:	T3K
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/14/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	17C
Sample Point:	17CW
Community ID:	Hardwood swamp
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ■ No

Remarks: The sample plot is located in a hardwood swamp. Recent rain even of 1.65 inches in last 24 hours. WETS analysis determined that the antecedent precipitation conditions were normal. 2.78 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth: -	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 10	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: surface	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Alluvial land, wet — Series Drainage Class: #N/A

Taxonomy (Subgroup): #N/A

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	12	1	10YR 2/1	100	--	--	--	--	mucky silt loam
12	20	2	10YR 5/2	88	10YR 5/2	12	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☑ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☑ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, A12 and F1 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: 17C Sample Point **17CW**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	40	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	40		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Alnus incana*	30	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	30		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex stricta*	10	Y	OBL
2.	*PHALARIS ARUNDINACEA*	2	N	FACW
3.	*Solidago gigantea*	5	Y	FACW
4.	*CIRSIUM ARVENSE*	2	N	FACU
5.	*Thalictrum dasycarpum*	2	N	FACW
6	*BERBERIS THUNBERGII*	2	N	FACU
7.	*Geum canadense*	5	Y	FAC
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	28		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	10	x 1 =	10
FACW spp.	79	x 2 =	158
FAC spp.	5	x 3 =	15
FACU spp.	4	x 4 =	16
UPL spp.	0	x 5 =	0
Total	98 (A)		199 (B)

Prevalence Index = B/A = ***2.031***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Alluvial land, wet	NWI/WWI Classification:	T3K
Landform:	Shoulder	Local Relief:	Convex
Slope (%):	2-6	Latitude: N/A	Longitude: N/A
Datum:	N/A		

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/14/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	17D
Sample Point:	17DU
Community ID:	Upland forest
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ Yes ☑ No

Remarks: Sample plot is located in upland forest. Recent rain even of 1.65 inches in last 24 hours. WETS analysis determined that the antecedent precipitation conditions were normal. 2.78 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Alluvial land, wet — Series Drainage Class: #N/A

Taxonomy (Subgroup): #N/A

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR	3/2	100	--	--	--	sandy loam
3	6	2	10YR	5/2	100	--	--	--	loamy sand
6	20	3	10YR	4/6	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: 17D | Sample Point 17DU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Prunus serotina*	15	N	FACU
2.	*Picea glauca*	80	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	95		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*BERBERIS THUNBERGII*	5	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	5		

Herb Stratum (Plot size: 2 meter radius)

1.	*BERBERIS THUNBERGII*	2	N	FACU
2.	*Carex pensylvanica*	40	Y	UPL
3.	*Equisetum arvense*	2	N	FAC
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	44		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	2	x 3 =	6
FACU spp.	102	x 4 =	408
UPL spp.	40	x 5 =	200
Total	144 (A)		614 (B)

Prevalence Index = B/A = 4.264

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Dune land	NWI/WWI Classification:	T3K
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/14/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	17D
Sample Point:	17DW
Community ID:	Alder thicket
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: The sample plot is located in an alder thicket. Recent rain even of 1.65 inches in last 24 hours. WETS analysis determined that the antecedent precipitation conditions were normal. 2.78 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation. Seasonal wateway 25 feet south east of point, water 6" deep and 3 feet wide.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth: -	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 10	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: surface	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively
Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	20	1	N 2.5/0	98	10YR 4/4	2	C	M	mucky silt loam
20	24	2	10YR 5/2	85	10YR 5/6	10	C	M	loamy sand
–	–	–	–	–	10YR 4/1	5	D	M	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☑ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☑ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☑ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the F6 Indicator described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: 17D Sample Point 17DW

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	20	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	20		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Alnus incana*	70	Y	FACW
2.	*BERBERIS THUNBERGII*	10	N	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	80		

Herb Stratum (Plot size: 2 meter radius)

1.	*BERBERIS THUNBERGII*	20	Y	FACU
2.	*Carex stricta*	15	Y	OBL
3.	*HESPERIS MATRONALIS*	2	N	FACU
4.	*Solidago gigantea*	5	N	FACW
5.	*Persicaria pensylvanica*	2	N	FACW
6	*Lycopus uniflorus*	2	N	OBL
7.	*Symplocarpus foetidus*	2	N	OBL
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	48		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *75.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	19	x 1 =	19
FACW spp.	97	x 2 =	194
FAC spp.	0	x 3 =	0
FACU spp.	32	x 4 =	128
UPL spp.	0	x 5 =	0
Total	148 (A)		341 (B)

Prevalence Index = B/A = *2.304*

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703195
Applicant:	Excel Engineering		
Investigator #1:	Chuck Herrmann	Investigator #2:	Mark Remington
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	08/14/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	W2
Sample Point:	17W
Community ID:	Wet Meadow
Section:	14
Township:	14N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a wet meadow. WETS analysis determined that the antecedent precipitation conditions were drier than normal.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 12	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 8	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology.

SOILS

Map Unit Name: Oakville loamy fine sand Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Mottles Color (Moist)	Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	8	A	10YR 2/1	95	10YR 5/6	5	C	M	sandy loam
8	20	B	10YR 5/2	90	10YR 4/6	10	C	M	sandy loam
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ F1 - Loamy Muck Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☑ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 and F3 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: W2 | Sample Point 17W

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–		–	–
2.	–		–	–
3.	–		–	–
4.	–		–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–		–	–
2.	–		–	–
3.	–		–	–
4.	–		–	–
5.	–		–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*PHALARIS ARUNDINACEA*	60	Y	FACW
2.	*Symphyotrichum lanceolatum*	25	Y	FACW
3.	*Eutrochium maculatum*	10	N	OBL
4.	*Onoclea sensibilis*	10	N	FACW
5.	*Toxicodendron radicans*	10	N	FAC
6	–		–	–
7.	–		–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	115		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–		–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *100.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	10	x 1 =	10
FACW spp.	95	x 2 =	190
FAC spp.	10	x 3 =	30
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	115 (A)		230 (B)

Prevalence Index = B/A = *2.000*

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703195
Applicant:	Excel Engineering		
Investigator #1:	Chuck Herrmann	Investigator #2:	Mark Remington
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	T3K
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	08/14/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	W1
Sample Point:	18W
Community ID:	Forested Wetland
Section:	14
Township:	14N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a forested wetland. WETS analysis determined that the antecedent precipitation conditions were drier than normal.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	9	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	3	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology.

SOILS

Map Unit Name: Oakville loamy fine sand Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Mottles Color (Moist)	Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	9	A	10YR 2/1	95	10YR 5/6	5	C	M	sandy loam
9	20	B	7.5YR 4/1	90	10YR 5/6	10	C	M	loam
–	–	–	–		–		–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ F1 - Loamy Muck Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☑ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 and F3 Indicators descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: W1 Sample Point 18W

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	40	Y	FACW
2.	–		–	–
3.	–		–	–
4.	–		–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	40		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Salix discolor*	10	Y	FACW
2.	*SALIX X FRAGILIS*	5	Y	FAC
3.	–		–	–
4.	–		–	–
5.	–		–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	15		

Herb Stratum (Plot size: 2 meter radius)

1.	*AGROSTIS GIGANTEA*	40	Y	FACW
2.	*Symphyotrichum lanceolatum*	20	Y	FACW
3.	*PHALARIS ARUNDINACEA*	15	N	FACW
4.	*Eupatorium perfoliatum*	10	N	FACW
5.	*Lycopus virginicus*	5	N	OBL
6	*Euphorbia maculata*	5	N	FACU
7.	*Juncus effusus*	5	N	OBL
8.	*Onoclea sensibilis*	5	N	FACW
9.	*POTENTILLA ARGENTEA*	5	N	FACU
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	110		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–		–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	10	x 1 =	10
FACW spp.	140	x 2 =	280
FAC spp.	5	x 3 =	15
FACU spp.	10	x 4 =	40
UPL spp.	0	x 5 =	0
Total	165 (A)		345 (B)

Prevalence Index = B/A = 2.091

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703195	Date:	08/14/14
Applicant:	Excel Engineering			County:	Sheboygan
Investigator #1:	Chuck Herrmann	Investigator #2:	Mark Remington	State:	Wisconsin
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	T3K	Wetland ID:	W1
Landform:	Terrace	Local Relief:	Convex	Sample Point:	19/20u
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: upland deciduous forest
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		☐ Yes	☑ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes	☐ No	Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: The sample plot is located in an upland forest. WETS analysis determined that the antecedent precipitation conditions were drier than normal.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	24	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	18	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: One secondary indicator of hydrology not sufficient to meet hydrology criteria.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Mottles Color (Moist)	Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	8	A	10YR 3/2	100	--		--	--	loamy sand
8	18	B	10YR 4/4	100	--		--	--	loamy sand
18	30	B	10YR 6/1	90	10YR 5/6	10	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ F1 - Loamy Muck Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: W1 Sample Point 19/20u

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	40	Y	FACW
2.	*Prunus serotina*	25	Y	FACU
3.	*Crataegus mollis*	10	N	FAC
4.	–		–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	75		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*ROSA MULTIFLORA*	10	Y	FACU
2.	*BERBERIS THUNBERGII*	5	Y	FACU
3.	–		–	–
4.	–		–	
5.	–		–	–
6.	–		–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	15		

Herb Stratum (Plot size: 2 meter radius)

1.	*Podophyllum peltatum*	15	Y	FAC
2.	*Anemone thalictroides*	10	Y	FACU
3.	*RUBUS IDAEUS VAR. IDAEUS*	10	Y	FACU
4.	*Viola palmata*	10	Y	FACU
5.	*Trillium grandiflorum*	5	N	UPL
6	*GLECHOMA HEDERACEA*	5	N	FACU
7.	*Fagus grandifolia*	5	N	FACU
8.	–		–	–
9.	–		–	–
10.	–		–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	60		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–		–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	40	x 2 =	80
FAC spp.	25	x 3 =	75
FACU spp.	80	x 4 =	320
UPL spp.	5	x 5 =	25
Total	150 (A)		500 (B)

Prevalence Index = B/A = 3.333

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Mark Remington
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	T3K
Landform:	Terrace	Local Relief:	Convex
Slope (%):	0-2	Latitude: N/A	Longitude: N/A
Datum:	N/A		

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/13/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	19
Sample Point:	19BU
Community ID:	Hardwood swamp
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: Sample plot is located in a hardwood swamp. WETS analysis determined that the antecedent precipitation conditions were normal. 1.13 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 2 to 3 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	8	1	10YR	3/2	100	--	--	--	sandy loam
8	15	2	10YR	5/3	100	--	--	--	loamy sand
15	20	3	10YR	4/4	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: 19 Sample Point 19BU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Prunus serotina*	10	Y	FACU
2.	*Fraxinus pennsylvanica*	7	N	FACW
3.	*Acer rubrum*	7	N	FAC
4.	*Populus deltoides*	30	Y	FAC
5.	*MALUS PUMILA*	7	N	UPL
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	61		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*ROSA MULTIFLORA*	5	N	FACU
2.	*Prunus virginiana*	30	Y	FACU
3.	*LONICERA X BELLA*	10	Y	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	45		

Herb Stratum (Plot size: 2 meter radius)

1.	*BERBERIS THUNBERGII*	20	Y	FACU
2.	*Rubus allegheniensis*	5	N	FACU
3.	*LONICERA X BELLA*	2	N	FACU
4.	*Geum canadense*	5	N	FAC
5.	*Dryopteris carthusiana*	2	N	FACW
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	34		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *20.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	9	x 2 =	18
FAC spp.	42	x 3 =	126
FACU spp.	82	x 4 =	328
UPL spp.	7	x 5 =	35
Total	140 (A)		507 (B)

Prevalence Index = B/A = *3.621*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/13/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	T3K	Wetland ID:	19
Landform:	Toeslope	Local Relief:	Concave	Sample Point:	19BW
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Hardwood swamp
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☑ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in a hardwood swamp. The hydrology of this sample plot is naturally problematic due to lack of primary hydrology indicators during the normal dry season. WETS analysis determined that the antecedent precipitation conditions were normal. 1.13 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation. Atypical situations require the use of professional judgment. Based on landscape position, hydric soils present, hydrophytic vegetatoin present, and the timing of the delineation, this area appears it may be inundated or saturated for longer periods of time during the early growing season.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☐ Yes ☑ No	Depth:	>28	(in.)
Saturation Present?	☐ Yes ☑ No	Depth:	>28	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of only one secondary indicator at the sample plot does not provide sufficient evidence of wetland hydrology. The sample plot is located approximately 2 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	6	1	10YR 3/2	92	10YR 4/6	8	C	M	loam
6	8	2	10YR 5/1	92	10YR 5/6	8	C	M	loamy sand
8	28	3	10YR 5/3	92	10YR 5/6	8	C	M	loamy sand
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 and S5 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: 19 Sample Point **19BW**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Populus deltoides*	20	Y	FAC
2.	*Fraxinus pennsylvanica*	15	Y	FACW
3.	*MALUS PUMILA*	5	N	UPL
4.	*Betula papyrifera*	20	Y	FACU
5.	*Acer rubrum*	5	N	FAC
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	65		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*LONICERA X BELLA*	10	Y	FACU
2.	*ROSA MULTIFLORA*	15	Y	FACU
3.	*Prunus virginiana*	5	N	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	30		

Herb Stratum (Plot size: 2 meter radius)

1.	*BERBERIS THUNBERGII*	10	N	FACU
2.	*Solidago gigantea*	5	N	FACW
3.	*Rubus idaeus var. strigosus*	25	Y	FAC
4.	*Geum canadense*	15	Y	FAC
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	55		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *57.1%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	20	x 2 =	40
FAC spp.	65	x 3 =	195
FACU spp.	60	x 4 =	240
UPL spp.	5	x 5 =	25
Total	150 (A)		500 (B)

Prevalence Index = B/A = *3.333*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703195
Applicant:	Excel Engineering		
Investigator #1:	Chuck Herrmann	Investigator #2:	Mark Remington
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	T3K
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	08/13/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	W1
Sample Point:	19W
Community ID:	Forested Wetland
Section:	14
Township:	14N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a forested wetland. WETS analysis determined that the antecedent precipitation conditions were drier than normal.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	13	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	9	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 1 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Mottles Color (Moist)	Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	8	A	10YR 2/1	100	--		--	--	loamy sand
8	16	B	10YR 6/1	100	--		--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
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NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ F1 - Loamy Muck Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 Indicator described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: W1 | Sample Point 19W

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	65	Y	FACW
2.	*Prunus serotina*	10	N	FACU
3.	*Acer rubrum*	5	N	FAC
4.	–		–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	80		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Prunus serotina*	15	Y	FACU
2.	*BERBERIS THUNBERGII*	5	Y	FACU
3.	–		–	–
4.	–		–	–
5.	–		–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	20		

Herb Stratum (Plot size: 2 meter radius)

1.	*Laportea canadensis*	30	Y	FACW
2.	*Onoclea sensibilis*	25	Y	FACW
3.	*Iris versicolor*	15	N	OBL
4.	*Geranium maculatum*	10	N	FACU
5.	–		–	–
6	–		–	–
7.	–		–	–
8.	–		–	–
9.	–		–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	80		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–		–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *60.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	15	x 1 =	15
FACW spp.	120	x 2 =	240
FAC spp.	5	x 3 =	15
FACU spp.	40	x 4 =	160
UPL spp.	0	x 5 =	0
Total	180 (A)		430 (B)

Prevalence Index = B/A = *2.389*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703195
Applicant:	Excel Engineering		
Investigator #1:	Chuck Herrmann	Investigator #2:	Mark Remington
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	T3K
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	08/14/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	W1
Sample Point:	20W
Community ID:	Forested Wetland
Section:	14
Township:	14N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a forested wetland. WETS analysis determined that the antecedent precipitation conditions were drier than normal.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 8	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 4	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Mottles Color (Moist)	Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	8	A	10YR 2/1	100	--		--	--	mucky sandy loam
8	18	B	10YR 7/1	100	--		--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
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--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☑ F1 - Loamy Muck Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 and F1 Indicator described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: W1 | Sample Point: 20W

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind. Status
1.	*Fraxinus pennsylvanica*	45	Y	FACW
2.	*Prunus serotina*	10	N	FACU
3.	–		–	–
4.	–		–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	55		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Alnus incana*	30	Y	FACW
2.	*ROSA MULTIFLORA*	10	Y	FACU
3.	–		–	–
4.	–		–	–
5.	–		–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	40		

Herb Stratum (Plot size: 2 meter radius)

1.	*Solidago gigantea*	15	Y	FACW
2.	*Laportea canadensis*	15	Y	FACW
3.	*Symplocarpus foetidus*	10	Y	OBL
4.	*Dryopteris intermedia*	10	Y	FAC
5.	*Geum aleppicum*	5	N	FAC
6	*Iris versicolor*	5	N	OBL
7.	*RUBUS IDAEUS VAR. IDAEUS*	5	N	FAC
8.	–		–	–
9.	–		–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	65		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–		–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 85.7% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	15	x 1 =	15
FACW spp.	105	x 2 =	210
FAC spp.	20	x 3 =	60
FACU spp.	20	x 4 =	80
UPL spp.	0	x 5 =	0
Total	160 (A)		365 (B)

Prevalence Index = B/A = 2.281

Hydrophytic Vegetation Indicators:

☐ Yes	☑ No	Rapid Test for Hydrophytic Vegetation
☑ Yes	☐ No	Dominance Test is > 50%
☑ Yes	☐ No	Prevalence Index is ≤ 3.0 *
☐ Yes	☐ No	Morphological Adaptations (Explain) *
☐ Yes	☐ No	Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	T3K
Landform:	Terrace	Local Relief:	Convex
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/14/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	21B
Sample Point:	21BU
Community ID:	Upland ridge
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ Yes ☑ No

Remarks: Sample plot is located in on an upland ridge. Recent rain even of 1.65 inches in last 24 hours. WETS analysis determined that the antecedent precipitation conditions were normal. 2.78 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 2 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Oakville loamy fine sand Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	7	1	10YR 3/2	100	--	--	--	--	sandy loam
7	9	2	10YR 3/2	97	10YR 4/6	3	C	M	sandy loam
9	16	3	10YR 4/4	98	10YR 4/6	2	C	M	loamy sand
16	24	4	10YR 5/3	95	10YR 5/6	5	C	M	sandy loam
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: 21B Sample Point **21BU**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Quercus rubra*	40	Y	FACU
2.	*Quercus macrocarpa*	10	N	FACU
3.	*Prunus serotina*	40	Y	FACU
4.	*Fraxinus pennsylvanica*	2	N	FACW
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	92		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*LONICERA X BELLA*	10	Y	FACU
2.	*BERBERIS THUNBERGII*	15	Y	FACU
3.	*Prunus virginiana*	2	N	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	27		

Herb Stratum (Plot size: 2 meter radius)

1.	*BERBERIS THUNBERGII*	50	Y	FACU
2.	*Carex blanda*	2	N	FAC
3.	*Rubus idaeus var. strigosus*	5	N	FAC
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	57		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	2	x 2 =	4
FAC spp.	7	x 3 =	21
FACU spp.	167	x 4 =	668
UPL spp.	0	x 5 =	0
Total	176 (A)		693 (B)

Prevalence Index = B/A = *3.938*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/14/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf	State:	Wisconsin
Soil Unit:	Adrian muck	NWI/WWI Classification:	T3K	Wetland ID:	21B
Landform:	Depression	Local Relief:	Concave	Sample Point:	21BW
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Hardwood Swamp
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: The sample plot is located in a hardwood swamp. Recent rain even of 1 65 inches in last 24 hours. WETS analysis determined that the antecedent precipitation conditions were normal. 2.78 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 4	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: surface	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 2 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Adrian muck — Series Drainage Class: very poorly

Taxonomy (Subgroup): Terric Haplosaprists

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	5	1	10YR 2/1	100	--	--	--	--	mucky sandy loam
5	9	2	10YR 2/1	95	10YR 5/6	5	C	M	mucky sandy loam
9	18	3	10YR 4/1	85	10YR 5/6	15	C	M	sandy loam
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☑ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☑ F3 - Depleted Matrix
- ☑ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, F1, F3 and F6 Indicators descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: 21B Sample Point **21BW**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	60	Y	FACW
2.	*Betula papyrifera*	20	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	80		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Alnus incana*	40	Y	FACW
2.	*LONICERA X BELLA*	15	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	55		

Herb Stratum (Plot size: 2 meter radius)

1.	*Geum canadense*	10	Y	FAC
2.	*Solidago gigantea*	15	Y	FACW
3.	*Thalictrum dasycarpum*	10	Y	FACW
4.	*Lycopus uniflorus*	5	N	OBL
5.	*Cornus alba*	5	N	FACW
6	*Thelypteris palustris*	2	N	FACW
7.	*BERBERIS THUNBERGII*	5	N	FACU
8.	*Calamagrostis canadensis*	2	N	OBL
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	54		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71.4% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	7	x 1 =	7
FACW spp.	132	x 2 =	264
FAC spp.	10	x 3 =	30
FACU spp.	40	x 4 =	160
UPL spp.	0	x 5 =	0
Total	189 (A)		461 (B)

Prevalence Index = B/A = 2.439

Hydrophytic Vegetation Indicators:

☐ Yes	☑ No	Rapid Test for Hydrophytic Vegetation
☑ Yes	☐ No	Dominance Test is > 50%
☑ Yes	☐ No	Prevalence Index is ≤ 3.0 *
☐ Yes	☐ No	Morphological Adaptations (Explain) *
☐ Yes	☐ No	Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Terrace	Local Relief:	Convex
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/14/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	21C
Sample Point:	21CU
Community ID:	Upland ridge
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ■ Yes ☑ No

Remarks: Sample plot is located in on an upland ridge. Recent rain even of 1 65 inches in last 24 hours. WETS analysis determined that the antecedent precipitation conditions were normal. 2.78 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 2 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	7	1	10YR 3/2	100	--	--	--	--	sandy loam
7	9	2	10YR 3/2	97	10YR 4/6	3	C	M	sandy loam
9	24	3	10YR 4/4	98	10YR 4/6	2	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: 21C | Sample Point 21CU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Prunus serotina*	30	Y	FACU
2.	*Crataegus crus-galli*	5	N	FAC
3.	*Fraxinus pennsylvanica*	10	Y	FACW
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	45		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*BERBERIS THUNBERGII*	40	Y	FACU
2.	*LONICERA X BELLA*	10	N	FACU
3.	*Quercus macrocarpa*	10	N	FACU
4.	*Prunus virginiana*	5	N	FACU
5.	*Cornus alternifolia*	2	N	FACU
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	67		

Herb Stratum (Plot size: 2 meter radius)

1.	*BERBERIS THUNBERGII*	50	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	50		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	10	x 2 =	20
FAC spp.	5	x 3 =	15
FACU spp.	147	x 4 =	588
UPL spp.	0	x 5 =	0
Total	162 (A)		623 (B)

Prevalence Index = B/A = 3.846

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/14/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf	State:	Wisconsin
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A	Wetland ID:	21C
Landform:	Depression	Local Relief:	Concave	Sample Point:	21CW
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Hardwood Swamp
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: The sample plot is located in a hardwood swamp. Recent rain even of 1.65 in last 24 hours. WETS analysis determined that the antecedent precipitation conditions were normal. 2.78 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☑ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☑ Yes ☐ No	Depth:	3	(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	0	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	0	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 3 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 2 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	10	1	10YR 2/1	97	10YR 4/6	3	C	M	loam
10	18	2	10YR 5/2	88	10YR 5/6	12	C	M	loam
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☑ F3 - Depleted Matrix
- ☑ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, F3, and F6 Indicators descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: 21C Sample Point **21CW**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	60	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	60		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Fraxinus pennsylvanica*	20	Y	FACW
2.	*Crataegus crus-galli*	2	N	FAC
3.	*BERBERIS THUNBERGII*	10	Y	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	32		

Herb Stratum (Plot size: 2 meter radius)

1.	*BERBERIS THUNBERGII*	20	Y	FACU
2.	*Iris virginica*	5	Y	OBL
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	25		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***60.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	5	x 1 =	5
FACW spp.	80	x 2 =	160
FAC spp.	2	x 3 =	6
FACU spp.	30	x 4 =	120
UPL spp.	0	x 5 =	0
Total	117 (A)		291 (B)

Prevalence Index = B/A = ***2.487***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/14/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf	State:	Wisconsin
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A	Wetland ID:	21D
Landform:	Terrace	Local Relief:	Convex	Sample Point:	21DU
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Upland ridge
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: Sample plot is located in on an upland ridge. Recent rain even of 1 65 inches in last 24 hours. WETS analysis determined that the antecedent precipitation conditions were normal. 2.78 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 2 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	7	1	10YR	3/2	100	--	--	--	sandy loam
7	16	2	10YR	4/4	100	--	--	--	loamy sand
16	24	3	10YR	5/4	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: 21D Sample Point 21DU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Betula papyrifera*	15	Y	FACU
2.	*Prunus serotina*	10	N	FACU
3.	*Quercus rubra*	50	Y	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	75		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Prunus serotina*	10	Y	FACU
2.	*Prunus virginiana*	5	N	FACU
3.	*BERBERIS THUNBERGII*	30	Y	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	45		

Herb Stratum (Plot size: 2 meter radius)

1.	*BERBERIS THUNBERGII*	40	Y	FACU
2.	*LONICERA X BELLA*	5	N	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	45		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	165	x 4 =	660
UPL spp.	0	x 5 =	0
Total	165 (A)		660 (B)

Prevalence Index = B/A = 4.000

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/14/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf	State:	Wisconsin
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A	Wetland ID:	21D
Landform:	Depression	Local Relief:	Concave	Sample Point:	21DW
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Seasonal flooded basin
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: The sample plot is located in a seasonally flooded basin. Recent rain even of 1.65 inches in last 24 hours. WETS analysis determined that the antecedent precipitation conditions were normal. 2.78 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 3	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: surface	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 2 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	2	1	10YR	2/1	100	--	--	--	--	sandy loam
2	18	2	10YR	5/3	95	10YR	4/6	5	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☑ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the S11 Indicator described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: 21D Sample Point 21DW

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–			–
2.	–			–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Alnus incana*	15	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	15		

Herb Stratum (Plot size: 2 meter radius)

1.	*BERBERIS THUNBERGII*	20	Y	FACU
2.	*PHALARIS ARUNDINACEA*	5	N	FACW
3.	*Solidago gigantea*	5	N	FACW
4.	*Rubus idaeus var. strigosus*	2	N	FAC
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	32		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	25	x 2 =	50
FAC spp.	2	x 3 =	6
FACU spp.	20	x 4 =	80
UPL spp.	0	x 5 =	0
Total	47 (A)		136 (B)

Prevalence Index = B/A = 2.894

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the prevalence index. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/13/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Mark Remington	State:	Wisconsin
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	T3K	Wetland ID:	22
Landform:	Terrace	Local Relief:	Convex	Sample Point:	22BU
Slope (%):	0-2 Latitude: N/A	Longitude:	N/A	Datum: N/A	Community ID: Mesic forest
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		☑ Yes ☐ No		Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: Sample plot is located in mesic forest. WETS analysis determined that the antecedent precipitation conditions were normal. 1.13 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 2 to 3 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	9	1	10YR 3/2	100	--	--	--	--	loamy sand
9	18	2	10YR 4/3	92	10YR 4/6	8	C	M	loamy sand
18	30	3	10YR 4/3	100	--	--	--	--	sandy loam
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: 22 | Sample Point 22BU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Prunus serotina*	40	Y	FACU
2.	*Betula papyrifera*	10	N	FACU
3.	*Quercus rubra*	5	N	FACU
4.	*Populus deltoides*	10	N	FAC
5.	*Acer saccharum*	10	N	FACU
6.	*Fraxinus pennsylvanica*	15	Y	FACW
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	90		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*BERBERIS THUNBERGII*	85	Y	FACU
2.	*LONICERA X BELLA*	2	N	FACU
3.	*Crataegus crus-galli*	10	N	FAC
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	97		

Herb Stratum (Plot size: 2 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	0		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *33.3%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	15	x 2 =	30
FAC spp.	20	x 3 =	60
FACU spp.	152	x 4 =	608
UPL spp.	0	x 5 =	0
Total	187 (A)		698 (B)

Prevalence Index = B/A = *3.733*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/13/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Mark Remington	State:	Wisconsin
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	T3K	Wetland ID:	25
Landform:	Shoulder	Local Relief:	Convex	Sample Point:	25BU
Slope (%):	2-6	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Mesic forest
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		☑ Yes ☐ No		Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: Sample plot is located in mesic forest. WETS analysis determined that the antecedent precipitation conditions were normal. 1.13 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 2 to 3 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	8	1	10YR	3/2	100	–	–	–	–	sandy loam
8	18	2	10YR	5/6	90	7.5YR	4/6	10	C	M	sandy loam
18	26	3	10YR	6/4	100	–	–	–	–	–	sandy clay loam
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: 25 | Sample Point 25BU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Prunus serotina*	25	Y	FACU
2.	*MALUS PUMILA*	15	N	UPL
3.	*Betula papyrifera*	20	Y	FACU
4.	*Fraxinus pennsylvanica*	20	Y	FACW
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	80		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*ROSA MULTIFLORA*	60	Y	FACU
2.	*Prunus virginiana*	5	N	FACU
3.	*Fraxinus pennsylvanica*	2	N	FACW
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	67		

Herb Stratum (Plot size: 2 meter radius)

1.	*Solidago gigantea*	5	N	FACW
2.	*Symphyotrichum ontarionis*	2	N	FAC
3.	*Rubus idaeus var. strigosus*	10	Y	FAC
4.	*Geum canadense*	20	Y	FAC
5.	*Arisaema triphyllum*	2	N	FAC
6	*Fragaria virginiana*	5	N	FACU
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	44		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *50.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	27	x 2 =	54
FAC spp.	34	x 3 =	102
FACU spp.	115	x 4 =	460
UPL spp.	15	x 5 =	75
Total	191 (A)		691 (B)

Prevalence Index = B/A = *3.618*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Mark Remington
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	T3K
Landform:	Side slope	Local Relief:	Linear
Slope (%):	2-6	Latitude: N/A	Longitude: N/A
Datum:	N/A		

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☑, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/13/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	25
Sample Point:	25BW
Community ID:	Hardwood swamp
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a hardwood swamp. WETS analysis determined that the antecedent precipitation conditions were normal. 1.13 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 3	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: surface	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 2 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 2 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	8	1	10YR 3/2	100	--	--	--	--	silt loam
8	18	2	10YR 4/2	85	10YR 5/6	15	C	M	sandy loam
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☑ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 and F3 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: 25 | Sample Point **25BW**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	30	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	30		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*ROSA MULTIFLORA*	5	Y	FACU
2.	*Fraxinus pennsylvanica*	5	Y	FACW
3.	*BERBERIS THUNBERGII*	2	N	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	12		

Herb Stratum (Plot size: 2 meter radius)

1.	*SOLANUM DULCAMARA*	5	N	FAC
2.	*Solidago gigantea*	2	N	FACW
3.	*Carex stricta*	5	N	OBL
4.	*BERBERIS THUNBERGII*	5	N	FACU
5.	*Lycopus uniflorus*	2	N	OBL
6	*Onoclea sensibilis*	2	N	FACW
7.	*Carex emoryi*	80	Y	OBL
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	101		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *75.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	87	x 1 =	87
FACW spp.	39	x 2 =	78
FAC spp.	5	x 3 =	15
FACU spp.	12	x 4 =	48
UPL spp.	0	x 5 =	0
Total	143 (A)		228 (B)

Prevalence Index = B/A = *1.594*

Hydrophytic Vegetation Indicators:

☐ Yes	☑ No	Rapid Test for Hydrophytic Vegetation
☑ Yes	☐ No	Dominance Test is > 50%
☑ Yes	☐ No	Prevalence Index is ≤ 3.0 *
☐ Yes	☐ No	Morphological Adaptations (Explain) *
☐ Yes	☐ No	Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/13/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Mark Remington	State:	Wisconsin
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	T3K	Wetland ID:	25
Landform:	Shoulder	Local Relief:	Convex	Sample Point:	25CU
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Mesic forest
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)	☑ Yes ☐ No			Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	■ Yes ☑ No

Remarks: Sample plot is located in mesic forest. WETS analysis determined that the antecedent precipitation conditions were normal. 1.13 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 2 to 3 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	10	1	10YR	3/2	100	--	--	--	--	sandy loam
10	14	2	10YR	5/3	100	--	--	--	--	sandy loam
14	20	3	10YR	4/4	92	10YR	5/6	8	C	M	sandy loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: 25 | Sample Point 25CU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Prunus serotina*	20	Y	FACU
2.	*Quercus macrocarpa*	10	Y	FACU
3.	*Crataegus crus-galli*	5	N	FAC
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	35		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*ROSA MULTIFLORA*	10	Y	FACU
2.	*Rubus idaeus var. strigosus*	5	Y	FAC
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	15		

Herb Stratum (Plot size: 2 meter radius)

1.	*Solidago gigantea*	2	N	FACW
2.	*HESPERIS MATRONALIS*	5	N	FACU
3.	*Carex pensylvanica*	10	Y	UPL
4.	*Rubus idaeus var. strigosus*	10	Y	FAC
5.	*BERBERIS THUNBERGII*	7	Y	FACU
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	34		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *28.6%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	2	x 2 =	4
FAC spp.	20	x 3 =	60
FACU spp.	52	x 4 =	208
UPL spp.	10	x 5 =	50
Total	84 (A)		322 (B)

Prevalence Index = B/A = *3.833*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/13/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Mark Remington	State:	Wisconsin
Soil Unit:	Hebron sandy loam	NWI/WWI Classification:	N/A	Wetland ID:	25
Landform:	Terrace	Local Relief:	Convex	Sample Point:	25DU
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Fallow field
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		☑ Yes ☐ No		Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: Sample plot is located in a fallow field. WETS analysis determined that the antecedent precipitation conditions were normal. 1.13 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 2 to 3 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Hebron sandy loam — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Oxyaquic Hapludalfs

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	7	1	10YR	3/2	100	--	--	--	sandy loam
7	20	2	10YR	4/6	100	--	--	--	sandy loam
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: 25 | Sample Point 25DU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*POA PRATENSIS*	85	Y	FACU
2.	*Solidago canadensis*	5	N	FACU
3.	*Equisetum arvense*	2	N	FAC
4.	*Symphyotrichum ontarionis*	2	N	FAC
5.	*DAUCUS CAROTA*	2	N	UPL
6	*Fragaria virginiana*	5	N	FACU
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	101		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	4	x 3 =	12
FACU spp.	95	x 4 =	380
UPL spp.	2	x 5 =	10
Total	101 (A)		402 (B)

Prevalence Index = B/A = 3.980

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/13/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Mark Remington	State:	Wisconsin
Soil Unit:	Hebron sandy loam	NWI/WWI Classification:	T3K	Wetland ID:	25
Landform:	Depression	Local Relief:	Concave	Sample Point:	25DW
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Alder thicket
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☑ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in an alder thicket. The hydrology of this sample plot is naturally problematic due to lack of primary hydrology indicators during the normal dry season. WETS analysis determined that the antecedent precipitation conditions were normal. 1.13 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☐ Yes ☑ No	Depth:	>20	(in.)
Saturation Present?	☐ Yes ☑ No	Depth:	>20	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 2 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Hebron sandy loam — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Oxyaquic Hapludalfs

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	9	1	10YR 3/2	94	10YR 4/6	6	C	M	sandy loam
9	14	2	10YR 3/3	95	10YR 5/6	5	C	M	sandy loam
14	20	3	10YR 4/6	100	–	–	–	–	loamy sand
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☑ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the F6 Indicator described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: 25 | Sample Point **25DW**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Alnus incana*	70	Y	FACW
2.	*LONICERA X BELLA*	5	N	FACU
3.	*Fraxinus pennsylvanica*	10	N	FACW
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	85		

Herb Stratum (Plot size: 2 meter radius)

1.	*BERBERIS THUNBERGII*	5	Y	FACU
2.	*LONICERA X BELLA*	10	Y	FACU
3.	*RHAMNUS CATHARTICA*	5	Y	FAC
4.	*Solidago gigantea*	5	Y	FACW
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	25		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***60.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	85	x 2 =	170
FAC spp.	5	x 3 =	15
FACU spp.	20	x 4 =	80
UPL spp.	0	x 5 =	0
Total	110 (A)		265 (B)

Prevalence Index = B/A = ***2.409***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Hebron sandy loam	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☑ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/13/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	25
Sample Point:	25EW
Community ID:	Shrub-carr component within hardwood swamp
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a shrub-carr component within a hardwood swamp. The hydrology of this sample plot is naturally problematic due to lack of primary hydrology indicators during the normal dry season. WETS analysis determined that the antecedent precipitation conditions were normal. 1.13 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 28	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 24	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 2 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Hebron sandy loam — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Oxyaquic Hapludalfs

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	8	1	10YR 3/2	95	10YR 4/6	5	C	M	sandy loam
8	12	2	10YR 4/2	92	10YR 4/6	8	C	M	sandy loam
12	17	3	10YR 4/4	100	–	–	–	–	loamy sand
17	24	4	10YR 4/3	92	10YR 4/2	3	C	M	loamy sand
–	–	–	–	–	10YR 5/4	5	C	M	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☑ F3 - Depleted Matrix
- ☑ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, F6, and F3 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: 25 | Sample Point **25EW**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind. Status
1.	*MALUS PUMILA*	5	Y	UPL
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	5		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*LONICERA X BELLA*	15	Y	FACU
2.	*Cornus alba*	30	Y	FACW
3.	*ROSA MULTIFLORA*	5	N	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	50		

Herb Stratum (Plot size: 2 meter radius)

1.	*PHALARIS ARUNDINACEA*	20	Y	FACW
2.	*BERBERIS THUNBERGII*	5	N	FACU
3.	*Solidago canadensis*	5	N	FACU
4.	*Solidago gigantea*	10	Y	FACW
5.	*RHAMNUS CATHARTICA*	2	N	FAC
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	42		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***60.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	60	x 2 =	120
FAC spp.	2	x 3 =	6
FACU spp.	30	x 4 =	120
UPL spp.	5	x 5 =	25
Total	97 (A)		271 (B)

Prevalence Index = B/A = ***2.794***

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/13/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Mark Remington	State:	Wisconsin
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	T3K	Wetland ID:	25
Landform:	Depression	Local Relief:	Concave	Sample Point:	25EW2
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Hardwood swamp
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in an hardwood swamp. WETS analysis determined that the antecedent precipitation conditions were normal. 1.13 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	14	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	11	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 1 primary and 2 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 2 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR 3/2	100	--	--	--	--	sandy loam
4	7	2	10YR 3/2	97	10YR 4/6	3	C	M	sandy loam
7	20	3	10YR 4/2	88	10YR 5/6	12	C	M	sandy loam
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☑ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 and F3 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: 25 | Sample Point **25EW2**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Populus deltoides*	40	Y	FAC
2.	*Fraxinus pennsylvanica*	40	Y	FACW
3.	*Prunus serotina*	5	N	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	85		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*BERBERIS THUNBERGII*	90	Y	FACU
2.	*Fraxinus pennsylvanica*	15	N	FACW
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	105		

Herb Stratum (Plot size: 2 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	0		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: **66.7%** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	55	x 2 =	110
FAC spp.	40	x 3 =	120
FACU spp.	95	x 4 =	380
UPL spp.	0	x 5 =	0
Total	190 (A)		610 (B)

Prevalence Index = B/A = **3.211**

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703195	Date:	08/14/14
Applicant:	Excel Engineering			County:	Sheboygan
Investigator #1:	Chuck Herrmann	Investigator #2:	Mark Remington	State:	Wisconsin
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	T3K	Wetland ID:	W1
Landform:	Side slope	Local Relief:	Convex	Sample Point:	25u
Slope (%):	2-6	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: upland deciduous forest
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☐ Yes ☑ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: The sample plot is located in an upland forest. WETS analysis determined that the antecedent precipitation conditions were drier than normal.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	28	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	23	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: Presence of one secondary hydrology indicator not sufficient to meet hydrology criteria.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Mottles Color (Moist)	Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	7	A	10YR 3/2	100	–		–	–	loamy sand
7	24	B	10YR 5/3	100	–		–	–	loamy sand
24	26	B	7.5YR 4/4	94	10YR 5/6	3	C	M	silty clay loam
–	–	–	–		10YR 6/1	3	D	M	–
26	30	B	10YR 5/2	80	10YR 5/6	20	C	M	loamy sand
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ F1 - Loamy Muck Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: W1 | Sample Point 25u

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Betula papyrifera*	45	Y	FACU
2.	*Fraxinus pennsylvanica*	20	Y	FACW
3.	*Prunus serotina*	15	N	FACU
4.	–		–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	80		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*BERBERIS THUNBERGII*	25	Y	FACU
2.	*Prunus serotina*	15	Y	FACU
3.	–		–	–
4.	–		–	–
5.	–		–	–
6.	–		–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	40		

Herb Stratum (Plot size: 2 meter radius)

1.	*RUBUS IDAEUS VAR. IDAEUS*	20	Y	FAC
2.	*Viola palmata*	10	Y	FACU
3.	*ROSA MULTIFLORA*	5	N	FACU
4.	*Fagus grandifolia*	5	N	FACU
5.	*Trillium cernuum*	5	N	FAC
6	*Thalictrum thalictroides*	2	N	FACU
7.	–		–	–
8.	–		–	–
9.	–		–	–
10.	–		–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	47		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–		–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *33.3%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	20	x 2 =	40
FAC spp.	25	x 3 =	75
FACU spp.	122	x 4 =	488
UPL spp.	0	x 5 =	0
Total	167 (A)		603 (B)

Prevalence Index = B/A = *3.611*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703195
Applicant:	Excel Engineering		
Investigator #1:	Chuck Herrmann	Investigator #2:	Mark Remington
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	T3K
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	08/14/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	W1
Sample Point:	25W
Community ID:	Forested Wetland
Section:	14
Township:	14N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a forested wetland. WETS analysis determined that the antecedent precipitation conditions were drier than normal.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☑ A3 - Saturation
- ☑ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 12	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 8	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Mottles Color (Moist)	Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	6	A	10YR 2/1	100	--		--	--	loamy sand
6	16	B	10YR 5/2	80	10YR 5/6	20	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ F1 - Loamy Muck Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 and S6 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: W1 Sample Point 25W

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	85	Y	FACW
2.	–		–	–
3.	–		–	–
4.	–		–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	85		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Prunus serotina*	15	Y	FACU
2.	*BERBERIS THUNBERGII*	10	Y	FACU
3.	*Cornus alba*	5	N	FACW
4.	–		–	–
5.	–		–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	30		

Herb Stratum (Plot size: 2 meter radius)

1.	*Laportea canadensis*	35	Y	FACW
2.	*Symplocarpus foetidus*	15	Y	OBL
3.	*Rubus pubescens*	15	Y	FACW
4.	*Lycopus virginicus*	5	N	OBL
5.	*Solidago gigantea*	5	N	FACW
6	*Thalictrum thalictroides*	5	N	FACU
7.	*ROSA MULTIFLORA*	2	N	FACU
8.	–		–	–
9.	–		–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	82		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–		–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	20	x 1 =	20
FACW spp.	145	x 2 =	290
FAC spp.	0	x 3 =	0
FACU spp.	32	x 4 =	128
UPL spp.	0	x 5 =	0
Total	197 (A)		438 (B)

Prevalence Index = B/A = 2.223

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/13/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Mark Remington	State:	Wisconsin
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	T3K	Wetland ID:	26
Landform:	Side slope	Local Relief:	Linear	Sample Point:	26BU
Slope (%):	2-6 Latitude: N/A	Longitude:	N/A	Datum: N/A	Community ID: Mesic forest
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	■ Yes ☑ No

Remarks: Sample plot is located in a mesic forest. WETS analysis determined that the antecedent precipitation conditions were normal. 1.13 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation. Although hydrophytic vegetation is present at the sample plot, the lack of hydric soils and wetland hydrology indicate the sample plot is located in an upland mesic forest.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 2 to 3 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	8	1	10YR	3/2	100	–	–	–	–	sandy loam
8	18	2	10YR	5/6	97	10YR	4/6	3	C	M	loamy sand
18	26	3	10YR	3/4	100	–	–	–	–	–	loamy sand
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: 26 | Sample Point 26BU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Prunus serotina*	20	Y	FACU
2.	*MALUS PUMILA*	5	N	UPL
3.	*Ulmus americana*	15	Y	FACW
4.	*Fraxinus pennsylvanica*	15	Y	FACW
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	55		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*LONICERA X BELLA*	2	N	FACU
2.	*ROSA MULTIFLORA*	15	Y	FACU
3.	*Alnus incana*	5	N	FACW
4.	*Prunus virginiana*	5	N	FACU
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	27		

Herb Stratum (Plot size: 2 meter radius)

1.	*Solidago gigantea*	10	Y	FACW
2.	*ROSA MULTIFLORA*	2	N	FACU
3.	*PHALARIS ARUNDINACEA*	2	N	FACW
4.	*Laportea canadensis*	2	N	FACW
5.	*Geum canadense*	10	Y	FAC
6	*RHAMNUS CATHARTICA*	2	N	FAC
7.	*Symphyotrichum ontarionis*	2	N	FAC
8.	*Dryopteris carthusiana*	2	N	FACW
9.	*Rubus idaeus var. strigosus*	2	N	FAC
10.	*BERBERIS THUNBERGII*	5	N	FACU
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	39		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	51	x 2 =	102
FAC spp.	16	x 3 =	48
FACU spp.	49	x 4 =	196
UPL spp.	5	x 5 =	25
Total	121 (A)		371 (B)

Prevalence Index = B/A = 3.066

Hydrophytic Vegetation Indicators:

☐ Yes	☑ No	Rapid Test for Hydrophytic Vegetation
☑ Yes	☐ No	Dominance Test is > 50%
☐ Yes	☑ No	Prevalence Index is ≤ 3.0 *
☐ Yes	☐ No	Morphological Adaptations (Explain) *
☐ Yes	☐ No	Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703195	Date:	08/14/14
Applicant:	Excel Engineering			County:	Sheboygan
Investigator #1:	Chuck Herrmann	Investigator #2:	Mark Remington	State:	Wisconsin
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	N/A	Wetland ID:	W1
Landform:	Depression	Local Relief:	Concave	Sample Point:	26u
Slope (%):	2-6	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: upland swale
					Section: 14
					Township: 14N
					Range: 23 Dir: E

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: The sample plot is located in an upland swale. WETS analysis determined that the antecedent precipitation conditions were drier than normal.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☐ Yes ☑ No	Depth:	>36	(in.)
Saturation Present?	☐ Yes ☑ No	Depth:	>36	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Mottles Color (Moist)	Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	8	A	10YR 3/2	100	–		–	–	loamy sand
8	24	B	10YR 4/3	100	–		–	–	loamy sand
24	36	B	10YR 5/3	70	10YR 5/6	30	C	M	loamy sand
–	–	–	–		–		–	–	–
–	–	–	–		–		–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ F1 - Loamy Muck Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: W1 | Sample Point 26u

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Pinus strobus*	40	Y	FACU
2.	*Prunus serotina*	20	Y	FACU
3.	*Fraxinus pennsylvanica*	5	N	FACW
4.	–		–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	65		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Cornus alba*	15	Y	FACW
2.	*RUBUS IDAEUS VAR. IDAEUS*	10	Y	FAC
3.	*LONICERA TATARICA*	10	Y	FACU
4.	*ROSA MULTIFLORA*	5	N	FACU
5.	*Fraxinus pennsylvanica*	2	N	FACW
6.	–		–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	42		

Herb Stratum (Plot size: 2 meter radius)

1.	*Solidago canadensis*	60	Y	FACU
2.	*Spiraea alba*	30	Y	FACU
3.	*PLANTAGO MAJOR*	10	N	FACU
4.	*TARAXACUM OFFICINALE*	5	N	FACU
5.	*Oxalis stricta*	5	N	FACU
6	*DACTYLIS GLOMERATA*	5	N	FACU
7.	*PHALARIS ARUNDINACEA*	5	N	FACW
8.	*Onoclea sensibilis*	2	N	FACW
9.	*RUMEX CRISPUS*	2	N	FAC
10.	*MEDICAGO LUPULINA*	2	N	FACU
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	126		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–		–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *28.6%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	29	x 2 =	58
FAC spp.	12	x 3 =	36
FACU spp.	192	x 4 =	768
UPL spp.	0	x 5 =	0
Total	233 (A)		862 (B)

Prevalence Index = B/A = *3.700*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703195	Date:	08/14/14
Applicant:	Excel Engineering			County:	Sheboygan
Investigator #1:	Chuck Herrmann	Investigator #2:	Mark Remington	State:	Wisconsin
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	N/A	Wetland ID:	W1
Landform:	Depression	Local Relief:	Concave	Sample Point:	26W
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: wet meadow
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		☐ Yes ☑ No		Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14N
Are Vegetation ☐, Soil ☐, or Hydrology ☑ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in a wet meadow. WETS analysis determined that the antecedent precipitation conditions were drier than normal.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☐ Yes ☑ No	Depth:	>24	(in.)
Saturation Present?	☐ Yes ☑ No	Depth:	>24	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 secondary indicators at the sample plot provides evidence of wetland hydrology. Hydrology identified as naturally problematic due to season inundation/saturation.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Mottles Color (Moist)	Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	6	A	10YR 2/1	100	--		--	--	loamy sand
6	24	B	10YR 4/2	80	10YR 5/6	20	C	M	loamy sand
--	--	--	--		--		--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ F1 - Loamy Muck Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 and S6 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: W1 | Sample Point: 26W

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	25	Y	FACW
2.	*Acer negundo*	15	Y	FAC
3.	–		–	–
4.	–		–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	40		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–		–	–
2.	–		–	–
3.	–		–	–
4.	–		–	–
5.	–		–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*PHALARIS ARUNDINACEA*	25	Y	FACW
2.	*Solidago gigantea*	25	Y	FACW
3.	*Solidago canadensis*	30	Y	FACU
4.	*Impatiens capensis*	10	N	FACW
5.	*LYTHRUM SALICARIA*	10	N	OBL
6	*Euthamia graminifolia*	10	N	FAC
7.	*Euphorbia maculata*	5	N	FACU
8.	*Lycopus virginicus*	2	N	OBL
9.	*Geum aleppicum*	2	N	FAC
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	119		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–		–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *80.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	12	x 1 =	12
FACW spp.	85	x 2 =	170
FAC spp.	27	x 3 =	81
FACU spp.	35	x 4 =	140
UPL spp.	0	x 5 =	0
Total	159 (A)		403 (B)

Prevalence Index = B/A = *2.535*

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Side slope	Local Relief:	Convex
Slope (%):	2-6	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/22/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	BR2A
Sample Point:	BR2AU
Community ID:	Pine plantation
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ■ Yes ☑ No

Remarks: The sample plot is located in a pine plantation within the growing season. WETS analysis determined that the antecedent precipitation conditions were normal. 2.30 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	6	1	10YR	3/2	100	--	--	--	sandy loam
6	14	2	10YR	4/3	100	--	--	--	loamy sand
14	20	3	10YR	5/4	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: BR2A | Sample Point **BR2AU**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Pinus resinosa*	60	Y	FACU
2.	*Pinus strobus*	20	Y	FACU
3.	*Fagus grandifolia*	10	N	FACU
4.	*Prunus serotina*	5	N	FACU
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	95		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Fagus grandifolia*	10	Y	FACU
2.	*SORBUS AUCUPARIA*	5	Y	UPL
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	15		

Herb Stratum (Plot size: 2 meter radius)

1.	*BERBERIS THUNBERGII*	10	Y	FACU
2.	*Dryopteris carthusiana*	2	N	FACW
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	12		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	2	x 2 =	4
FAC spp.	0	x 3 =	0
FACU spp.	115	x 4 =	460
UPL spp.	5	x 5 =	25
Total	122 (A)		489 (B)

Prevalence Index = B/A = *4.008*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	T3K
Landform:	Toeslope	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/22/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	BR2A
Sample Point:	BR2AW
Community ID:	Shrub-carr component within hardwood swamp
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: The sample plot is located in a shurb-carr component within a hardwood swamp during the growing season. WETS analysis determined that the antecedent precipitation conditions were normal. 2.30 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth: -	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 11	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 8	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	8	1	10YR 2/1	100	--	--	--	--	silt loam
8	14	2	10YR 4/1	92	10YR 5/6	8	C	M	sandy loam
14	20	3	10YR 6/1	93	10YR 5/6	7	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☑ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 and F3 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: BR2A | Sample Point BR2AW

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	20	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	20		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Corylus americana*	10	Y	FACU
2.	*Alnus incana*	10	Y	FACW
3.	*BERBERIS THUNBERGII*	15	Y	FACU
4.	*Crataegus crus-galli*	5	N	FAC
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	40		

Herb Stratum (Plot size: 2 meter radius)

1.	*BERBERIS THUNBERGII*	10	Y	FACU
2.	*Dryopteris carthusiana*	2	N	FACW
3.	*Calamagrostis canadensis*	5	Y	OBL
4.	*Solidago gigantea*	5	Y	FACW
5.	*Symphyotrichum ontarionis*	2	N	FAC
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	24		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 57.1% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	5	x 1 =	5
FACW spp.	37	x 2 =	74
FAC spp.	7	x 3 =	21
FACU spp.	35	x 4 =	140
UPL spp.	0	x 5 =	0
Total	84 (A)		240 (B)

Prevalence Index = B/A = 2.857

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Shoulder	Local Relief:	Convex
Slope (%):	2-6	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/22/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	BR3A
Sample Point:	BR3AU
Community ID:	Upland forest
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ Yes ☑ No

Remarks: The sample plot is located in an upland forest within the growing season. WETS analysis determined that the antecedent precipitation conditions were normal. 2.30 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot.

SOILS

Map Unit Name: Granby loamy fine sand Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	7	1	10YR	3/2	100	--	--	--	sandy loam
7	20	2	10YR	4/6	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: BR3A | Sample Point: BR3AU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind. Status
1.	*Prunus serotina*	20	Y	FACU
2.	*Fagus grandifolia*	50	Y	FACU
3.	*Acer saccharum*	20	Y	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	90		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*BERBERIS THUNBERGII*	10	Y	FACU
2.	*Crataegus crus-galli*	5	Y	FAC
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	15		

Herb Stratum (Plot size: 2 meter radius)

1.	*BERBERIS THUNBERGII*	10	Y	FACU
2.	*Carex pensylvanica*	40	Y	UPL
3.	*Fagus grandifolia*	2	N	FACU
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	52		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 14.3% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	5	x 3 =	15
FACU spp.	112	x 4 =	448
UPL spp.	40	x 5 =	200
Total	157 (A)		663 (B)

Prevalence Index = B/A = 4.223

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/22/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf	State:	Wisconsin
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	T3K	Wetland ID:	BR3A
Landform:	Toeslope	Local Relief:	Concave	Sample Point:	BR3AW
Slope (%):	0-2 Latitude: N/A	Longitude:	N/A	Datum: N/A	Community ID: Alder thicket
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: The sample plot is located in an alder thicket within the growing season. WETS analysis determined that the antecedent precipitation conditions were normal. 2.30 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:	-	(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	14	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	11	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 1 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	10	1	10YR 3/2	100	--	--	--	--	silt loam
10	20	2	10YR 4/1	92	10YR 5/6	8	C	M	sandy loam
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
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NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☑ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 and F3 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: BR3A Sample Point BR3AW

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	30	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	30		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*BERBERIS THUNBERGII*	15	Y	FACU
2.	*Alnus incana*	30	Y	FACW
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	45		

Herb Stratum (Plot size: 2 meter radius)

1.	*BERBERIS THUNBERGII*	10	Y	FACU
2.	*Calamagrostis canadensis*	5	Y	OBL
3.	*Carex stricta*	5	Y	OBL
4.	*Urtica dioica*	2	N	FAC
5.	*Iris virginica*	5	N	OBL
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	27		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	15	x 1 =	15
FACW spp.	60	x 2 =	120
FAC spp.	2	x 3 =	6
FACU spp.	25	x 4 =	100
UPL spp.	0	x 5 =	0
Total	102 (A)		241 (B)

Prevalence Index = B/A = 2.363

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/22/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf	State:	Wisconsin
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A	Wetland ID:	BR4A
Landform:	Shoulder	Local Relief:	Convex	Sample Point:	BR4AU
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Upland forest
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: The sample plot is located in an upland forest within the growing season. WETS analysis determined that the antecedent precipitation conditions were normal. 2.30 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	6	1	10YR	3/2	100	--	--	--	--	sandy loam
6	20	2	10YR	4/4	100	--	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
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NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: BR4A | Sample Point: BR4AU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind. Status
1.	*Acer saccharum*	40	Y	FACU
2.	*Betula papyrifera*	5	N	FACU
3.	*Prunus serotina*	5	N	FACU
4.	*Fagus grandifolia*	30	Y	FACU
5.	*Pinus strobus*	10	N	FACU
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	90		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*BERBERIS THUNBERGII*	5	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	5		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex pensylvanica*	60	Y	UPL
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	60		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	95	x 4 =	380
UPL spp.	60	x 5 =	300
Total	155 (A)		680 (B)

Prevalence Index = B/A = 4.387

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Toeslope	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☑, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/22/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	BR4A
Sample Point:	BR4AW
Community ID:	Alder thicket
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: The sample plot is located in an alder thicket within the growing season. WETS analysis determined that the antecedent precipitation conditions were normal. 2.30 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth: -	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 16	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 12	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 1 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology.

SOILS

Map Unit Name: Oakville loamy fine sand Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	5	1	10YR 2/1	100	--	--	--	--	silt loam
5	12	2	10YR 3/1	97	10YR 4/6	3	C	M	silt loam
12	20	3	10YR 5/2	92	10YR 5/6	8	C	M	sandy loam
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☑ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☑ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 and F6 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: BR4A | Sample Point BR4AW

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Alnus incana*	5	Y	FACW
2.	*Fraxinus pennsylvanica*	10	Y	FACW
3.	*Acer saccharum*	2	N	FACU
4.	*Prunus serotina*	5	Y	FACU
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	22		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Alnus incana*	15	Y	FACW
2.	*BERBERIS THUNBERGII*	2	N	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	17		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex lacustris*	20	Y	OBL
2.	*BERBERIS THUNBERGII*	5	N	FACU
3.	*Dryopteris carthusiana*	2	N	FACW
4.	*Impatiens capensis*	5	N	FACW
5.	*Calamagrostis canadensis*	10	Y	OBL
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	42		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83.3% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	30	x 1 =	30
FACW spp.	37	x 2 =	74
FAC spp.	0	x 3 =	0
FACU spp.	14	x 4 =	56
UPL spp.	0	x 5 =	0
Total	81 (A)		160 (B)

Prevalence Index = B/A = 1.975

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/22/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf	State:	Wisconsin
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A	Wetland ID:	BR5A
Landform:	Shoulder	Local Relief:	Convex	Sample Point:	BR5AU
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Upland forest
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		☑ Yes ☐ No		Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: The sample plot is located in an upland forest within the growing season. WETS analysis determined that the antecedent precipitation conditions were normal. 2.30 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	5	1	10YR	3/2	100	--	--	--	--	sandy loam
5	14	2	10YR	5/3	100	--	--	--	--	loamy sand
14	24	3	10YR	4/6	100	--	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: BR5A Sample Point **BR5AU**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fagus grandifolia*	35	Y	FACU
2.	*Pinus strobus*	15	Y	FACU
3.	*Acer saccharum*	20	Y	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	70		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Betula papyrifera*	20	Y	FACU
2.	*BERBERIS THUNBERGII*	5	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	25		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex pensylvanica*	80	Y	UPL
2.	*BERBERIS THUNBERGII*	5	N	FACU
3.	*Dryopteris carthusiana*	2	N	FACW
4.	*Fagus grandifolia*	5	N	FACU
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	92		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	2	x 2 =	4
FAC spp.	0	x 3 =	0
FACU spp.	105	x 4 =	420
UPL spp.	80	x 5 =	400
Total	187 (A)		824 (B)

Prevalence Index = B/A = *4.406*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Toeslope	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/22/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	BR5A
Sample Point:	BR5AW
Community ID:	Alder thicket
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: The sample plot is located in an alder thicket within the growing season. WETS analysis determined that the antecedent precipitation conditions were normal. 2.30 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth: -	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 14	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 10	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 1 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	13	1	10YR 2/1	100	--	--	--	--	mucky silt loam
13	20	2	10YR 4/2	95	10YR 4/6	5	C	M	silty clay loam
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☑ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☑ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A12 and F1 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: BR5A Sample Point BR5AW

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Alnus incana*	5	N	FACW
2.	*Fraxinus pennsylvanica*	30	Y	FACW
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	35		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Alnus incana*	30	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	30		

Herb Stratum (Plot size: 2 meter radius)

1.	*PHALARIS ARUNDINACEA*	10	Y	FACW
2.	*Symphyotrichum ontarionis*	5	N	FAC
3.	*Solidago gigantea*	5	N	FACW
4.	*Carex lacustris*	10	Y	OBL
5.	*Calamagrostis canadensis*	10	Y	OBL
6	*Carex stricta*	5	N	OBL
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	45		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *100.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	25	x 1 =	25
FACW spp.	80	x 2 =	160
FAC spp.	5	x 3 =	15
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	110 (A)		200 (B)

Prevalence Index = B/A = *1.818*

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Shoulder	Local Relief:	Convex
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/22/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	BR6A
Sample Point:	BR6AU
Community ID:	Upland forest
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ Yes ☑ No

Remarks: The sample plot is located in an upland forest within the growing season. WETS analysis determined that the antecedent precipitation conditions were normal. 2.30 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR	3/2	100	--	--	--	sandy loam
4	9	2	10YR	4/4	100	--	--	--	loamy sand
9	24	3	10YR	4/6	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
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NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: BR6A Sample Point **BR6AU**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fagus grandifolia*	40	Y	FACU
2.	*Acer saccharum*	20	Y	FACU
3.	*Betula papyrifera*	15	Y	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	75		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*BERBERIS THUNBERGII*	5	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	5		

Herb Stratum (Plot size: 2 meter radius)

1.	*Lycopodium digitatum*	20	Y	UPL
2.	*Carex pensylvanica*	20	Y	UPL
3.	*Fagus grandifolia*	15	Y	FACU
4.	*BERBERIS THUNBERGII*	5	N	FACU
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	60		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	100	x 4 =	400
UPL spp.	40	x 5 =	200
Total	140 (A)		600 (B)

Prevalence Index = B/A = *4.286*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	T3K
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A
Datum:	N/A		

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☑, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/22/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	BR6A
Sample Point:	BR6AW
Community ID:	Wet meadow/hardwood swamp
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ■ No

Remarks: The sample plot is located in a wet meadow/hardwood swamp within the growing season. WETS analysis determined that the antecedent precipitation conditions were normal. 2.30 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth: -	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 4	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: surface	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	14	1	10YR 2/1	100	--	--	--	--	mucky silt loam
14	22	2	10YR 3/1	92	10YR 4/4	8	C	M	mucky silt loam
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
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NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☑ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the F1 Indicator described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: BR6A Sample Point BR6AW

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	30	Y	FACW
2.	*Betula papyrifera*	5	N	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	35		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*BERBERIS THUNBERGII*	20	Y	FACU
2.	*Alnus incana*	10	Y	FACW
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	30		

Herb Stratum (Plot size: 2 meter radius)

1.	*Ranunculus hispidus*	20	Y	FAC
2.	*Lycopus uniflorus*	5	Y	OBL
3.	*Iris virginica*	5	Y	OBL
4.	*Symphyotrichum ontarionis*	2	N	FAC
5.	*Thelypteris palustris*	2	N	FACW
6	*Carex canescens*	5	Y	OBL
7.	*Solidago gigantea*	5	Y	FACW
8.	*BERBERIS THUNBERGII*	2	N	FACU
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	46		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 87.5% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	15	x 1 =	15
FACW spp.	47	x 2 =	94
FAC spp.	22	x 3 =	66
FACU spp.	27	x 4 =	108
UPL spp.	0	x 5 =	0
Total	111 (A)		283 (B)

Prevalence Index = B/A = 2.550

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Shoulder	Local Relief:	Convex
Slope (%):	2-6	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/22/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	BR8A
Sample Point:	BR8AU
Community ID:	Upland forest
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ■ Yes ☑ No

Remarks: The sample plot is located in an upland forest within the growing season. Small upland terrace within the mosaic wetland complex. Typical representation of upland in mosaic beech/maple wetland complex, south end of mosaic wetland complex. WETS analysis determined that the antecedent precipitation conditions were normal. 2.30 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:	(in.)
Water Table Present?	☐ Yes ☑ No	Depth:	(in.)
Saturation Present?	☐ Yes ☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	7.5YR	3/2	100	--	--	--	loam with Duff layer
3	6	2	10YR	5/2	100	--	--	--	loamy sand
6	24	3	10YR	4/6	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: BR8A Sample Point BR8AU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fagus grandifolia*	30	Y	FACU
2.	*Quercus rubra*	25	Y	FACU
3.	*Pinus strobus*	20	Y	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	75		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Fagus grandifolia*	20	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	20		

Herb Stratum (Plot size: 2 meter radius)

1.	*Fagus grandifolia*	2	N	FACU
2.	*Pinus strobus*	2	N	FACU
3.	*Lycopodium digitatum*	25	Y	UPL
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	29		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	99	x 4 =	396
UPL spp.	25	x 5 =	125
Total	124 (A)		521 (B)

Prevalence Index = B/A = *4.202*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/22/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf	State:	Wisconsin
Soil Unit:	Adrian muck	NWI/WWI Classification:	N/A	Wetland ID:	BR8A
Landform:	Depression	Local Relief:	Concave	Sample Point:	BR8AW
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Wet meadow
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		☑ Yes ☐ No		Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: The sample plot is located within a wet meadow within the growing season. Typical representation of wetland depression in mosaic beech/maple wetland complex , south end of mosaic wetland complex. WETS analysis determined that the antecedent precipitation conditions were normal. 2.30 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth: -	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 4	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: surface	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology.

SOILS

Map Unit Name: Adrian muck — Series Drainage Class: very poorly

Taxonomy (Subgroup): Terric Haplosaprists

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	6	1	10YR 2/1	100	--	--	--	--	mucky silt loam
6	14	2	10YR 4/2	95	10YR 4/6	5	C	M	sandy loam
14	24	3	10YR 5/2	95	10YR 5/6	5	C	M	sandy loam
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☑ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☑ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, F1 and F3 Indicators descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: BR8A Sample Point BR8AW

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer negundo*	5	Y	FAC
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	5		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*BERBERIS THUNBERGII*	20	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	20		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex lacustris*	10	Y	OBL
2.	*Calamagrostis canadensis*	10	Y	OBL
3.	*BERBERIS THUNBERGII*	2	N	FACU
4.	*Symphyotrichum ontarionis*	2	N	FAC
5.	*Solidago gigantea*	5	N	FACW
6	*Symplocarpus foetidus*	2	N	OBL
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	31		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *75.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	22	x 1 =	22
FACW spp.	5	x 2 =	10
FAC spp.	7	x 3 =	21
FACU spp.	22	x 4 =	88
UPL spp.	0	x 5 =	0
Total	56 (A)		141 (B)

Prevalence Index = B/A = *2.518*

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Terrace	Local Relief:	Convex
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/22/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	BR9A
Sample Point:	BR9AU
Community ID:	Upland forest
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ■ Yes ☑ No

Remarks: The sample plot is located in an upland forest within the growing season. Small upland terrace within the mosaic wetland complex and is a typical representation of upland in mosaic beech/maple wetland complex. WETS analysis determined that the antecedent precipitation conditions were normal. 2.30 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	7.5YR	3/2	100	--	--	--	--	loam with Duff layer
3	5	2	10YR	5/3	100	--	--	--	--	sandy loam
5	14	3	10YR	5/4	92	10YR	5/6	8	C	M	loamy sand
14	28	4	10YR	5/3	88	10YR	5/6	12	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: BR9A Sample Point BR9AU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer saccharum*	30	Y	FACU
2.	*Quercus rubra*	10	N	FACU
3.	*Fagus grandifolia*	40	Y	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	80		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Fagus grandifolia*	25	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	25		

Herb Stratum (Plot size: 2 meter radius)

1.	*Fagus grandifolia*	5	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	5		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	110	x 4 =	440
UPL spp.	0	x 5 =	0
Total	110 (A)		440 (B)

Prevalence Index = B/A = *4.000*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

Sample point is located within an representative upland knoll within upland/wetland mosiac complex. Area is too small to delineate as separate upland community. Approximately 15% of mosaic complex comprised of upland knolls represented by this sample point.

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Adrian muck	NWI/WWI Classification:	N/A
Landform:	Toeslope	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☑, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/22/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	BR9A
Sample Point:	BR9AW
Community ID:	Wet meadow
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: The sample plot is located in a wet meadow within the growing season. Typical representation of wetland depression in mosaic wetland complex . WETS analysis determined that the antecedent precipitation conditions were normal. 2.30 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth: -	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 4	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: surface	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology.

SOILS

Map Unit Name: Adrian muck Series Drainage Class: very poorly

Taxonomy (Subgroup): Terric Haplosaprists

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	20	1	10YR 2/1	100	--	--	--	--	muck
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☑ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A1 Indicator descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: BR9A | Sample Point BR9AW

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	20	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	20		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Fagus grandifolia*	5	Y	FACU
2.	*Quercus rubra*	5	Y	FACU
3.	*Fraxinus pennsylvanica*	10	Y	FACW
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	20		

Herb Stratum (Plot size: 2 meter radius)

1.	*PHALARIS ARUNDINACEA*	10	Y	FACW
2.	*Thelypteris palustris*	5	Y	FACW
3.	*Fagus grandifolia*	2	N	FACU
4.	*Symplocarpus foetidus*	2	N	OBL
5.	*Solidago gigantea*	5	Y	FACW
6	*Iris virginica*	2	N	OBL
7.	*Geum canadense*	2	N	FAC
8.	*Symphyotrichum ontarionis*	2	N	FAC
9.	*Urtica dioica*	2	N	FAC
10.	*Carex lacustris*	5	Y	OBL
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	37		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	9	x 1 =	9
FACW spp.	50	x 2 =	100
FAC spp.	6	x 3 =	18
FACU spp.	12	x 4 =	48
UPL spp.	0	x 5 =	0
Total	77 (A)		175 (B)

Prevalence Index = B/A = 2.273

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Shoulder	Local Relief:	Convex
Slope (%):	2-6	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/22/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	BR9B
Sample Point:	BR9BU
Community ID:	Upland forest
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ Yes ☑ No

Remarks: The sample plot is located in an upland forest within the growing season. Upland terrace outside of the mosaic wetland complex. WETS analysis determined that the antecedent precipitation conditions were normal. 2.30 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	7.5YR	3/2	100	--	--	--	loam with Duff layer
3	7	2	10YR	3/2	100	--	--	--	sandy loam
7	24	3	7.5YR	4/6	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: BR9B Sample Point BR9BU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fagus grandifolia*	40	Y	FACU
2.	*Acer saccharum*	10	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	50		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Fagus grandifolia*	10	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	10		

Herb Stratum (Plot size: 2 meter radius)

1.	*Fagus grandifolia*	15	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	15		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	75	x 4 =	300
UPL spp.	0	x 5 =	0
Total	75 (A)		300 (B)

Prevalence Index = B/A = *4.000*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/22/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf	State:	Wisconsin
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	N/A	Wetland ID:	BR9B
Landform:	Depression	Local Relief:	Concave	Sample Point:	BR9BW
Slope (%):	0-2 Latitude: N/A	Longitude:	N/A	Datum: N/A	Community ID: Mosaic Beech/Maple complex
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: The sample plot is located in a mosaic beech/maple complex within the growing season. Typical representation of wetland depression in mosaic beech/maple wetland complex . WETS analysis determined that the antecedent precipitation conditions were normal. 2 30 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth: -	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 5	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: surface	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR 2/1	100	--	--	--	--	mucky loam
4	8	2	10YR 4/2	95	10YR 4/6	5	C	M	loamy sand
8	16	3	10YR 5/3	90	10YR 5/6	10	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
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NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☑ S11 - High Chroma Sands
- ☑ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the F1, S5 and S11 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: BR9B | Sample Point BR9BW

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fagus grandifolia*	5	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	5		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Iris virginica*	2	N	OBL
2.	*Solidago gigantea*	5	Y	FACW
3.	*Thelypteris palustris*	5	Y	FACW
4.	*Carex lacustris*	5	Y	OBL
5.	*PHALARIS ARUNDINACEA*	2	N	FACW
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	19		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *75.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	7	x 1 =	7
FACW spp.	12	x 2 =	24
FAC spp.	0	x 3 =	0
FACU spp.	5	x 4 =	20
UPL spp.	0	x 5 =	0
Total	24 (A)		51 (B)

Prevalence Index = B/A = *2.125*

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/22/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf	State:	Wisconsin
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	N/A	Wetland ID:	BR10B
Landform:	Terrace	Local Relief:	Convex	Sample Point:	BR10BU
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Upland forest
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		☑ Yes ☐ No		Section:	11
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: The sample plot is located within an upland/wetland mosiac forest within the growing season. Small upland terrace within the mosaic wetland complex and is a typical representation of upland in mosaic beech/maple wetland complex. WETS analysis determined that the antecedent precipitation conditions were normal. 2.30 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☐ Yes ☑ No	Depth:		(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	30	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR 2/1	100	–	–	–	–	silt loam with Duff layer
4	14	2	10YR 5/3	100	–	–	–	–	loamy sand
14	20	3	10YR 4/3	100	–	–	–	–	loamy sand
20	28	4	10YR 4/3	92	10YR 5/6	8	C	M	loamy sand
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: BR10B Sample Point 3R10BU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Quercus rubra*	30	Y	FACU
2.	*Acer saccharum*	20	Y	FACU
3.	*Pinus strobus*	20	Y	FACU
4.	*Fagus grandifolia*	15	N	FACU
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	85		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Betula papyrifera*	5	Y	FACU
2.	*Fagus grandifolia*	10	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	15		

Herb Stratum (Plot size: 2 meter radius)

1.	*Fagus grandifolia*	2	N	FACU
2.	*Carex pensylvanica*	2	N	UPL
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	4		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	102	x 4 =	408
UPL spp.	2	x 5 =	10
Total	104 (A)		418 (B)

Prevalence Index = B/A = *4.019*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

Sample point is typical resprentation of upland knoll within upland/wetland mosiac complex. Mosiac consists of approximately 15% upland knolls, most were too small to delineate as upland, such as this area.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/22/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf	State:	Wisconsin
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	N/A	Wetland ID:	BR10B
Landform:	Depression	Local Relief:	Concave	Sample Point:	BR10BW
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Mosaic Beech/Maple complex
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	11
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☑, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: The sample plot is a typical representation of a wetland depression in mosaic beech/maple upland/wetland complex . WETS analysis determined that the antecedent precipitation conditions were normal. 2.30 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation. Atypical situations require the use of professional judgment. Based upon the landscape position, wetland hydrology and hydric soil parameters observed, the sample plot is located in a wetland.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☑ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:	-	(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	14	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	11	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 1 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR 2/1	100	--	--	--	--	loam
4	16	2	10YR 4/3	95	10YR 4/4	5	C	M	loamy sand
16	24	3	10YR 4/2	98	10YR 4/4	3	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☑ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the S5 and S11 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: BR10B | Sample Point BR10BW

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Quercus rubra*	10	N	FACU
2.	*Fagus grandifolia*	40	Y	FACU
3.	*Acer saccharum*	15	Y	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	65		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Fagus grandifolia*	15	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	15		

Herb Stratum (Plot size: 2 meter radius)

1.	*Fagus grandifolia*	2	N	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	2		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	82	x 4 =	328
UPL spp.	0	x 5 =	0
Total	82 (A)		328 (B)

Prevalence Index = B/A = 4.000

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☑ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Trees and shrubs located on small upland knolls that are located in mosaic wetland complex. Approximately 15% of mosiac consists of small upland knolls to small to delineate, however the dominant condition is wetland as represented by this sample point. Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic. Wetland spring ephemeral plants mostly likely dominate the seasonally flooded basin in early growing season.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Terrace	Local Relief:	Convex
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/22/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	BR10C
Sample Point:	BR10CU
Community ID:	Upland forest
Section:	11
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ Yes ☑ No

Remarks: The sample plot is located in an upland forest outside of the wetland/upland mosiac complex within the growing season. WETS analysis determined that the antecedent precipitation conditions were normal. 2.30 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR	2/1	100	--	--	--	loam
3	6	2	10YR	4/3	100	--	--	--	loamy sand
6	24	3	10YR	4/6	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: BR10C Sample Point BR10CU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fagus grandifolia*	20	Y	FACU
2.	*Quercus rubra*	40	Y	FACU
3.	*Pinus strobus*	10	N	FACU
4.	*Acer saccharum*	10	N	FACU
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	80		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Fagus grandifolia*	20	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	20		

Herb Stratum (Plot size: 2 meter radius)

1.	*Fagus grandifolia*	5	Y	FACU
2.	*Pinus resinosa*	2	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	7		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	107	x 4 =	428
UPL spp.	0	x 5 =	0
Total	107 (A)		428 (B)

Prevalence Index = B/A = 4.000

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/22/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf	State:	Wisconsin
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	N/A	Wetland ID:	BR10C
Landform:	Depression	Local Relief:	Concave	Sample Point:	BR10CW
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Complex wetland mosaic
					Section: 11
					Township: 14 N
					Range: 23 Dir: E

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☑, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: The sample plot is a typical representation of wetland depression in mosaic wetland/upland complex . WETS analysis determined that the antecedent precipitation conditions were normal. 2.30 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation. Atypical situations require the use of professional judgment. Based upon the landscape position, wetland hydrology and hydric soil parameters observed, the sample plot is located in a wetland.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☑ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth: -	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 4	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: surface	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 3 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	5	1	10YR 2/1	100	--	--	--	--	mucky silt loam
5	20	2	10YR 4/3	97	10YR 4/4	3	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☑ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the F1 and S5 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: BR10C | Sample Point BR10CW

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Betula alleghaniensis*	5	N	FAC
2.	*Quercus rubra*	10	N	FACU
3.	*Fagus grandifolia*	20	Y	FACU
4.	*Acer saccharum*	25	Y	FACU
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	60		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Fagus grandifolia*	10	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	10		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex lacustris*	10	Y	OBL
2.	*PHALARIS ARUNDINACEA*	15	Y	FACW
3.	*Thelypteris palustris*	2	N	FACW
4.	*Symphyotrichum ontarionis*	2	N	FAC
5.	*Calamagrostis canadensis*	5	N	OBL
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	34		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *40.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	15	x 1 =	15
FACW spp.	17	x 2 =	34
FAC spp.	7	x 3 =	21
FACU spp.	65	x 4 =	260
UPL spp.	0	x 5 =	0
Total	104 (A)		330 (B)

Prevalence Index = B/A = *3.173*

Hydrophytic Vegetation Indicators:

☐ Yes	☑ No	Rapid Test for Hydrophytic Vegetation
☐ Yes	☑ No	Dominance Test is > 50%
☐ Yes	☑ No	Prevalence Index is ≤ 3.0 *
☐ Yes	☐ No	Morphological Adaptations (Explain) *
☑ Yes	☐ No	Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Trees and shrubs located on small upland ridges that are located in mosaic wetland/upland complex. Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic. Wetland spring ephemeral plants mostly likely dominate the seasonally flooded basin in early growing season.

Additional Remarks:

Approximately 15% of upland/wetland mosiac consists of upland knolls to small to delineate. Dominate condition of mosiac is wetland depressions represented by this sample point.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/22/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf	State:	Wisconsin
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	N/A	Wetland ID:	BR10D
Landform:	Terrace	Local Relief:	Convex	Sample Point:	BR10DU
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Upland forest
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	11
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	■ Yes ☑ No

Remarks: The sample plot is located in a small upland terrace within the mosaic wetland/upland complex. Typical representation of upland in mosaic wetland. WETS analysis determined that the antecedent precipitation conditions were normal. 2.30 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR	3/2	100	--	--	--	loam with Duff layer
4	9	2	10YR	5/2	100	--	--	--	loamy sand
9	24	3	10YR	4/4	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: BR10D Sample Point BR10DU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fagus grandifolia*	40	Y	FACU
2.	*Betula papyrifera*	20	Y	FACU
3.	*Quercus rubra*	20	Y	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	80		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Fagus grandifolia*	15	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	15		

Herb Stratum (Plot size: 2 meter radius)

1.	*Fagus grandifolia*	5	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	5		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	100	x 4 =	400
UPL spp.	0	x 5 =	0
Total	100 (A)		400 (B)

Prevalence Index = B/A = *4.000*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

Upland ridge lies approximately 2 feet above wetland complex and was distinctly defined by elevation and upland vegetation. Area was determined to be significant enough in size to delineate as upland. Area identified as upland does not contain wetland depressions and is entirely upland.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/22/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf	State:	Wisconsin
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	N/A	Wetland ID:	BR11B
Landform:	Terrace	Local Relief:	Convex	Sample Point:	BR11BU
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Upland forest
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		☑ Yes ☐ No		Section:	11
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: The sample plot is located in a small upland terrace within the mosaic wetland/upland complex. Typical representation of larger sized upland in mosaic wetland. WETS analysis determined that the antecedent precipitation conditions were normal. 2.30 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	34	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	30	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	5	1	10YR 2/1	100	--	--	--	--	loam with Duff layer
5	8	2	10YR 4/2	100	--	--	--	--	loamy sand
8	30	3	10YR 5/3	88	10YR 5/6	12	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: BR11B | Sample Point BR11BU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Pinus strobus*	40	Y	FACU
2.	*Fagus grandifolia*	20	Y	FACU
3.	*Quercus rubra*	20	Y	FACU
4.	*Betula papyrifera*	10	N	FACU
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	90		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Fagus grandifolia*	10	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	10		

Herb Stratum (Plot size: 2 meter radius)

1.	*Fagus grandifolia*	5	Y	FACU
2.	*Carex pensylvanica*	2	Y	UPL
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	7		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	105	x 4 =	420
UPL spp.	2	x 5 =	10
Total	107 (A)		430 (B)

Prevalence Index = B/A = 4.019

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

Upland ridge lies approximately 2 feet above wetland complex and was distinctly defined by elevetation and upland vegetation. Area was determined to be significant enough in size to delineate as upland. Area identified as upland does not contain wetland depressions and is entirely upland.

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Terrace	Local Relief:	Linear
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/30/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	BR-11
Sample Point:	BR-11U
Community ID:	Upland ridge
Section:	11
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ Yes ☑ No

Remarks: Sample plot is located in on an upland ridge. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.18 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☐ Yes ☑ No	Depth:	>20	(in.)
Saturation Present?	☐ Yes ☑ No	Depth:	>20	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 to 5 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	2	1	10YR	3/2	100	–	–	–	–	–	sandy loam
2	3	2	10YR	5/2	100	–	–	–	–	–	loamy sand
3	12	3	10YR	4/6	100	–	–	–	–	–	loamy sand
12	20	4	10YR	5/3	100	–	–	–	–	–	loamy sand
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: BR-11 | Sample Point BR-11U

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer rubrum*	30	Y	FAC
2.	*Quercus rubra*	30	Y	FACU
3.	*Fagus grandifolia*	10	N	FACU
4.	*Pinus strobus*	10	N	FACU
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	80		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Acer saccharum*	2	Y	FACU
2.	*Fagus grandifolia*	4	Y	FACU
3.	*Corylus cornuta*	2	Y	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	8		

Herb Stratum (Plot size: 2 meter radius)

1.	*Fagus grandifolia*	2	Y	FACU
2.	*Carex pensylvanica*	2	Y	UPL
3.	*Pinus strobus*	1	Y	FACU
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	5		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *12.5%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	30	x 3 =	90
FACU spp.	61	x 4 =	244
UPL spp.	2	x 5 =	10
Total	93 (A)		344 (B)

Prevalence Index = B/A = *3.699*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

Upland maple and oak woodland. No depressional wetlands in this area.

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☑, Soil ☐, or Hydrology ☑ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/30/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	BR-11W
Sample Point:	BR-11W
Community ID:	Mosaic Beech/Maple complex
Section:	11
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally wetland depression within a mosaic of depressional wetland and upland cradle knolls. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.18 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation. The sample plot is located in a problem area because hydrophytic vegetation is not dominant; however, based upon the wetland hydrology and hydric soils observed, the sample plot is located in a seasonally wetland depression.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☑ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☑ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth: >24	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 24	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 1 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	2	1	10YR	2/1	100	--	--	--	--	sandy loam
2	24	2	10YR	5/2	95	10YR	5/6	5	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☑ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, S5 and S11 Indicators descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: BR-11W Sample Point BR-11W

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fagus grandifolia*	25	Y	FACU
2.	*Acer rubrum*	40	Y	FAC
3.	*Betula alleghaniensis*	10	N	FAC
4.	*Quercus rubra*	5	N	FACU
5.	*Acer saccharum*	2	N	FACU
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	82		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Acer saccharum*	2	Y	FACU
2.	*Fagus grandifolia*	4	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	6		

Herb Stratum (Plot size: 2 meter radius)

1.	*Dryopteris carthusiana*	2	N	FACW
2.	*Carex aquatilis*	1	N	OBL
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	3		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Remarks: Dominant vegetation was determined through use of 50/20 rule. Vegetation at the sample plot is not hydrophytic. However, it is difficult to assess vegetation directly within the wet depressions, as many of the upland trees occur on subtle knolls elevated generally 6" or more above the surface. Additionally, these depressions likely support additional hydrophytes that may only be present earlier in the growing season.

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	1	x 1 =	1
FACW spp.	2	x 2 =	4
FAC spp.	50	x 3 =	150
FACU spp.	38	x 4 =	152
UPL spp.	0	x 5 =	0
Total	91 (A)		307 (B)

Prevalence Index = B/A = 3.374

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☑ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Additional Remarks:

Mosaic of depressional wetlands, about 15% of area is upland on hummocks (craddle knolls).

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Side slope	Local Relief:	Linear
Slope (%):	2-6	Latitude: N/A	Longitude: N/A
Datum:	N/A		

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/22/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	BR12A
Sample Point:	BR12AU
Community ID:	Mesic forest
Section:	11
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ Yes ☑ No

Remarks: The sample plot is located within a mesic forest within the growing season. WETS analysis determined that the antecedent precipitation conditions were normal. 2.30 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR	3/2	100	--	--	--	sandy loam
4	24	2	10YR	5/4	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: BR12A Sample Point BR12AU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fagus grandifolia*	25	Y	FACU
2.	*Acer saccharum*	30	Y	FACU
3.	*Ostrya virginiana*	20	Y	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	75		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Fagus grandifolia*	10	Y	FACU
2.	*Ostrya virginiana*	15	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	25		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex pensylvanica*	40	Y	UPL
2.	*Acer saccharum*	20	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	60		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	120	x 4 =	480
UPL spp.	40	x 5 =	200
Total	160 (A)		680 (B)

Prevalence Index = B/A = 4.250

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	E2K
Landform:	Toeslope	Local Relief:	Concave
Slope (%):	2-6	Latitude: N/A	Longitude: N/A
Datum:	N/A		

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/22/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	BR12A
Sample Point:	BR12AW
Community ID:	Wet meadow
Section:	11
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: The sample plot is located in a wet meadow within the growing season. WETS analysis determined that the antecedent precipitation conditions were normal. 2.30 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation. Standing water six feet to the east of this wetland point.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:	-	(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	14	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	12	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 1 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	12	1	10YR 2/1	98	10YR 4/6	2	C	M	silt loam
12	24	2	10YR 4/2	95	10YR 5/6	5	C	M	loamy sand
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☑ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 and F6 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: BR12A | Sample Point BR12AW

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer saccharum*	20	Y	FACU
2.	*Quercus rubra*	15	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	35		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*PHALARIS ARUNDINACEA*	50	Y	FACW
2.	*Carex lacustris*	15	Y	OBL
3.	*Symplocarpus foetidus*	2	N	OBL
4.	*Impatiens capensis*	2	N	FACW
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	69		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	17	x 1 =	17
FACW spp.	52	x 2 =	104
FAC spp.	0	x 3 =	0
FACU spp.	35	x 4 =	140
UPL spp.	0	x 5 =	0
Total	104 (A)		261 (B)

Prevalence Index = B/A = 2.510

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the prevalence index. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/22/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf	State:	Wisconsin
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A	Wetland ID:	BR13A
Landform:	Shoulder	Local Relief:	Convex	Sample Point:	BR13AU
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Mesic forest
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: The sample plot is located in a mesic forest within the growing season.. WETS analysis determined that the antecedent precipitation conditions were normal. 2.30 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	5	1	10YR	3/2	100	--	--	--	sandy loam
5	24	2	10YR	5/3	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: BR13A Sample Point BR13AU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer saccharum*	75	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	75		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Fagus grandifolia*	10	Y	FACU
2.	*Acer saccharum*	20	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	30		

Herb Stratum (Plot size: 2 meter radius)

1.	*Acer saccharum*	2	N	FACU
2.	*Carex pensylvanica*	2	N	UPL
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	4		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	107	x 4 =	428
UPL spp.	2	x 5 =	10
Total	109 (A)		438 (B)

Prevalence Index = B/A = *4.018*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Mostly bare soil at sample point. Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/22/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf	State:	Wisconsin
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A	Wetland ID:	BR13A
Landform:	Toeslope	Local Relief:	Concave	Sample Point:	BR13AW
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Alder thicket
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: The sample plot is located in an alder thicker within the growing season. WETS analysis determined that the antecedent precipitation conditions were normal. 2.30 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:	-	(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	14	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	10	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 1 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	14	1	10YR 2/1	97	10YR 4/4	3	C	M	mucky silt loam
14	17	2	10YR 4/2	95	10YR 4/6	5	C	M	silty clay loam
17	24	3	10YR 5/3	97	10YR 5/6	3	C	M	loamy sand
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☑ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☑ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the F1 and F6 Indicators descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: BR13A | Sample Point BR13AW

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer negundo*	30	Y	FAC
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	30		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Alnus incana*	30	Y	FACW
2.	*Fraxinus pennsylvanica*	5	N	FACW
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	35		

Herb Stratum (Plot size: 2 meter radius)

1.	*PHALARIS ARUNDINACEA*	25	Y	FACW
2.	*Carex lacustris*	25	Y	OBL
3.	*Solidago gigantea*	2	N	FACW
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	52		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *100.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	25	x 1 =	25
FACW spp.	62	x 2 =	124
FAC spp.	30	x 3 =	90
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	117 (A)		239 (B)

Prevalence Index = B/A = *2.043*

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Toeslope	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/22/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	BR14A
Sample Point:	BR14AU
Community ID:	Mesic forest
Section:	11
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ Yes ☑ No

Remarks: The sample plot is located in a mesic forest within the growing season. WETS analysis determined that the antecedent precipitation conditions were normal. 2.30 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	7	1	10YR	3/2	100	--	--	--	loamy sand
7	24	2	10YR	5/3	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: BR14A Sample Point BR14AU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer saccharum*	15	N	FACU
2.	*Fagus grandifolia*	60	Y	FACU
3.	*Carpinus caroliniana*	5	N	FAC
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	80		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Carpinus caroliniana*	15	Y	FAC
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	15		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex pensylvanica*	80	Y	UPL
2.	*Fagus grandifolia*	2	N	FACU
3.	*BERBERIS THUNBERGII*	2	N	FACU
4.	*Schizachne purpurascens*	1	N	FACU
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	85		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	20	x 3 =	60
FACU spp.	80	x 4 =	320
UPL spp.	80	x 5 =	400
Total	180 (A)		780 (B)

Prevalence Index = B/A = 4.333

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/22/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf	State:	Wisconsin
Soil Unit:	Houghton muck	NWI/WWI Classification:	N/A	Wetland ID:	BR14A
Landform:	Toeslope	Local Relief:	Concave	Sample Point:	BR14AW
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Wet meadow
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	11
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: The sample plot is located in a wet meadow within the growing season. WETS analysis determined that the antecedent precipitation conditions were normal. 2.30 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:	-	(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	12	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	10	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology.

SOILS

Map Unit Name: Houghton muck — Series Drainage Class: very poorly

Taxonomy (Subgroup): Typic Haplosaprists

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR 2/1	100	--	--	--	--	silt loam
4	14	2	10YR 2/1	92	10YR 4/6	8	C	M	silt loam
14	20	3	10YR 5/1	90	10YR 5/6	10	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
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NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☑ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☑ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A12 and F6 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: BR14A | Sample Point BR14AW

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Crataegus crus-galli*	5	Y	FAC
2.	*Betula alleghaniensis*	20	Y	FAC
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	25		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Osmundastrum cinnamomeum*	5	Y	FACW
2.	*Symplocarpus foetidus*	5	Y	OBL
3.	*PHALARIS ARUNDINACEA*	10	Y	FACW
4.	*BERBERIS THUNBERGII*	2	N	FACU
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	22		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *100.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	5	x 1 =	5
FACW spp.	15	x 2 =	30
FAC spp.	25	x 3 =	75
FACU spp.	2	x 4 =	8
UPL spp.	0	x 5 =	0
Total	47 (A)		118 (B)

Prevalence Index = B/A = *2.511*

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Side slope	Local Relief:	Linear
Slope (%):	2-6	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/22/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	BR14B
Sample Point:	BR14BU
Community ID:	Mesic forest
Section:	11
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ Yes ☑ No

Remarks: The sample plot is located in a mesic forest within the growing season. WETS analysis determined that the antecedent precipitation conditions were normal. 2.30 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR	3/2	100	–	–	–	–	loam
4	6	2	10YR	5/2	100	–	–	–	–	loam
6	12	3	10YR	3/2	100	–	–	–	–	loamy sand
12	24	4	10YR	3/3	100	–	–	–	–	loamy sand
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: BR14B | Sample Point BR14BU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fagus grandifolia*	40	Y	FACU
2.	*Acer saccharum*	40	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	80		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Acer saccharum*	10	Y	FACU
2.	*Fagus grandifolia*	15	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	25		

Herb Stratum (Plot size: 2 meter radius)

1.	*Dryopteris carthusiana*	2	N	FACW
2.	*Fagus grandifolia*	5	N	FACU
3.	*Carex pensylvanica*	20	Y	UPL
4.	*Quercus rubra*	2	N	FACU
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	29		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	2	x 2 =	4
FAC spp.	0	x 3 =	0
FACU spp.	112	x 4 =	448
UPL spp.	20	x 5 =	100
Total	134 (A)		552 (B)

Prevalence Index = B/A = 4.119

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/22/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf	State:	Wisconsin
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A	Wetland ID:	BR14B
Landform:	Depression	Local Relief:	Concave	Sample Point:	BR14BW
Slope (%):	0-2 Latitude: N/A	Longitude:	N/A	Datum: N/A	Community ID: Wet meadow
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	11
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: The sample plot is located in a wet meadow within the growing season. WETS analysis determined that the antecedent precipitation conditions were normal. 2.30 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☑ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:	-	(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	13	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	10	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	5	1	10YR	3/2	95	10YR 4/6	5	C	M	silt loam
5	24	2	10YR	5/3	90	10YR 5/6	10	C	M	loamy sand
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☑ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the S5 and F6 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: BR14B | Sample Point BR14BW

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fagus grandifolia*	5	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	5		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Acer saccharum*	2	N	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	2		

Herb Stratum (Plot size: 2 meter radius)

1.	*PHALARIS ARUNDINACEA*	10	Y	FACW
2.	*BERBERIS THUNBERGII*	2	N	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	12		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	10	x 2 =	20
FAC spp.	0	x 3 =	0
FACU spp.	9	x 4 =	36
UPL spp.	0	x 5 =	0
Total	19 (A)		56 (B)

Prevalence Index = B/A = 2.947

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Mostly bare soil at sample point connected to wet meadow, shaded by surrounding upland forest. Dominant vegetation was determined through use of the prevalence index. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Houghton muck	NWI/WWI Classification:	N/A
Landform:	Terrace	Local Relief:	Convex
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/22/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	BR14C
Sample Point:	BR14CU
Community ID:	Mesic forest
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ Yes ☑ No

Remarks: The sample plot is located in a mesic forest within the growing season. WETS analysis determined that the antecedent precipitation conditions were normal. 2.30 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot.

SOILS

Map Unit Name: Houghton muck — Series Drainage Class: very poorly

Taxonomy (Subgroup): Typic Haplosaprists

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	13	1	10YR	3/2	100	--	--	--	sandy loam
13	24	2	10YR	5/3	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: BR14C Sample Point 3R14CU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer saccharum*	60	Y	FACU
2.	*Prunus serotina*	5	N	FACU
3.	*Fagus grandifolia*	5	N	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	70		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Acer saccharum*	5	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	5		

Herb Stratum (Plot size: 2 meter radius)

1.	*BERBERIS THUNBERGII*	5	N	FACU
2.	*Carex pensylvanica*	40	Y	UPL
3.	*Solidago canadensis*	5	N	FACU
4.	*PHALARIS ARUNDINACEA*	2	N	FACW
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	52		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	2	x 2 =	4
FAC spp.	0	x 3 =	0
FACU spp.	85	x 4 =	340
UPL spp.	40	x 5 =	200
Total	127 (A)		544 (B)

Prevalence Index = B/A = 4.283

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Houghton muck	NWI/WWI Classification:	N/A
Landform:	Toeslope	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/22/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	BR14C
Sample Point:	BR14CW
Community ID:	Wet meadow
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: The sample plot is located in a wet meadow witin the growing season. WETS analysis determined that the antecedent precipitation conditions were normal. 2.30 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth: -	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 16	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 10	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 1 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology.

SOILS

Map Unit Name: Houghton muck — Series Drainage Class: very poorly

Taxonomy (Subgroup): Typic Haplosaprists

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	16	1	10YR 3/2	90	10YR 4/6	10	C	M	silt loam
16	20	2	10YR 3/2	76	10YR 5/6	12	C	M	silt loam
–	–	–	–	–	10YR 4/2	12	C	M	silt loam
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☑ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the F6 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: BR14C Sample Point BR14CW

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	20	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	20		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Alnus incana*	15	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	15		

Herb Stratum (Plot size: 2 meter radius)

1.	*PHALARIS ARUNDINACEA*	40	Y	FACW
2.	*Carex lacustris*	10	Y	OBL
3.	*Helenium autumnale*	5	N	FACW
4.	*Solidago gigantea*	5	N	FACW
5.	*Symplocarpus foetidus*	2	N	OBL
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	62		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *100.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	12	x 1 =	12
FACW spp.	85	x 2 =	170
FAC spp.	0	x 3 =	0
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	97 (A)		182 (B)

Prevalence Index = B/A = *1.876*

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Dune land	NWI/WWI Classification:	T3/E2K
Landform:	Terrace	Local Relief:	Linear
Slope (%):	0-3	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/29/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	NE-1A
Sample Point:	NE-1AU
Community ID:	Upland ridge
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ Yes ☑ No

Remarks: Sample plot is located in on an upland ridge. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.33 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth: >22	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 to 5 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	14	1	10YR	3/2	100	--	--	--	loamy sand
14	22	2	10YR	6/3	100	--	--	--	sand
--	--	--	--	--	--	--	--	--	--
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NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: NE-1A Sample Point NE-1AU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Quercus rubra*	25	Y	FACU
2.	*Pinus strobus*	30	Y	FACU
3.	*Acer saccharum*	10	N	FACU
4.	*Acer rubrum*	15	N	FAC
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	80		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Acer spicatum*	25	Y	FACU
2.	*Acer saccharum*	15	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	40		

Herb Stratum (Plot size: 2 meter radius)

1.	*BERBERIS THUNBERGII*	15	Y	FACU
2.	*Rubus idaeus var. strigosus*	10	N	FAC
3.	*Corylus cornuta*	15	Y	FACU
4.	*Linnaea borealis*	5	N	FAC
5.	*Quercus rubra*	1	N	FACU
6	*Carex pensylvanica*	20	Y	UPL
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	66		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	30	x 3 =	90
FACU spp.	136	x 4 =	544
UPL spp.	20	x 5 =	100
Total	186 (A)		734 (B)

Prevalence Index = B/A = 3.946

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Dune land	NWI/WWI Classification:	T3/E2K
Landform:	Terrace	Local Relief:	Linear
Slope (%):	0-6	Latitude: N/A	Longitude: N/A
Datum:	N/A		

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/29/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	NE-1B
Sample Point:	NE-1BU
Community ID:	Upland ridge
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ■ Yes ☑ No

Remarks: Sample plot is located in on an upland ridge. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.33 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth: >18	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 to 5 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR	3/2	100	--	--	--	loamy sand
4	18	2	10YR	4/4	100	--	--	--	sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: NE-1B Sample Point NE-1BU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer saccharum*	60	Y	FACU
2.	*Fraxinus pennsylvanica*	20	Y	FACW
3.	*Quercus rubra*	5	N	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	85		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Corylus cornuta*	5	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	5		

Herb Stratum (Plot size: 2 meter radius)

1.	*BERBERIS THUNBERGII*	15	Y	FACU
2.	*Urtica dioica*	5	N	FAC
3.	*Rubus idaeus var. strigosus*	15	Y	FAC
4.	*Carex pensylvanica*	35	Y	UPL
5.	*Alisma subcordatum*	2	N	OBL
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	72		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	2	x 1 =	2
FACW spp.	20	x 2 =	40
FAC spp.	20	x 3 =	60
FACU spp.	85	x 4 =	340
UPL spp.	35	x 5 =	175
Total	162 (A)		617 (B)

Prevalence Index = B/A = 3.809

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Dune land	NWI/WWI Classification:	T3/E2K
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A
Datum:	N/A		

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/29/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	NE-1
Sample Point:	NE-1W
Community ID:	Wet meadow
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a wet meadow. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.33 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 10	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 6	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	7	1	10YR 3/2	95	10YR 5/6	5	C	M	mucky silt loam
7	9	2	10YR 5/3	97	10YR 5/6	3	C	M	loamy sand
9	16	3	10YR 3/2	92	10YR 5/6	8	C	M	mucky silt loam
16	22	4	10YR 5/3	95	10YR 5/6	5	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
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NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☑ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☑ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the F6 Indicator described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: NE-1 | Sample Point **NE-1W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Alnus incana*	10	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	10		

Herb Stratum (Plot size: 2 meter radius)

1.	*Calamagrostis canadensis*	40	Y	OBL
2.	*Carex lacustris*	30	Y	OBL
3.	*Alnus incana*	5	N	FACW
4.	*Lycopus uniflorus*	15	N	OBL
5.	*Mentha arvensis*	10	N	FACW
6	*Laportea canadensis*	5	N	FACW
7.	*Glyceria grandis*	5	N	OBL
8.	*SOLANUM DULCAMARA*	5	N	FAC
9.	*PHALARIS ARUNDINACEA*	2	N	FACW
10.	*Sparganium eurycarpum*	2	N	OBL
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	119		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	92	x 1 =	92
FACW spp.	32	x 2 =	64
FAC spp.	5	x 3 =	15
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	129 (A)		171 (B)

Prevalence Index = B/A = ***1.326***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Dune land	NWI/WWI Classification:	T3/E2K
Landform:	Side slope	Local Relief:	Convex
Slope (%):	2-6	Latitude: N/A	Longitude: N/A
Datum:	N/A		

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/29/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	NE-2A
Sample Point:	NE-2AU
Community ID:	Upland ridge
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ Yes ☑ No

Remarks: Sample plot is located in on an upland ridge. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.33 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth: >18	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 to 5 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	2	1	10YR 3/2	100	–	–	–	–	loam
2	5	2	10YR 3/3	100	–	–	–	–	loamy sand
5	18	3	10YR 4/4	100	–	–	–	–	sand
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: NE-2A Sample Point NE-2AU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer saccharum*	40	Y	FACU
2.	*Quercus rubra*	45	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	85		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Acer saccharum*	15	Y	FACU
2.	*Corylus cornuta*	5	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	20		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex pensylvanica*	45	Y	UPL
2.	*Corylus cornuta*	50	Y	FACU
3.	*Rubus idaeus var. strigosus*	10	N	FAC
4.	*Linnaea borealis*	5	N	FAC
5.	*Acer saccharum*	1	N	FACU
6	*Quercus rubra*	1	N	FACU
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	112		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	15	x 3 =	45
FACU spp.	157	x 4 =	628
UPL spp.	45	x 5 =	225
Total	217 (A)		898 (B)

Prevalence Index = B/A = *4.138*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	T3/E2K
Landform:	Side slope	Local Relief:	Convex
Slope (%):	2-6	Latitude: N/A	Longitude: N/A
Datum:	N/A		

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/29/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	NE-2B
Sample Point:	NE-2BU
Community ID:	Upland ridge
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ Yes ☑ No

Remarks: Sample plot is located in on an upland ridge. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.33 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☐ Yes ☑ No	Depth:	>18	(in.)
Saturation Present?	☐ Yes ☑ No	Depth:	>18	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 to 5 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR	3/2	100	–	–	–	–	loamy sand
4	6	2	10YR	4/3	100	–	–	–	–	loamy sand
6	18	3	10YR	4/4	100	–	–	–	–	sand
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: NE-2B Sample Point NE-2BU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer saccharum*	65	Y	FACU
2.	*Pinus strobus*	10	N	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	75		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex pensylvanica*	55	Y	UPL
2.	*ALLIARIA PETIOLATA*	5	N	FACU
3.	*Laportea canadensis*	2	N	FACW
4.	*Calamagrostis canadensis*	2	N	OBL
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	64		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	2	x 1 =	2
FACW spp.	2	x 2 =	4
FAC spp.	0	x 3 =	0
FACU spp.	80	x 4 =	320
UPL spp.	55	x 5 =	275
Total	139 (A)		601 (B)

Prevalence Index = B/A = *4.324*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/29/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	T3/E2K	Wetland ID:	NE-2
Landform:	Depression	Local Relief:	Concave	Sample Point:	NE-2W
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Wet meadow
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☐ Yes ☑ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in a wet meadow. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0 33 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☑ B8 - Sparsely Vegetated Concave Surface
- ☑ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	3	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	surface	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 4 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	13	1	10YR 2/1	95	10YR 4/6	5	C	M	mucky silt loam
13	20	2	10YR 4/2	95	10YR 5/6	5	C	M	loamy sand
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☑ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☑ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 and F6 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: NE-2 | Sample Point **NE-2W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Alnus incana*	10	Y	FACW
2.	*Acer rubrum*	5	Y	FAC
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	15		

Herb Stratum (Plot size: 2 meter radius)

1.	*Calamagrostis canadensis*	60	Y	OBL
2.	*Lycopus uniflorus*	5	N	OBL
3.	*Symphyotrichum ontarionis*	2	N	FAC
4.	*Dryopteris carthusiana*	2	N	FACW
5.	*Urtica dioica*	2	N	FAC
6	*Carex lacustris*	2	N	OBL
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	73		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	67	x 1 =	67
FACW spp.	12	x 2 =	24
FAC spp.	9	x 3 =	27
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	88 (A)		118 (B)

Prevalence Index = B/A = ***1.341***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/29/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	NE-3A
Landform:	Terrace	Local Relief:	Linear	Sample Point:	NE-3AU
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Upland ridge
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		☐ Yes	☑ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes	☐ No	Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	■ Yes ☑ No

Remarks: Sample plot is located in on an upland ridge. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.33 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☐ Yes ☑ No	Depth:	>20	(in.)
Saturation Present?	☐ Yes ☑ No	Depth:	>20	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 to 5 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR	3/2	100	--	--	--	loam
3	12	2	10YR	5/3	100	--	--	--	loamy sand
12	20	3	10YR	4/4	100	--	--	--	sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: NE-3A Sample Point NE-3AU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer saccharum*	60	Y	FACU
2.	*Corylus cornuta*	5	N	FACU
3.	*Betula papyrifera*	10	N	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	75		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Acer saccharum*	2	N	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	2		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex pensylvanica*	60	Y	UPL
2.	*Acer saccharum*	2	N	FACU
3.	*Dryopteris carthusiana*	1	N	FACW
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	63		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	1	x 2 =	2
FAC spp.	0	x 3 =	0
FACU spp.	79	x 4 =	316
UPL spp.	60	x 5 =	300
Total	140 (A)		618 (B)

Prevalence Index = B/A = 4.414

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	T3/E2K
Landform:	Side slope	Local Relief:	Convex
Slope (%):	2-6	Latitude: N/A	Longitude: N/A
Datum:	N/A		

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/29/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	NE-3B
Sample Point:	NE-3BU
Community ID:	Upland ridge
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ■ Yes ☑ No

Remarks: Sample plot is located in on an upland ridge. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.33 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☐ Yes ☑ No	Depth:	>20	(in.)
Saturation Present?	☐ Yes ☑ No	Depth:	>20	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 to 5 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR	3/2	100	–	–	–	–	loam
3	7	2	10YR	5/3	100	–	–	–	–	loamy sand
7	20	3	10YR	4/4	100	–	–	–	–	sand
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: NE-3B Sample Point NE-3BU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer saccharum*	80	Y	FACU
2.	*Corylus cornuta*	10	N	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	90		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Acer saccharum*	15	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	15		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex pensylvanica*	70	Y	UPL
2.	*Acer saccharum*	10	N	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	80		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	115	x 4 =	460
UPL spp.	70	x 5 =	350
Total	185 (A)		810 (B)

Prevalence Index = B/A = *4.378*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/29/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	T3/E2K	Wetland ID:	NE-3
Landform:	Depression	Local Relief:	Concave	Sample Point:	NE-3W
Slope (%):	0-2 Latitude: N/A	Longitude:	N/A	Datum: N/A	Community ID: Alder thicket
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☐ Yes ☑ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in an alder thicket. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.33 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	12	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	8	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	5	1	10YR 2/1	93	10YR 5/6	7	C	M	mucky silt loam
5	20	2	10YR 4/2	95	10YR 4/6	5	C	M	loamy sand
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☑ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☑ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, F1, F6 and S5 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: NE-3 Sample Point **NE-3W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	45	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	45		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Alnus incana*	65	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	65		

Herb Stratum (Plot size: 2 meter radius)

1.	*Glyceria striata*	40	Y	OBL
2.	*Calamagrostis canadensis*	15	Y	OBL
3.	*Lycopus uniflorus*	10	N	OBL
4.	*Alnus incana*	15	Y	FACW
5.	*Impatiens capensis*	5	N	FACW
6	*Carex stricta*	5	N	OBL
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	90		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	70	x 1 =	70
FACW spp.	130	x 2 =	260
FAC spp.	0	x 3 =	0
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	200 (A)		330 (B)

Prevalence Index = B/A = ***1.650***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Terrace	Local Relief:	Linear
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/29/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	NE-4B
Sample Point:	NE-4BU
Community ID:	Upland ridge
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ■ Yes ☑ No

Remarks: Sample plot is located in on an upland ridge. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.33 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth: >18	(in.)
Saturation Present?	☐ Yes	☑ No	Depth: >18	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 to 5 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	8	1	10YR	3/2	100	--	--	--	loamy sand
8	18	2	10YR	4/4	100	--	--	--	sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: NE-4B Sample Point NE-4BU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Pinus strobus*	10	N	FACU
2.	*Acer saccharum*	45	Y	FACU
3.	*Betula papyrifera*	25	Y	FACU
4.	*Acer spicatum*	2	N	FACU
5.	*Populus balsamifera*	2	N	FACW
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	84		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex pensylvanica*	95	Y	UPL
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	95		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	2	x 2 =	4
FAC spp.	0	x 3 =	0
FACU spp.	82	x 4 =	328
UPL spp.	95	x 5 =	475
Total	179 (A)		807 (B)

Prevalence Index = B/A = *4.508*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Dune land	NWI/WWI Classification:	T3/E2K
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/29/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	NE-4
Sample Point:	NE-4W
Community ID:	Alder thicket
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in an alder thicket. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.33 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 6	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: surface	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land Series Drainage Class: well to excessively
Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	10	1	10YR 2/1	97	10YR 4/6	3	C	M	mucky silt loam
10	24	2	10YR 5/2	95	10YR 5/6	5	C	M	loamy sand
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☑ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☑ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, F1, and F6 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: NE-4 | Sample Point **NE-4W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Alnus incana*	65	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	65		

Herb Stratum (Plot size: 2 meter radius)

1.	*Calamagrostis canadensis*	45	Y	OBL
2.	*Carex lacustris*	20	Y	OBL
3.	*Lycopus uniflorus*	2	N	OBL
4.	*Lycopus uniflorus*	10	N	OBL
5.	*Laportea canadensis*	5	N	FACW
6	*Urtica dioica*	5	N	FAC
7.	*Symphyotrichum ontarionis*	2	N	FAC
8.	*Onoclea sensibilis*	2	N	FACW
9.	*Alnus incana*	2	N	FACW
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	93		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	77	x 1 =	77
FACW spp.	74	x 2 =	148
FAC spp.	7	x 3 =	21
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	158 (A)		246 (B)

Prevalence Index = B/A = ***1.557***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	T3/E2K
Landform:	Terrace	Local Relief:	Linear
Slope (%):	0-2	Latitude: N/A	Longitude: N/A
			Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/30/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	NE-5A
Sample Point:	NE-5AU
Community ID:	Upland ridge
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ Yes ☑ No

Remarks: Sample plot is located in on an upland ridge. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.18 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 to 5 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	2	1	10YR	3/2	100	--	--	--	sandy loam
2	20	2	10YR	4/4	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: NE-5A Sample Point NE-5AU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer saccharum*	40	Y	FACU
2.	*Quercus rubra*	25	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	65		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Prunus virginiana*	15	Y	FACU
2.	*Acer saccharum*	10	Y	FACU
3.	*Fagus grandifolia*	10	Y	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	35		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex pensylvanica*	15	Y	UPL
2.	*Acer saccharum*	5	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	20		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	105	x 4 =	420
UPL spp.	15	x 5 =	75
Total	120 (A)		495 (B)

Prevalence Index = B/A = *4.125*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Side slope	Local Relief:	Convex
Slope (%):	2-6	Latitude: N/A	Longitude: N/A
Datum:	N/A		

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/30/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	NE-5B
Sample Point:	NE-5BU
Community ID:	Upland ridge
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ Yes ☑ No

Remarks: Sample plot is located in on an upland ridge. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.18 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 to 5 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	2	1	10YR	2/1	100	--	--	--	sandy loam
2	20	2	10YR	4/4	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
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--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: NE-5B Sample Point NE-5BU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer saccharum*	85	Y	FACU
2.	*Fagus grandifolia*	5	N	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	90		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Acer saccharum*	20	Y	FACU
2.	*Fagus grandifolia*	5	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	25		

Herb Stratum (Plot size: 2 meter radius)

1.	*Acer saccharum*	10	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	10		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	125	x 4 =	500
UPL spp.	0	x 5 =	0
Total	125 (A)		500 (B)

Prevalence Index = B/A = *4.000*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/30/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	T3/E2K	Wetland ID:	NE-5
Landform:	Depression	Local Relief:	Concave	Sample Point:	NE-5W
Slope (%):	0-2 Latitude: N/A	Longitude:	N/A	Datum: N/A	Community ID: Wet meadow
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☐ Yes ☑ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in a wet meadow. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.18 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	10	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	6	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR 2/1	100	--	--	--	--	mucky sand
3	6	2	10YR 2/1	100	--	--	--	--	sandy loam
6	20	3	10YR 4/1	100	--	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☑ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the S1 Indicator descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: NE-5 Sample Point **NE-5W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	65	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	65		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Alnus incana*	10	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	10		

Herb Stratum (Plot size: 2 meter radius)

1.	*Calamagrostis canadensis*	40	Y	OBL
2.	*Carex stricta*	55	Y	OBL
3.	*Symphyotrichum ontarionis*	10	N	FAC
4.	*Urtica dioica*	5	N	FAC
5.	*Equisetum sylvaticum*	2	N	FACW
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	112		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	95	x 1 =	95
FACW spp.	77	x 2 =	154
FAC spp.	15	x 3 =	45
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	187 (A)		294 (B)

Prevalence Index = B/A = ***1.572***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/30/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	T3/E2K	Wetland ID:	NE-6A
Landform:	Terrace	Local Relief:	Linear	Sample Point:	NE-6AU
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Upland ridge
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☐ Yes ☑ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: Sample plot is located in on an upland ridge. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.18 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 to 5 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	2	1	10YR	2/1	100	–	–	–	–	–	sandy loam
2	3	2	10YR	5/2	100	–	–	–	–	–	loamy sand
3	20	3	10YR	5/4	100	–	–	–	–	–	loamy sand
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: NE-6A | Sample Point NE-6AU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Betula papyrifera*	10	N	FACU
2.	*Acer saccharum*	55	Y	FACU
3.	*Fagus grandifolia*	15	N	FACU
4.	*Pinus strobus*	10	N	FACU
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	90		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Fagus grandifolia*	55	Y	FACU
2.	*Acer saccharum*	10	N	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	65		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex pensylvanica*	25	Y	UPL
2.	*BERBERIS THUNBERGII*	2	N	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	27		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	157	x 4 =	628
UPL spp.	25	x 5 =	125
Total	182 (A)		753 (B)

Prevalence Index = B/A = *4.137*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/30/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	N/A	Wetland ID:	NE-6B
Landform:	Side slope	Local Relief:	Convex	Sample Point:	NE-6BU
Slope (%):	2-6 Latitude: N/A	Longitude:	N/A	Datum: N/A	Community ID: Upland ridge
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☐ Yes ☑ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: Sample plot is located in on an upland ridge. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.18 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 to 5 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	2	1	10YR	2/1	100	--	--	--	sandy loam
2	14	2	10YR	5/4	100	--	--	--	loamy sand
14	20	3	10YR	4/3	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: NE-6B Sample Point NE-6BU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer saccharum*	45	Y	FACU
2.	*Pinus strobus*	15	N	FACU
3.	*Quercus rubra*	15	N	FACU
4.	*Prunus serotina*	10	N	FACU
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	85		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*BERBERIS THUNBERGII*	5	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	5		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex pensylvanica*	60	Y	UPL
2.	*Calamagrostis canadensis*	5	N	OBL
3.	*Dryopteris carthusiana*	2	N	FACW
4.	*Carex aquatilis*	2	N	OBL
5.	*BERBERIS THUNBERGII*	5	N	FACU
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	74		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	7	x 1 =	7
FACW spp.	2	x 2 =	4
FAC spp.	0	x 3 =	0
FACU spp.	95	x 4 =	380
UPL spp.	60	x 5 =	300
Total	164 (A)		691 (B)

Prevalence Index = B/A = *4.213*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/30/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	T3/E2K	Wetland ID:	NE-6
Landform:	Depression	Local Relief:	Concave	Sample Point:	NE-6W
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Wet meadow
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☐ Yes ☑ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in a wet meadow. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.18 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	10	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	6	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR	2/1	100	--	--	--	mucky sand
3	20	2	10YR	6/1	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☑ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 and S1 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: NE-6 | Sample Point **NE-6W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	40	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	40		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Calamagrostis canadensis*	15	Y	OBL
2.	*Lycopus uniflorus*	10	N	OBL
3.	*Laportea canadensis*	40	Y	FACW
4.	*Symphyotrichum ontarionis*	2	N	FAC
5.	*Onoclea sensibilis*	2	N	FACW
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	69		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	25	x 1 =	25
FACW spp.	82	x 2 =	164
FAC spp.	2	x 3 =	6
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	109 (A)		195 (B)

Prevalence Index = B/A = ***1.789***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/29/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	P-1
Landform:	Depression	Local Relief:	Concave	Sample Point:	P-1U
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Upland swale
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		☐ Yes ☑ No		Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: Sample plot is located in on an upland swale. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.33 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☐ Yes ☑ No	Depth:	>22	(in.)
Saturation Present?	☐ Yes ☑ No	Depth:	>22	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of only one secondary indicator at the sample plot does not provide sufficient evidence of wetland hydrology.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	5	1	10YR	3/2	100	--	--	--	loam
5	16	2	10YR	5/3	100	--	--	--	loamy sand
16	22	3	10YR	4/4	100	--	--	--	sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
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NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-1 Sample Point **P-1U**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Pinus resinosa*	15	Y	FACU
2.	*Quercus rubra*	25	Y	FACU
3.	*Fraxinus pennsylvanica*	10	N	FACW
4.	*Acer spicatum*	5	N	FACU
5.	*Pinus strobus*	2	N	FACU
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	57		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*BERBERIS THUNBERGII*	20	Y	FACU
2.	*Pinus strobus*	15	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	35		

Herb Stratum (Plot size: 2 meter radius)

1.	*BERBERIS THUNBERGII*	10	Y	FACU
2.	*Pinus strobus*	10	Y	FACU
3.	*Carex pensylvanica*	35	Y	UPL
4.	*Rubus idaeus var. strigosus*	10	N	FAC
5.	*Prunus virginiana*	2	N	FACU
6	*Fraxinus pennsylvanica*	2	N	FACW
7.	*Fragaria virginiana*	2	N	FACU
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	71		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	12	x 2 =	24
FAC spp.	10	x 3 =	30
FACU spp.	106	x 4 =	424
UPL spp.	35	x 5 =	175
Total	163 (A)		653 (B)

Prevalence Index = B/A = *4.006*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Dune land	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☑ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/29/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-1
Sample Point:	P-1W
Community ID:	Seasonally Flooded Basin
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. The hydrology of this sample plot is naturally problematic due to lack of primary hydrology indicators during the normal dry season. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.33 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth: >24	(in.)
Saturation Present?	☐ Yes	☑ No	Depth: >24	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 secondary indicators at the sample plot provides evidence of wetland hydrology. Hydrology observations of high water table (16 in.) and saturation (10 in.) were found during Excel Engineering field investigation in May.The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land Series Drainage Class: well to excessively
Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR 3/2	100	--	--	--	--	sandy loam
3	24	2	10YR 5/2	97	10YR 5/6	7	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☑ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, S5, and S11 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-1 Sample Point **P-1W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Rubus idaeus var. strigosus*	15	Y	FAC
2.	*Urtica dioica*	40	Y	FAC
3.	*Carex stricta*	10	N	OBL
4.	*Dryopteris carthusiana*	2	N	FACW
5.	*Calamagrostis canadensis*	5	N	OBL
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	72		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	15	x 1 =	15
FACW spp.	2	x 2 =	4
FAC spp.	55	x 3 =	165
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	72 (A)		184 (B)

Prevalence Index = B/A = ***2.556***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/29/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	P-2
Landform:	Terrace	Local Relief:	Linear	Sample Point:	P-2U
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Upland ridge
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		☐ Yes	☑ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes	☐ No	Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: Sample plot is located in on an upland ridge. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.33 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☐ Yes ☑ No	Depth:	>22	(in.)
Saturation Present?	☐ Yes ☑ No	Depth:	>22	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 to 5 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	14	1	10YR	3/2	100	--	--	--	loamy sand
14	22	2	10YR	6/3	100	--	--	--	sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-2 | Sample Point: P-2U

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind. Status
1.	*Acer saccharum*	30	Y	FACU
2.	*Acer spicatum*	5	N	FACU
3.	*Acer rubrum*	5	N	FAC
4.	*Pinus strobus*	10	Y	FACU
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	50		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Pinus strobus*	10	Y	FACU
2.	*Acer rubrum*	10	Y	FAC
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	20		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex pensylvanica*	65	Y	UPL
2.	*Asclepias syriaca*	5	N	UPL
3.	*Rubus idaeus var. strigosus*	30	Y	FAC
4.	*CIRSIUM ARVENSE*	2	N	FACU
5.	*Galium triflorum*	5	N	FACU
6	*Pinus strobus*	2	N	FACU
7.	*Urtica dioica*	5	N	FAC
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	114		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	50	x 3 =	150
FACU spp.	64	x 4 =	256
UPL spp.	70	x 5 =	350
Total	184 (A)		756 (B)

Prevalence Index = B/A = 4.109

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/29/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	P-2
Landform:	Depression	Local Relief:	Concave	Sample Point:	P-2W
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Seasonally Flooded Basin
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		☐ Yes ☑ No		Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.33 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	12	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	8	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	5	1	10YR 2/1	100	--	--	--	--	mucky silt loam
5	12	2	10YR 4/1	94	10YR 5/6	6	C	M	loamy sand
12	20	3	10YR 6/2	92	10YR 5/6	8	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☑ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, F1 and S5 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-2 Sample Point **P-2W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	15	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	15		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Rubus idaeus var. strigosus*	45	Y	FAC
2.	*Calamagrostis canadensis*	15	N	OBL
3.	*Carex stricta*	35	Y	OBL
4.	*Lycopus uniflorus*	10	N	OBL
5.	*Urtica dioica*	5	N	FAC
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	110		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	60	x 1 =	60
FACW spp.	15	x 2 =	30
FAC spp.	50	x 3 =	150
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	125 (A)		240 (B)

Prevalence Index = B/A = ***1.920***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Dune land	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☑ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/29/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-3
Sample Point:	P-3W
Community ID:	Seasonally Flooded Basin
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. The hydrology of this sample plot is naturally problematic due to lack of primary hydrology indicators during the normal dry season. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.33 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth: >24	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 20	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 3 secondary indicators at the sample plot provides evidence of wetland hydrology. Field observations of high water table (16 inches) and saturation (12 inches) were found during Excel Engineering field investigation in May. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land Series Drainage Class: well to excessively
Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR 2/1	100	--	--	--	--	mucky silt loam
3	13	2	10YR 4/1	90	10YR 5/6	10	C	M	loamy sand
13	24	3	10YR 6/2	95	10YR 5/6	5	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☑ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, S11 and S5 Indicators descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-3 Sample Point **P-3W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Calamagrostis canadensis*	85	Y	OBL
2.	*Urtica dioica*	10	N	FAC
3.	*Lycopus uniflorus*	10	N	OBL
4.	*Carex pensylvanica*	5	N	UPL
5.	*Symphyotrichum ontarionis*	2	N	FAC
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	112		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	95	x 1 =	95
FACW spp.	0	x 2 =	0
FAC spp.	12	x 3 =	36
FACU spp.	0	x 4 =	0
UPL spp.	5	x 5 =	25
Total	112 (A)		156 (B)

Prevalence Index = B/A = ***1.393***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Dune land	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A
Datum:	N/A		

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/29/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-4
Sample Point:	P-4U
Community ID:	Upland swale
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ Yes ☑ No

Remarks: Sample plot is located in on an upland swale. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.33 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☐ Yes ☑ No	Depth:	>20	(in.)
Saturation Present?	☐ Yes ☑ No	Depth:	>20	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of only one secondary indicator at the sample plot does not provide sufficient evidence of wetland hydrology.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR	3/2	100	–	–	–	–	sandy loam
3	5	2	10YR	4/2	100	–	–	–	–	loamy sand
5	20	3	10YR	4/4	100	–	–	–	–	sand
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-4 Sample Point P-4U

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer saccharum*	35	Y	FACU
2.	*Prunus serotina*	10	N	FACU
3.	*Pinus strobus*	20	Y	FACU
4.	*Quercus rubra*	25	Y	FACU
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	90		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex pensylvanica*	35	Y	UPL
2.	*Calamagrostis canadensis*	5	N	OBL
3.	*Acer saccharum*	15	Y	FACU
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	55		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	5	x 1 =	5
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	105	x 4 =	420
UPL spp.	35	x 5 =	175
Total	145 (A)		600 (B)

Prevalence Index = B/A = 4.138

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/29/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	P-4
Landform:	Depression	Local Relief:	Concave	Sample Point:	P-4W
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Seasonally Flooded Basin
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		☐ Yes ☑ No		Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.33 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	5	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	surface	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	6	1	10YR 2/1	100	--	--	--	--	mucky silt loam
6	20	2	10YR 4/2	94	10YR 5/6	6	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☑ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, F1 and S5 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-4 | Sample Point **P-4W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Alnus incana*	15	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	15		

Herb Stratum (Plot size: 2 meter radius)

1.	*Calamagrostis canadensis*	85	Y	OBL
2.	*PHALARIS ARUNDINACEA*	5	N	FACW
3.	*Onoclea sensibilis*	5	N	FACW
4.	*Lycopus uniflorus*	5	N	OBL
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	100		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	90	x 1 =	90
FACW spp.	25	x 2 =	50
FAC spp.	0	x 3 =	0
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	115 (A)		140 (B)

Prevalence Index = B/A = ***1.217***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Dune land	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A
Datum:	N/A		

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/29/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-5
Sample Point:	P-5U
Community ID:	Upland swale
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ Yes ☑ No

Remarks: Sample plot is located in on an upland swale. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.33 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☐ Yes ☑ No	Depth:	>24	(in.)
Saturation Present?	☐ Yes ☑ No	Depth:	>24	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: Although sample point lies within a closed depression, the presence of only one secondary indicator at the sample plot does not provide sufficient evidence of wetland hydrology.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR 2/1	100	--	--	--	--	sandy loam
3	6	2	10YR 4/1	100	--	--	--	--	loamy sand
6	12	3	10YR 4/4	100	--	--	--	--	sand
12	24	4	10YR 3/3	100	--	--	--	--	sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-5 | Sample Point: P-5U

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fagus grandifolia*	15	Y	FACU
2.	*Acer rubrum*	10	Y	FAC
3.	*Acer saccharum*	10	Y	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	35		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Pinus strobus*	15	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	15		

Herb Stratum (Plot size: 2 meter radius)

1.	*Rubus idaeus var. strigosus*	20	Y	FAC
2.	*Urtica dioica*	10	N	FAC
3.	*ALLIARIA PETIOLATA*	10	N	FACU
4.	*Pinus strobus*	10	N	FACU
5.	*Carex pensylvanica*	40	Y	UPL
6	*Acer saccharum*	5	N	FACU
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	95		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *33.3%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	40	x 3 =	120
FACU spp.	65	x 4 =	260
UPL spp.	40	x 5 =	200
Total	145 (A)		580 (B)

Prevalence Index = B/A = *4.000*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Dune land	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☑ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/29/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-6
Sample Point:	P-6W
Community ID:	Seasonally Flooded Basin
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. The hydrology of this sample plot is naturally problematic due to lack of primary hydrology indicators during the normal dry season. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.33 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☑ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth: >24	(in.)
Saturation Present?	☐ Yes	☑ No	Depth: >24	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 1 primary and 2 secondary indicators at the sample plot provides evidence of wetland hydrology. Field observations of high water table (16 inches) and saturation (10 inches) were found during Excel Engineering field investigation in May. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land Series Drainage Class: well to excessively
Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR 2/1	100	--	--	--	--	silt loam
3	16	2	10YR 4/1	95	10YR 5/6	5	C	M	loamy sand
16	24	3	10YR 5/3	95	10YR 5/6	5	C	M	sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☑ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, S5 and S11 Indicators descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-6 | Sample Point **P-6W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	40	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	40		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Acer saccharum*	5	Y	FACU
2.	*Calamagrostis canadensis*	5	Y	OBL
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	10		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: **66.7%** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	5	x 1 =	5
FACW spp.	40	x 2 =	80
FAC spp.	0	x 3 =	0
FACU spp.	5	x 4 =	20
UPL spp.	0	x 5 =	0
Total	50 (A)		105 (B)

Prevalence Index = B/A = **2.100**

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Dune land	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A
Datum:	N/A		

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☑ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/29/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-7
Sample Point:	P-7W
Community ID:	Seasonally Flooded Basin
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. The hydrology of this sample plot is naturally problematic due to lack of primary hydrology indicators during the normal dry season. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.33 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	28	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	22	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 3 secondary indicators at the sample plot provides evidence of wetland hydrology. No primary indicators were found during Excel Engineering field investigation in May. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR 2/1	100	--	--	--	--	sandy loam
4	15	2	10YR 4/1	95	10YR 5/6	5	C	M	loamy sand
15	28	3	10YR 5/3	97	10YR 4/4	3	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☑ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, S5 and S11 Indicators descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-7 Sample Point **P-7W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Calamagrostis canadensis*	50	Y	OBL
2.	*Acer saccharum*	25	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	75		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***50.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	50	x 1 =	50
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	25	x 4 =	100
UPL spp.	0	x 5 =	0
Total	75 (A)		150 (B)

Prevalence Index = B/A = ***2.000***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant hydrophytic vegetation was determined through use of the prevalence index. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/29/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	P-8
Landform:	Depression	Local Relief:	Concave	Sample Point:	P-8U
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Upland swale
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		☐ Yes ☑ No		Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: Sample plot is located in on an upland swale. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.33 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation. Although hydric soil is present at the sample plot, the lack of hydrophytic vegetation and wetland hydrology indicate the sample plot is located in an upland.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☐ Yes ☑ No	Depth:	>24	(in.)
Saturation Present?	☐ Yes ☑ No	Depth:	>24	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: Although sample point is located within a closed depression, the presence of only one secondary indicator at the sample plot does not provide sufficient evidence of wetland hydrology.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR 3/2	100	--	--	--	--	sandy loam
4	8	2	10YR 4/1	97	10YR 4/6	3	C	M	sand
8	20	3	10YR 4/4	99	10YR 4/6	1	C	M	sand
20	24	4	10YR 4/3	100	--	--	--	--	sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☑ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the S5 and S11 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-8 | Sample Point: P-8U

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex pensylvanica*	75	Y	UPL
2.	*Carex stricta*	5	N	OBL
3.	*Calamagrostis canadensis*	5	N	OBL
4.	*Acer saccharum*	15	N	FACU
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	100		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	10	x 1 =	10
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	15	x 4 =	60
UPL spp.	75	x 5 =	375
Total	100 (A)		445 (B)

Prevalence Index = B/A = 4.450

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Dune land	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☑ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/29/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-9
Sample Point:	P-9W
Community ID:	Seasonally Flooded Basin
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. The hydrology of this sample plot is naturally problematic due to lack of primary hydrology indicators during the normal dry season. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.33 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 24	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 20	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 3 secondary indicators at the sample plot provides evidence of wetland hydrology. Field observations of high water table (10 inches) and saturation (8 inches) were found during Excel Engineering field investigation in May. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land Series Drainage Class: well to excessively
Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	5	1	10YR 2/1	100	--	--	--	--	mucky silt loam
5	24	2	10YR 5/1	95	10YR 4/6	5	C	M	sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☑ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, F1 and S5 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-9 | Sample Point **P-9W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex stricta*	65	Y	OBL
2.	*Calamagrostis canadensis*	15	N	OBL
3.	*Acer saccharum*	10	N	FACU
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	90		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	80	x 1 =	80
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	10	x 4 =	40
UPL spp.	0	x 5 =	0
Total	90 (A)		120 (B)

Prevalence Index = B/A = ***1.333***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Dune land	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☑ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/29/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-10
Sample Point:	P-10W
Community ID:	Seasonally Flooded Basin
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. The hydrology of this sample plot is naturally problematic due to lack of primary hydrology indicators during the normal dry season. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.33 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 24	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 20	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 3 secondary indicators at the sample plot provides evidence of wetland hydrology. Field observations of high water table (10 inches) and saturation (6 inches) were found during Excel Engineering field investigation in May. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land Series Drainage Class: well to excessively
Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	5	1	10YR 2/1	100	--	--	--	--	mucky silt loam
5	24	2	10YR 5/1	95	10YR 4/6	5	C	M	sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
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NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☑ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, F1 and S5 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-10 | Sample Point **P-10W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Lycopus uniflorus*	70	Y	OBL
2.	*Urtica dioica*	5	N	FAC
3.	*Acer saccharum*	15	N	FACU
4.	*Calamagrostis canadensis*	5	N	OBL
5.	*Carex stricta*	10	N	OBL
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	105		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	85	x 1 =	85
FACW spp.	0	x 2 =	0
FAC spp.	5	x 3 =	15
FACU spp.	15	x 4 =	60
UPL spp.	0	x 5 =	0
Total	105 (A)		160 (B)

Prevalence Index = B/A = ***1.524***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/22/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	P-13
Landform:	Terrace	Local Relief:	Linear	Sample Point:	P-13U
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Upland ridge
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		☑ Yes ☐ No		Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: Sample plot is located in on an upland ridge. WETS analysis determined that the antecedent precipitation conditions were normal. 0.85 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 to 5 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR	2/1	100	--	--	--	sandy loam
3	16	2	7.5YR	5/4	100	--	--	--	loamy sand
16	22	3	7.5YR	6/3	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-13 | Sample Point **P-13U**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer saccharum*	65	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	65		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex pensylvanica*	70	Y	UPL
2.	*Acer saccharum*	10	N	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	80		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	75	x 4 =	300
UPL spp.	70	x 5 =	350
Total	145 (A)		650 (B)

Prevalence Index = B/A = *4.483*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/22/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	P-13
Landform:	Depression	Local Relief:	Concave	Sample Point:	P-13W
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Seasonally Flooded Basin
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		☑ Yes ☐ No		Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were normal. 0.85 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☑ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	6	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	2	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 3 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR	2/1	100	--	--	--	--	sandy loam
4	20	2	10YR	5/2	95	10YR	5/6	5	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☑ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, S5 and S11 Indicators descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-13 | Sample Point **P-13W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Leersia oryzoides*	15	Y	OBL
2.	*Lycopus uniflorus*	35	Y	OBL
3.	*Calamagrostis canadensis*	10	Y	OBL
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	60		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	60	x 1 =	60
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	60 (A)		60 (B)

Prevalence Index = B/A = ***1.000***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/22/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	P-14
Landform:	Depression	Local Relief:	Concave	Sample Point:	P-14W
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Seasonally Flooded Basin
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were normal. 0.85 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	12	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	8	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR	2/1	100	--	--	--	sandy loam
4	20	2	10YR	6/1	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 Indicator described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-14 | Sample Point **P-14W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Lycopus uniflorus*	70	Y	OBL
2.	*Calamagrostis canadensis*	10	N	OBL
3.	*Carex vulpinoidea*	2	N	OBL
4.	*Laportea canadensis*	2	N	FACW
5.	*Thelypteris palustris*	2	N	FACW
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	86		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	82	x 1 =	82
FACW spp.	4	x 2 =	8
FAC spp.	0	x 3 =	0
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	86 (A)		90 (B)

Prevalence Index = B/A = ***1.047***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Dune land	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A
Datum:	N/A		

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☑ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/29/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-15B
Sample Point:	P-15BW
Community ID:	Seasonally Flooded Basin
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. The hydrology of this sample plot is naturally problematic due to lack of primary hydrology indicators during the normal dry season. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.33 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☑ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 20	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 16	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 1 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	5	1	10YR 2/1	97	--	--	--	--	sandy loam
5	20	2	10YR 5/2	95	10YR 4/4	2	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 and S5 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-15B Sample Point P-15BW

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind. Status
1.	*Fraxinus pennsylvanica*	5	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	5		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Calamagrostis canadensis*	5	N	OBL
2.	*Glyceria striata*	25	Y	OBL
3.	*Carex stricta*	5	N	OBL
4.	*Carex intumescens*	5	N	FACW
5.	*PHALARIS ARUNDINACEA*	2	N	FACW
6	*Acer saccharum*	2	N	FACU
7.	*Solidago gigantea*	2	N	FACW
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	46		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	35	x 1 =	35
FACW spp.	14	x 2 =	28
FAC spp.	0	x 3 =	0
FACU spp.	2	x 4 =	8
UPL spp.	0	x 5 =	0
Total	51 (A)		71 (B)

Prevalence Index = B/A = 1.392

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/30/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	P-15C
Landform:	Depression	Local Relief:	Concave	Sample Point:	P-15CW
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Seasonally flooded basin
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☐ Yes ☑ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.18 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☑ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	10	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	6	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence 3 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR 2/1	100	--	--	--	--	mucky sand
3	8	2	10YR 2/1	100	--	--	--	--	sandy loam
8	20	3	10YR 5/1	100	--	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☑ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 and S1 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-15C | Sample Point P-15CW

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	5	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	5		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Fraxinus pennsylvanica*	5	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	5		

Herb Stratum (Plot size: 2 meter radius)

1.	*Dryopteris carthusiana*	25	Y	FACW
2.	*Calamagrostis canadensis*	20	Y	OBL
3.	*Impatiens capensis*	2	N	FACW
4.	*Carex aquatilis*	10	N	OBL
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	57		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	30	x 1 =	30
FACW spp.	37	x 2 =	74
FAC spp.	0	x 3 =	0
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	67 (A)		104 (B)

Prevalence Index = B/A = 1.552

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Dune land	NWI/WWI Classification:	N/A
Landform:	Terrace	Local Relief:	Linear
Slope (%):	0-2	Latitude: N/A	Longitude: N/A
Datum:	N/A		

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/29/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-15
Sample Point:	P-15U
Community ID:	Upland ridge
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ■ Yes ☑ No

Remarks: Sample plot is located in on an upland ridge. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.33 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth: >20	(in.)
Saturation Present?	☐ Yes	☑ No	Depth: >20	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 to 5 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR	3/2	100	--	--	--	sandy loam
3	12	2	10YR	4/4	100	--	--	--	loamy sand
12	20	3	10YR	4/3	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-15 | Sample Point P-15U

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer saccharum*	70	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	70		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*BERBERIS THUNBERGII*	5	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	5		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex pensylvanica*	75	Y	UPL
2.	*Acer saccharum*	10	N	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	85		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	85	x 4 =	340
UPL spp.	75	x 5 =	375
Total	160 (A)		715 (B)

Prevalence Index = B/A = 4.469

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Dune land	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A
Datum:	N/A		

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☑ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/30/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-15
Sample Point:	P-15W
Community ID:	Seasonally flooded basin
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. The hydrology of this sample plot is naturally problematic due to lack of primary hydrology indicators during the normal dry season. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.18 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	18	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	14	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence 3 secondary indicators at the sample plot provides evidence of wetland hydrology. Field observations of high water table (10 inches) and saturation (6 inches) were found during Excel Engineering field investigation in May. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively
Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR 2/1	100	--	--	--	--	mucky sand
3	20	2	10YR 5/1	100	--	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☑ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 and S1 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-15 Sample Point **P-15W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Urtica dioica*	25	Y	FAC
2.	*Lycopus uniflorus*	15	Y	OBL
3.	*Carex aquatilis*	15	Y	OBL
4.	*Dryopteris carthusiana*	5	N	FACW
5.	*BERBERIS THUNBERGII*	2	N	FACU
6	*Calamagrostis canadensis*	5	N	OBL
7.	*Carex vulpinoidea*	10	N	OBL
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	77		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	45	x 1 =	45
FACW spp.	5	x 2 =	10
FAC spp.	25	x 3 =	75
FACU spp.	2	x 4 =	8
UPL spp.	0	x 5 =	0
Total	77 (A)		138 (B)

Prevalence Index = B/A = ***1.792***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Dune land	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/29/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-16B
Sample Point:	P-16BU
Community ID:	Upland swale
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ Yes ☑ No

Remarks: Sample plot is located in on an upland swale. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.33 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth: >24	(in.)
Saturation Present?	☐ Yes	☑ No	Depth: >24	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of only one secondary indicator at the sample plot does not provide sufficient evidence of wetland hydrology.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	2	1	10YR 3/2	100	--	--	--	--	sandy loam
2	7	2	10YR 4/3	100	--	--	--	--	loamy sand
7	18	3	10YR 4/3	95	10YR 4/6	5	C	M	loamy sand
18	24	4	10YR 5/1	95	10YR 5/6	5	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-16B Sample Point P-16BU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer saccharum*	10	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	10		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*BERBERIS THUNBERGII*	5	Y	FACU
2.	*Corylus cornuta*	5	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	10		

Herb Stratum (Plot size: 2 meter radius)

1.	*Calamagrostis canadensis*	25	Y	OBL
2.	*Carex pensylvanica*	60	Y	UPL
3.	*Acer saccharum*	5	N	FACU
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	90		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *20.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	25	x 1 =	25
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	25	x 4 =	100
UPL spp.	60	x 5 =	300
Total	110 (A)		425 (B)

Prevalence Index = B/A = *3.864*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703195	Date:	09/29/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	P-16
Landform:	Depression	Local Relief:	Concave	Sample Point:	P-16W
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Community ID:	Seasonally Flooded Basin
			Datum: N/A	Section:	14
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		☐ Yes	☑ No	Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Range:	23 Dir: E
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes	☐ No		

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.33 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	16	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	12	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 1 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR	2/1	100	–	–	–	–	mucky silt loam
3	10	2	10YR	4/2	90	10YR	5/6	10	C	M	loamy sand
10	20	3	10YR	6/1	100	–	–	–	–	–	loamy sand
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☑ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, S5 and S11 Indicators descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-16 | Sample Point **P-16W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*BERBERIS THUNBERGII*	2	N	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	2		

Herb Stratum (Plot size: 2 meter radius)

1.	*Calamagrostis canadensis*	30	Y	OBL
2.	*Lycopus uniflorus*	15	Y	OBL
3.	*Onoclea sensibilis*	2	N	FACW
4.	*Rubus idaeus var. strigosus*	5	N	FAC
5.	*Carex stricta*	2	N	OBL
6	*Urtica dioica*	2	N	FAC
7.	*CIRSIUM ARVENSE*	2	N	FACU
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	58		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	47	x 1 =	47
FACW spp.	2	x 2 =	4
FAC spp.	7	x 3 =	21
FACU spp.	4	x 4 =	16
UPL spp.	0	x 5 =	0
Total	60 (A)		88 (B)

Prevalence Index = B/A = ***1.467***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Dune land	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A
Datum:	N/A		

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☑ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/22/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-19
Sample Point:	P-19W
Community ID:	Seasonally Flooded Basin
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. The hydrology of this sample plot is naturally problematic due to lack of primary hydrology indicators during the normal dry season. WETS analysis determined that the antecedent precipitation conditions were normal. 0.85 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth: >20	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 18	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 3 secondary indicators at the sample plot provides evidence of wetland hydrology. Primary indicators of high water table (12 in.) and saturation (8 in.) were found during Excel Engineering field investigation in May. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively
Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR 2/1	100	--	--	--	--	sandy loam
3	20	2	10YR 6/2	95	10YR 5/6	5	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☑ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, S5 and S11 Indicators descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-19 Sample Point **P-19W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Calamagrostis canadensis*	65	Y	OBL
2.	*Thelypteris palustris*	5	N	FACW
3.	*Acer rubrum*	2	N	FAC
4.	*Acer saccharum*	1	N	FACU
5.	*Toxicodendron radicans*	2	N	FAC
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	75		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	65	x 1 =	65
FACW spp.	5	x 2 =	10
FAC spp.	4	x 3 =	12
FACU spp.	1	x 4 =	4
UPL spp.	0	x 5 =	0
Total	75 (A)		91 (B)

Prevalence Index = B/A = ***1.213***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/22/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	P-20
Landform:	Terrace	Local Relief:	Convex	Sample Point:	P-20U
Slope (%):	2-6	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Upland ridge
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		☑ Yes ☐ No		Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	■ Yes ☑ No

Remarks: Sample plot is located in on an upland ridge. WETS analysis determined that the antecedent precipitation conditions were normal. 0.85 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 to 5 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR	2/1	100	–	–	–	–	sandy loam
3	18	2	7.5YR	5/4	100	–	–	–	–	loamy sand
18	24	3	7.5YR	6/3	100	–	–	–	–	loamy sand
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-20 Sample Point **P-20U**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer saccharum*	90	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	90		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex pensylvanica*	90	Y	UPL
2.	*Acer saccharum*	2	N	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	92		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	92	x 4 =	368
UPL spp.	90	x 5 =	450
Total	182 (A)		818 (B)

Prevalence Index = B/A = *4.495*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Dune land	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/22/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-20
Sample Point:	P-20W
Community ID:	Seasonally Flooded Basin
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ■ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were normal. 0.85 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 16	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 2	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 1 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR	2/1	100	--	--	--	--	sandy loam
3	20	2	10YR	6/2	95	10YR	5/6	5	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
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--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☑ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, S5 and S11 Indicators descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-20 | Sample Point **P-20W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Calamagrostis canadensis*	65	Y	OBL
2.	*Rubus idaeus var. strigosus*	15	N	FAC
3.	*Onoclea sensibilis*	5	N	FACW
4.	*Dryopteris carthusiana*	5	N	FACW
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	90		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	65	x 1 =	65
FACW spp.	10	x 2 =	20
FAC spp.	15	x 3 =	45
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	90 (A)		130 (B)

Prevalence Index = B/A = ***1.444***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/22/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	P-21
Landform:	Side slope	Local Relief:	Convex	Sample Point:	P-21U
Slope (%):	2-6	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Upland ridge
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	■ Yes ☑ No

Remarks: Sample plot is located in on an upland ridge. WETS analysis determined that the antecedent precipitation conditions were normal. 0.85 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 to 5 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR	3/2	100	–	–	–	sandy loam
3	18	2	7.5YR	5/4	100	–	–	–	loamy sand
18	24	3	7.5YR	6/3	100	–	–	–	loamy sand
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-21 Sample Point **P-21U**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer saccharum*	45	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	45		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*BERBERIS THUNBERGII*	15	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	15		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex pensylvanica*	65	Y	UPL
2.	*Rubus idaeus var. strigosus*	15	N	FAC
3.	*Acer saccharum*	5	N	FACU
4.	*Asclepias syriaca*	5	N	UPL
5.	*BERBERIS THUNBERGII*	10	N	FACU
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	100		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	15	x 3 =	45
FACU spp.	75	x 4 =	300
UPL spp.	70	x 5 =	350
Total	160 (A)		695 (B)

Prevalence Index = B/A = *4.344*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/22/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	P-21
Landform:	Depression	Local Relief:	Concave	Sample Point:	P-21W
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Seasonally Flooded Basin
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were normal. 0.85 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	5	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	1	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR	2/1	100	--	--	--	sandy loam
4	20	2	10YR	6/2	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 Indicator described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-21 Sample Point **P-21W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Laportea canadensis*	10	N	FACW
2.	*Calamagrostis canadensis*	40	Y	OBL
3.	*Lycopus uniflorus*	5	N	OBL
4.	*Epilobium coloratum*	15	Y	OBL
5.	*Carex comosa*	10	N	OBL
6	*Impatiens capensis*	5	N	FACW
7.	*CIRSIUM ARVENSE*	2	N	FACU
8.	*Scutellaria galericulata*	2	N	OBL
9.	*Dryopteris carthusiana*	2	N	FACW
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	91		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	72	x 1 =	72
FACW spp.	17	x 2 =	34
FAC spp.	0	x 3 =	0
FACU spp.	2	x 4 =	8
UPL spp.	0	x 5 =	0
Total	91 (A)		114 (B)

Prevalence Index = B/A = ***1.253***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/22/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	P-22
Landform:	Depression	Local Relief:	Concave	Sample Point:	P-22W
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Seasonally Flooded Basin
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were normal. 0.85 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	16	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	12	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 1 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR	2/1	100	--	--	--	--	sandy loam
3	12	2	10YR	5/2	100	--	--	--	--	loamy sand
12	20	3	10YR	6/1	100	--	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 Indicator described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-22 | Sample Point **P-22W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Calamagrostis canadensis*	35	Y	OBL
2.	*Geum canadense*	2	N	FAC
3.	*Laportea canadensis*	5	N	FACW
4.	*BERBERIS THUNBERGII*	5	N	FACU
5.	*Carex intumescens*	10	N	FACW
6	*Impatiens capensis*	2	N	FACW
7.	*Dryopteris carthusiana*	2	N	FACW
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	61		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *100.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	35	x 1 =	35
FACW spp.	19	x 2 =	38
FAC spp.	2	x 3 =	6
FACU spp.	5	x 4 =	20
UPL spp.	0	x 5 =	0
Total	61 (A)		99 (B)

Prevalence Index = B/A = *1.623*

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Dune land	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A
Datum:	N/A		

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☑ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/30/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-23
Sample Point:	P-23W
Community ID:	Seasonally flooded basin
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. The hydrology of this sample plot is naturally problematic due to lack of primary hydrology indicators during the normal dry season. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.18 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	26	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	22	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence 3 secondary indicators at the sample plot provides evidence of wetland hydrologyField observations of high water table (16 inches) and saturation (12 inches) were found during Excel Engineering field investigation in May. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively
Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	7	1	10YR	2/1	100	--	--	--	sandy loam
7	30	2	10YR	5/1	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 Indicator described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-23 | Sample Point **P-23W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*BERBERIS THUNBERGII*	15	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	15		

Herb Stratum (Plot size: 2 meter radius)

1.	*Calamagrostis canadensis*	60	Y	OBL
2.	*Equisetum sylvaticum*	2	N	FACW
3.	*Carex pensylvanica*	10	N	UPL
4.	*Acer saccharum*	2	N	FACU
5.	*Fraxinus pennsylvanica*	2	N	FACW
6	*Quercus rubra*	1	N	FACU
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	77		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***50.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	60	x 1 =	60
FACW spp.	4	x 2 =	8
FAC spp.	0	x 3 =	0
FACU spp.	18	x 4 =	72
UPL spp.	10	x 5 =	50
Total	92 (A)		190 (B)

Prevalence Index = B/A = ***2.065***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the prevalence index. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/30/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	P-25
Landform:	Terrace	Local Relief:	Linear	Sample Point:	P-25U
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Upland ridge
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		☐ Yes	☑ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes	☐ No	Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: Sample plot is located in on an upland ridge. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.18 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 to 5 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	2	1	10YR	3/2	100	--	--	--	sandy loam
2	15	2	10YR	4/4	100	--	--	--	loamy sand
15	22	3	10YR	4/3	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
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NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-25 Sample Point **P-25U**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer saccharum*	40	Y	FACU
2.	*Quercus rubra*	10	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	50		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*BERBERIS THUNBERGII*	40	Y	FACU
2.	*Acer saccharum*	10	N	FACU
3.	*Fagus grandifolia*	10	N	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	60		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex pensylvanica*	40	Y	UPL
2.	*Calamagrostis canadensis*	5	N	OBL
3.	*BERBERIS THUNBERGII*	15	Y	FACU
4.	*Acer saccharum*	10	N	FACU
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	70		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	5	x 1 =	5
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	135	x 4 =	540
UPL spp.	40	x 5 =	200
Total	180 (A)		745 (B)

Prevalence Index = B/A = *4.139*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/30/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	P-25
Landform:	Depression	Local Relief:	Concave	Sample Point:	P-25W
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Seasonally flooded basin
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		☐ Yes ☑ No		Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.18 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	14	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	10	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence 1 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR	2/1	100	--	--	--	--	sandy loam
3	20	2	10YR	5/1	100	--	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 Indicator described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-25 | Sample Point **P-25W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	15	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	15		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Alnus incana*	10	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	10		

Herb Stratum (Plot size: 2 meter radius)

1.	*Calamagrostis canadensis*	70	Y	OBL
2.	*Onoclea sensibilis*	10	N	FACW
3.	*Urtica dioica*	5	N	FAC
4.	*Lycopus uniflorus*	5	N	OBL
5.	*PHALARIS ARUNDINACEA*	5	N	FACW
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	95		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	75	x 1 =	75
FACW spp.	40	x 2 =	80
FAC spp.	5	x 3 =	15
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	120 (A)		170 (B)

Prevalence Index = B/A = ***1.417***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Dune land	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A
Datum:	N/A		

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☑ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/30/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-26
Sample Point:	P-26W
Community ID:	Seasonally flooded basin
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. The hydrology of this sample plot is naturally problematic due to lack of primary hydrology indicators during the normal dry season. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.18 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	24	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	20	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence 3 secondary indicators at the sample plot provides evidence of wetland hydrology. Field observations of high water table (16 inches) and saturation (12 inches) were found during Excel Engineering field investigation in May. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively
Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR	2/1	100	--	--	--	sandy loam
3	20	2	10YR	5/1	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 Indicator described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-26 | Sample Point **P-26W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Calamagrostis canadensis*	10	Y	OBL
2.	*Dryopteris carthusiana*	5	Y	FACW
3.	*Acer saccharum*	2	N	FACU
4.	*Quercus rubra*	2	N	FACU
5.	*Carex aquatilis*	2	N	OBL
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	21		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	12	x 1 =	12
FACW spp.	5	x 2 =	10
FAC spp.	0	x 3 =	0
FACU spp.	4	x 4 =	16
UPL spp.	0	x 5 =	0
Total	21 (A)		38 (B)

Prevalence Index = B/A = ***1.810***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Dune land	NWI/WWI Classification:	T3/E2K
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A
Datum:	N/A		

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☑ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/30/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-27
Sample Point:	P-27W
Community ID:	Seasonally flooded basin
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. The hydrology of this sample plot is naturally problematic due to lack of primary hydrology indicators during the normal dry season. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.18 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	24	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	20	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence 3 secondary indicators at the sample plot provides evidence of wetland hydrology. Field observations of high water table (12 inches) and saturation (6 inches) were found during Excel Engineering field investigation in May. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively
Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	6	1	10YR	2/1	100	--	--	--	sandy loam
6	20	2	10YR	5/1	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 Indicator described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-27 Sample Point **P-27W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	35	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	35		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Calamagrostis canadensis*	35	Y	OBL
2.	*Dryopteris carthusiana*	10	N	FACW
3.	*Carex pensylvanica*	40	Y	UPL
4.	*Rubus idaeus var. strigosus*	10	N	FAC
5.	*Acer rubrum*	1	N	FAC
6	*BERBERIS THUNBERGII*	5	N	FACU
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	101		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: **66.7%** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	35	x 1 =	35
FACW spp.	45	x 2 =	90
FAC spp.	11	x 3 =	33
FACU spp.	5	x 4 =	20
UPL spp.	40	x 5 =	200
Total	136 (A)		378 (B)

Prevalence Index = B/A = **2.779**

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/22/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	P-29
Landform:	Side slope	Local Relief:	Convex	Sample Point:	P-29U
Slope (%):	2-6	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Upland ridge
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		☑ Yes ☐ No		Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: Sample plot is located in on an upland ridge. WETS analysis determined that the antecedent precipitation conditions were normal. 0.85 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 to 5 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR	2/1	100	--	--	--	sandy loam
3	19	2	7.5YR	5/4	100	--	--	--	loamy sand
19	22	3	7.5YR	6/3	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-29 | Sample Point **P-29U**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Ostrya virginiana*	10	N	FACU
2.	*Acer saccharum*	40	Y	FACU
3.	*Fagus grandifolia*	5	N	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	55		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex pensylvanica*	60	Y	UPL
2.	*POA PRATENSIS*	10	N	FACU
3.	*Rubus idaeus var. strigosus*	15	N	FAC
4.	*Acer saccharum*	5	N	FACU
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	90		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	15	x 3 =	45
FACU spp.	70	x 4 =	280
UPL spp.	60	x 5 =	300
Total	145 (A)		625 (B)

Prevalence Index = B/A = *4.310*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/22/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	P-29
Landform:	Depression	Local Relief:	Concave	Sample Point:	P-29W
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Seasonally Flooded Basin
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		☑ Yes ☐ No		Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were normal. 0.85 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	9	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	5	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR	2/1	100	--	--	--	sandy loam
3	20	2	10YR	6/1	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 Indicator described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-29 | Sample Point **P-29W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*BERBERIS THUNBERGII*	10	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	10		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex intumescens*	10	Y	FACW
2.	*Lycopus uniflorus*	15	Y	OBL
3.	*Dryopteris carthusiana*	2	N	FACW
4.	*Impatiens capensis*	5	N	FACW
5.	*Calamagrostis canadensis*	2	N	OBL
6	*Scutellaria galericulata*	2	N	OBL
7.	*Laportea canadensis*	5	N	FACW
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	41		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: **66.7%** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	19	x 1 =	19
FACW spp.	22	x 2 =	44
FAC spp.	0	x 3 =	0
FACU spp.	10	x 4 =	40
UPL spp.	0	x 5 =	0
Total	51 (A)		103 (B)

Prevalence Index = B/A = **2.020**

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/22/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	P-30
Landform:	Depression	Local Relief:	Concave	Sample Point:	P-30W
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Seasonally Flooded Basin
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		☑ Yes ☐ No		Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were normal. 0.85 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	4	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	surface	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	5	1	10YR	2/1	100	--	--	--	mucky sand
5	20	2	10YR	6/1	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☑ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 and S1 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-30 Sample Point **P-30W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Calamagrostis canadensis*	45	Y	OBL
2.	*Lycopus uniflorus*	40	Y	OBL
3.	*Laportea canadensis*	2	N	FACW
4.	*Onoclea sensibilis*	2	N	FACW
5.	*Carex comosa*	5	N	OBL
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	94		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	90	x 1 =	90
FACW spp.	4	x 2 =	8
FAC spp.	0	x 3 =	0
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	94 (A)		98 (B)

Prevalence Index = B/A = ***1.043***

Hydrophytic Vegetation Indicators:

☑ Yes	☐ No	Rapid Test for Hydrophytic Vegetation
☑ Yes	☐ No	Dominance Test is > 50%
☑ Yes	☐ No	Prevalence Index is ≤ 3.0 *
☐ Yes	☐ No	Morphological Adaptations (Explain) *
☐ Yes	☐ No	Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Dune land	NWI/WWI Classification:	N/A
Landform:	Terrace	Local Relief:	Linear
Slope (%):	0-2	Latitude: N/A	Longitude: N/A
Datum:	N/A		

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/22/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-31
Sample Point:	P-31U
Community ID:	Upland ridge
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ■ Yes ☑ No

Remarks: Sample plot is located in on an upland ridge. WETS analysis determined that the antecedent precipitation conditions were normal. 0.85 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 to 5 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR	3/2	100	--	--	--	sandy loam
4	20	2	10YR	4/3	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
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--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-31 Sample Point **P-31U**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*ROBINIA PSEUDOACACIA*	5	N	FACU
2.	*Acer saccharum*	15	Y	FACU
3.	*Fraxinus pennsylvanica*	10	Y	FACW
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	30		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*BERBERIS THUNBERGII*	25	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	25		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex pensylvanica*	60	Y	UPL
2.	*BERBERIS THUNBERGII*	5	N	FACU
3.	*Calamagrostis canadensis*	20	Y	OBL
4.	*Asclepias syriaca*	5	N	UPL
5.	*Toxicodendron radicans*	5	N	FAC
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	95		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***40.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	20	x 1 =	20
FACW spp.	10	x 2 =	20
FAC spp.	5	x 3 =	15
FACU spp.	50	x 4 =	200
UPL spp.	65	x 5 =	325
Total	150 (A)		580 (B)

Prevalence Index = B/A = ***3.867***

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Dune land	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A
Datum:	N/A		

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/22/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-31
Sample Point:	P-31W
Community ID:	Seasonally Flooded Basin
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ■ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were normal. 0.85 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 4	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: surface	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	5	1	10YR	2/1	100	--	--	--	mucky sand
5	20	2	10YR	6/1	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☑ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 and S1 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-31 | Sample Point **P-31W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Alnus incana*	15	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	15		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex intumescens*	10	N	FACW
2.	*Lycopus uniflorus*	15	N	OBL
3.	*Calamagrostis canadensis*	10	N	OBL
4.	*Glyceria striata*	60	Y	OBL
5.	*Urtica dioica*	2	N	FAC
6	*Carex vulpinoidea*	5	N	OBL
7.	*GLECHOMA HEDERACEA*	5	N	FACU
8.	*Persicaria pensylvanica*	1	N	FACW
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	108		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	90	x 1 =	90
FACW spp.	26	x 2 =	52
FAC spp.	2	x 3 =	6
FACU spp.	5	x 4 =	20
UPL spp.	0	x 5 =	0
Total	123 (A)		168 (B)

Prevalence Index = B/A = ***1.366***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/22/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	P-32
Landform:	Depression	Local Relief:	Concave	Sample Point:	P-32W
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Seasonally Flooded Basin
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		☑ Yes ☐ No		Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were normal. 0.85 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	9	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	5	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR	2/1	100	--	--	--	--	--	sandy muck mineral
4	20	2	10YR	6/1	100	--	--	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☑ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 and S1 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-32 | Sample Point **P-32W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Calamagrostis canadensis*	30	Y	OBL
2.	*Thelypteris palustris*	25	Y	FACW
3.	*Laportea canadensis*	5	N	FACW
4.	*Rubus idaeus var. strigosus*	5	N	FAC
5.	*Solidago gigantea*	2	N	FACW
6	*PHALARIS ARUNDINACEA*	35	Y	FACW
7.	*Lycopus uniflorus*	2	N	OBL
8.	*Carex intumescens*	10	N	FACW
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	114		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	32	x 1 =	32
FACW spp.	77	x 2 =	154
FAC spp.	5	x 3 =	15
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	114 (A)		201 (B)

Prevalence Index = B/A = ***1.763***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/22/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	P-33
Landform:	Terrace	Local Relief:	Convex	Sample Point:	P-33U
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Upland ridge
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	■ Yes ☑ No

Remarks: Sample plot is located in on an upland ridge. WETS analysis determined that the antecedent precipitation conditions were normal. 0.85 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 to 5 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR	3/2	100	--	--	--	sandy loam
3	16	2	10YR	5/4	100	--	--	--	loamy sand
16	20	3	10YR	6/3	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-33 | Sample Point **P-33U**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer saccharum*	30	Y	FACU
2.	*Fagus grandifolia*	45	Y	FACU
3.	*Pinus strobus*	15	N	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	90		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex pensylvanica*	85	Y	UPL
2.	*Fagus grandifolia*	5	N	FACU
3.	*Rubus idaeus var. strigosus*	2	N	FAC
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	92		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	2	x 3 =	6
FACU spp.	95	x 4 =	380
UPL spp.	85	x 5 =	425
Total	182 (A)		811 (B)

Prevalence Index = B/A = *4.456*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Dune land	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A
Datum:	N/A		

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☑ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/22/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-33
Sample Point:	P-33W
Community ID:	Seasonally Flooded Basin
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. The hydrology of this sample plot is naturally problematic due to lack of primary hydrology indicators during the normal dry season. WETS analysis determined that the antecedent precipitation conditions were normal. 0.85 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth: >24	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 24	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 3 secondary indicators at the sample plot provides evidence of wetland hydrology. Field observations of saturation (16 inches) was found during Excel Engineering field investigation in May. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR 2/1	100	–	–	–	–	loamy sand
3	16	2	10YR 5/2	95	10YR 5/6	5	C	M	loamy sand
16	24	3	10YR 6/1	100	–	–	–	–	loamy sand
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☑ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, S5 and S11 Indicators descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-33 | Sample Point **P-33W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*BERBERIS THUNBERGII*	2	N	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	2		

Herb Stratum (Plot size: 2 meter radius)

1.	*Calamagrostis canadensis*	5	N	OBL
2.	*Dryopteris carthusiana*	15	Y	FACW
3.	*Urtica dioica*	2	N	FAC
4.	*BERBERIS THUNBERGII*	5	N	FACU
5.	*Carex lupulina*	2	N	OBL
6	*Fagus grandifolia*	1	N	FACU
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	30		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	7	x 1 =	7
FACW spp.	15	x 2 =	30
FAC spp.	2	x 3 =	6
FACU spp.	8	x 4 =	32
UPL spp.	0	x 5 =	0
Total	32 (A)		75 (B)

Prevalence Index = B/A = ***2.344***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/22/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	P-34
Landform:	Depression	Local Relief:	Concave	Sample Point:	P-34W
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Seasonally Flooded Basin
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were normal. 0.85 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	11	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	8	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR	2/1	100	–	–	–	–	loamy sand
3	20	2	10YR	5/2	95	10YR	5/6	5	C	M	loamy sand
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☑ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, S5 and S11 Indicators descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-34 Sample Point **P-34W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Laportea canadensis*	50	Y	FACW
2.	*Urtica dioica*	5	N	FAC
3.	*Calamagrostis canadensis*	5	N	OBL
4.	*BERBERIS THUNBERGII*	5	N	FACU
5.	*Dryopteris carthusiana*	10	N	FACW
6	*Carex vulpinoidea*	2	N	OBL
7.	*Carex intumescens*	2	N	FACW
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	79		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	7	x 1 =	7
FACW spp.	62	x 2 =	124
FAC spp.	5	x 3 =	15
FACU spp.	5	x 4 =	20
UPL spp.	0	x 5 =	0
Total	79 (A)		166 (B)

Prevalence Index = B/A = ***2.101***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/22/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	P-35BU
Landform:	Depression	Local Relief:	Concave	Sample Point:	P-35BU
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Upland swale
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: Sample plot is located in on an upland swale. WETS analysis determined that the antecedent precipitation conditions were normal. 0.85 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation. According to the Army Corps of Engineers NC/NE Supplement, three parameters are required to meet jurisdictional wetland requirements. Although hydric soil is present at the sample plot, the lack of hydrophytic vegetation and wetland hydrology indicate the sample plot is located in an upland.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	35	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	32	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of only one secondary indicator at the sample plot does not provide sufficient evidence of wetland hydrology.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR 3/2	100	–	–	–	–	sandy loam
3	16	2	10YR 5/4	98	10YR 5/6	2	C	M	loamy sand
16	35	3	10YR 6/3	100	–	–	–	–	loamy sand
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☑ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot marginally meets the S11 Indicator descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-35BU Sample Point **P-35BU**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	15	Y	FACW
2.	*Acer saccharum*	10	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	25		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Fagus grandifolia*	10	Y	FACU
2.	*BERBERIS THUNBERGII*	5	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	15		

Herb Stratum (Plot size: 2 meter radius)

1.	*Acer saccharum*	30	Y	FACU
2.	*Fagus grandifolia*	5	N	FACU
3.	*BERBERIS THUNBERGII*	5	N	FACU
4.	*Laportea canadensis*	1	N	FACW
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	41		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***20.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	16	x 2 =	32
FAC spp.	0	x 3 =	0
FACU spp.	65	x 4 =	260
UPL spp.	0	x 5 =	0
Total	81 (A)		292 (B)

Prevalence Index = B/A = ***3.605***

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/22/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	P-35
Landform:	Depression	Local Relief:	Concave	Sample Point:	P-35U
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Upland swale
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		☑ Yes ☐ No		Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: Sample plot is located in on an upland swale. WETS analysis determined that the antecedent precipitation conditions were normal. 0.85 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:	(in.)
Water Table Present?	☐ Yes ☑ No	Depth:	(in.)
Saturation Present?	☐ Yes ☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of only one secondary indicator at the sample plot does not provide sufficient evidence of wetland hydrology.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	2	1	10YR	3/2	100	–	–	–	–	–	sandy loam
2	3	2	10YR	5/2	100	–	–	–	–	–	loamy sand
3	24	3	10YR	5/3	100	–	–	–	–	–	loamy sand
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-35 | Sample Point **P-35U**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer saccharum*	85	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	85		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Acer saccharum*	5	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	5		

Herb Stratum (Plot size: 2 meter radius)

1.	*Acer saccharum*	10	Y	FACU
2.	*BERBERIS THUNBERGII*	5	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	15		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	105	x 4 =	420
UPL spp.	0	x 5 =	0
Total	105 (A)		420 (B)

Prevalence Index = B/A = *4.000*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/19/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Beaches, sandy	NWI/WWI Classification:	N/A	Wetland ID:	P-36
Landform:	Depression	Local Relief:	Concave	Sample Point:	P-36BU
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Upland swale
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: Sample plot is located in on an upland swale. WETS analysis determined that the antecedent precipitation conditions were normal. 1.13 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation. Although hydric soil is present at the sample plot, the lack of hydrophytic vegetation and wetland hydrology indicate the sample plot is located in an upland swale.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	40	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	36	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of only one secondary indicator at the sample plot does not provide sufficient evidence of wetland hydrology.

SOILS

Map Unit Name: Beaches, sandy — Series Drainage Class: moderately well

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	10	1	10YR 7/1	95	10YR 5/6	5	C	M	loamy sand
10	40	2	10YR 7/1	100	–	–	–	–	loamy sand
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the S5 Indicator descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-36 | Sample Point **P-36BU**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Pinus strobus*	35	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	35		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Pinus strobus*	15	Y	FACU
2.	*Pinus resinosa*	10	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	25		

Herb Stratum (Plot size: 2 meter radius)

1.	*Juniperus horizontalis*	50	Y	FACU
2.	*Calamovilfa longifolia*	15	Y	UPL
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	65		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***0.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	110	x 4 =	440
UPL spp.	15	x 5 =	75
Total	125 (A)		515 (B)

Prevalence Index = B/A = ***4.120***

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Dune land	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A
Datum:	N/A		

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/19/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-36B
Sample Point:	P-36BW
Community ID:	Seasonally Flooded Basin
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were normal. 1.13 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 16	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 12	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 1 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	2	1	10YR	2/1	100	--	--	--	--	sandy loam
2	20	2	10YR	7/1	100	--	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 Indicator described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-36B | Sample Point P-36BW

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Pinus resinosa*	2	N	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	2		

Herb Stratum (Plot size: 2 meter radius)

1.	*Juncus balticus*	40	Y	OBL
2.	*Juniperus horizontalis*	30	Y	FACU
3.	*Equisetum laevigatum*	5	N	FACW
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	75		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	40	x 1 =	40
FACW spp.	5	x 2 =	10
FAC spp.	0	x 3 =	0
FACU spp.	32	x 4 =	128
UPL spp.	0	x 5 =	0
Total	77 (A)		178 (B)

Prevalence Index = B/A = 2.312

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the prevalence index. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Beaches, sandy	NWI/WWI Classification:	N/A
Landform:	Side slope	Local Relief:	Convex
Slope (%):	2-6	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/19/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-36
Sample Point:	P-36CU
Community ID:	Upland ridge
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ■ Yes ☑ No

Remarks: Sample plot is located in on an upland ridge. WETS analysis determined that the antecedent precipitation conditions were normal. 1.13 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 to 5 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Beaches, sandy — Series Drainage Class: moderately well

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	30	1	10YR 6/3	100	--	--	--	--	sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-36 | Sample Point **P-36CU**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Juniperus horizontalis*	25	Y	FACU
2.	*Schizachyrium scoparium*	5	N	FACU
3.	*Calamovilfa longifolia*	15	Y	UPL
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	45		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	30	x 4 =	120
UPL spp.	15	x 5 =	75
Total	45 (A)		195 (B)

Prevalence Index = B/A = *4.333*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/19/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Beaches, sandy	NWI/WWI Classification:	N/A	Wetland ID:	P-36C
Landform:	Depression	Local Relief:	Concave	Sample Point:	P-36CW
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Seasonally Flooded Basin
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☑ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. The hydrology of this sample plot is naturally problematic due to lack of primary hydrology indicators during the normal dry season. WETS analysis determined that the antecedent precipitation conditions were normal. 1.13 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☐ Yes ☑ No	Depth:	>20	(in.)
Saturation Present?	☐ Yes ☑ No	Depth:	>20	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Beaches, sandy — Series Drainage Class: moderately well

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR	3/1	100	--	--	--	sandy loam
3	20	2	7.5YR	7/1	95	10YR 5/6	5	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
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NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☑ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, S5 and S11 Indicators descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-36C | Sample Point P-36CW

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Juncus balticus*	75	Y	OBL
2.	*Juniperus horizontalis*	5	N	FACU
3.	*Solidago speciosa*	5	N	UPL
4.	*Calamovilfa longifolia*	2	N	UPL
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	87		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	75	x 1 =	75
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	5	x 4 =	20
UPL spp.	7	x 5 =	35
Total	87 (A)		130 (B)

Prevalence Index = B/A = 1.494

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/19/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	P-36
Landform:	Terrace	Local Relief:	Linear	Sample Point:	P-36U
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Upland ridge
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		☑ Yes ☐ No		Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: Sample plot is located in on an upland ridge. WETS analysis determined that the antecedent precipitation conditions were normal. 1.13 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 to 5 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	20	1	10YR 4/3	100	--	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
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NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-36 | Sample Point **P-36U**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Pinus banksiana*	5	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	5		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Pinus strobus*	5	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	5		

Herb Stratum (Plot size: 2 meter radius)

1.	*Schizachyrium scoparium*	20	Y	FACU
2.	*Juniperus horizontalis*	15	Y	FACU
3.	*Calamovilfa longifolia*	15	Y	UPL
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	50		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	45	x 4 =	180
UPL spp.	15	x 5 =	75
Total	60 (A)		255 (B)

Prevalence Index = B/A = *4.250*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Dune land	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A
Datum:	N/A		

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☑, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/19/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-36
Sample Point:	P-36W
Community ID:	Seasonally Flooded Basin
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were normal. 1.13 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation. Although hydrophytic vegetation is not present at the sample plot, the presence of hydric soils and wetland hydrology indicate the sample plot is located in a seasonally flooded basin.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 4	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: surface	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	1	1	10YR	2/1	100	--	--	--	sandy loam
1	20	2	10YR	7/1	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 Indicator described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-36 | Sample Point **P-36W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Juncus balticus*	10	N	OBL
2.	*Carex pensylvanica*	60	Y	UPL
3.	*Calamagrostis canadensis*	15	N	OBL
4.	*Euthamia graminifolia*	2	N	FAC
5.	*Salix lucida*	5	N	FACW
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	92		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	25	x 1 =	25
FACW spp.	5	x 2 =	10
FAC spp.	2	x 3 =	6
FACU spp.	0	x 4 =	0
UPL spp.	60	x 5 =	300
Total	92 (A)		341 (B)

Prevalence Index = B/A = *3.707*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☑ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic. Wetland spring ephemeral vegetation mostly likely dominate this seasonally flooded basin in early growing season.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/22/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	P-37
Landform:	Depression	Local Relief:	Concave	Sample Point:	P-37U
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Upland swale
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		☑ Yes ☐ No		Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: Sample plot is located in on an upland swale. WETS analysis determined that the antecedent precipitation conditions were normal. 0.85 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:	(in.)
Water Table Present?	☐ Yes ☑ No	Depth:	(in.)
Saturation Present?	☐ Yes ☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of only one secondary indicator at the sample plot does not provide sufficient evidence of wetland hydrology.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR	3/2	100	--	--	--	sandy loam
3	20	2	10YR	5/3	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-37 Sample Point **P-37U**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer saccharum*	65	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	65		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*BERBERIS THUNBERGII*	10	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	10		

Herb Stratum (Plot size: 2 meter radius)

1.	*Bromus pubescens*	10	Y	FACU
2.	*Maianthemum stellatum*	2	N	FAC
3.	*Rubus idaeus var. strigosus*	2	N	FAC
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	14		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	4	x 3 =	12
FACU spp.	85	x 4 =	340
UPL spp.	0	x 5 =	0
Total	89 (A)		352 (B)

Prevalence Index = B/A = *3.955*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Dune land	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/22/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-37
Sample Point:	P-37W
Community ID:	Seasonally Flooded Basin
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were normal. 0.85 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 16	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 12	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 1 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. Primary indicator of saturation (10 in.) was found in May field investigation. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR 2/1	100	--	--	--	--	loamy sand
3	20	2	10YR 5/1	95	10YR 5/6	5	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☑ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, S5 and S11 Indicators descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-37 | Sample Point **P-37W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	15	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	15		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Calamagrostis canadensis*	65	Y	OBL
2.	*Urtica dioica*	2	N	FAC
3.	*Solidago gigantea*	10	N	FACW
4.	*Impatiens capensis*	2	N	FACW
5.	*BERBERIS THUNBERGII*	2	N	FACU
6	*Osmundastrum cinnamomeum*	5	N	FACW
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	86		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	65	x 1 =	65
FACW spp.	32	x 2 =	64
FAC spp.	2	x 3 =	6
FACU spp.	2	x 4 =	8
UPL spp.	0	x 5 =	0
Total	101 (A)		143 (B)

Prevalence Index = B/A = ***1.416***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/22/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	P-38U
Landform:	Terrace	Local Relief:	Linear	Sample Point:	P-38U
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Upland ridge
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		☑ Yes ☐ No		Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	■ Yes ☑ No

Remarks: Sample plot is located in on an upland ridge. WETS analysis determined that the antecedent precipitation conditions were normal. 0.85 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 to 5 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR	3/2	100	--	--	--	sandy loam
3	20	2	10YR	5/3	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-38U Sample Point P-38U

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Pinus strobus*	15	Y	FACU
2.	*Acer saccharum*	10	Y	FACU
3.	*Fagus grandifolia*	5	N	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	30		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*BERBERIS THUNBERGII*	25	Y	FACU
2.	*Celtis occidentalis*	5	N	FAC
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	30		

Herb Stratum (Plot size: 2 meter radius)

1.	*POA PRATENSIS*	40	Y	FACU
2.	*Rubus idaeus var. strigosus*	5	N	FAC
3.	*CIRSIUM ARVENSE*	10	N	FACU
4.	*Carex pensylvanica*	35	Y	UPL
5.	*Calamagrostis canadensis*	5	N	OBL
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	95		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	5	x 1 =	5
FACW spp.	0	x 2 =	0
FAC spp.	10	x 3 =	30
FACU spp.	105	x 4 =	420
UPL spp.	35	x 5 =	175
Total	155 (A)		630 (B)

Prevalence Index = B/A = 4.065

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/22/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	P-38
Landform:	Depression	Local Relief:	Concave	Sample Point:	P-38W
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Seasonally Flooded Basin
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were normal. 0.85 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	5	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	surface	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR	2/1	100	--	--	--	mucky sand
3	20	2	10YR	6/2	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☑ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 and S1 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-38 | Sample Point **P-38W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	35	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	35		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Alnus incana*	10	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	10		

Herb Stratum (Plot size: 2 meter radius)

1.	*Symphyotrichum ontarionis*	5	N	FAC
2.	*Calamagrostis canadensis*	65	Y	OBL
3.	*Onoclea sensibilis*	10	N	FACW
4.	*Lycopus uniflorus*	30	Y	OBL
5.	*Urtica dioica*	10	N	FAC
6	*Thelypteris palustris*	5	N	FACW
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	125		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	95	x 1 =	95
FACW spp.	60	x 2 =	120
FAC spp.	15	x 3 =	45
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	170 (A)		260 (B)

Prevalence Index = B/A = ***1.529***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/22/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	P-39U
Landform:	Side slope	Local Relief:	Convex	Sample Point:	P-39U
Slope (%):	2-6	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Upland ridge
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: Sample plot is located in on an upland ridge. WETS analysis determined that the antecedent precipitation conditions were normal. 0.85 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 to 5 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR	3/2	100	--	--	--	sandy loam
3	14	2	10YR	5/4	100	--	--	--	loamy sand
14	20	3	10YR	6/3	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-39U Sample Point P-39U

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer saccharum*	35	Y	FACU
2.	*Pinus resinosa*	30	Y	FACU
3.	*Pinus strobus*	10	N	FACU
4.	*Fraxinus pennsylvanica*	10	N	FACW
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	85		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*BERBERIS THUNBERGII*	15	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	15		

Herb Stratum (Plot size: 2 meter radius)

1.	*Schizachne purpurascens*	10	Y	FACU
2.	*Eurybia macrophylla*	2	Y	UPL
3.	*LONICERA X BELLA*	15	Y	FACU
4.	*Acer spicatum*	2	N	FACU
5.	*Solidago gigantea*	2	N	FACW
6	*Pinus resinosa*	5	N	FACU
7.	*BERBERIS THUNBERGII*	2	N	FACU
8.	*Rubus idaeus var. strigosus*	5	N	FAC
9.	*Carex pensylvanica*	5	N	UPL
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	48		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	12	x 2 =	24
FAC spp.	5	x 3 =	15
FACU spp.	124	x 4 =	496
UPL spp.	7	x 5 =	35
Total	148 (A)		570 (B)

Prevalence Index = B/A = *3.851*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/22/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	P-39
Landform:	Depression	Local Relief:	Concave	Sample Point:	P-39W
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Seasonally Flooded Basin
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☑ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. The hydrology of this sample plot is naturally problematic due to lack of primary hydrology indicators during the normal dry season. WETS analysis determined that the antecedent precipitation conditions were normal. 0.85 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth: >22	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 22	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 3 secondary indicators at the sample plot provides evidence of wetland hydrology. Field observations of high water table (18 inches) and saturation (12 inches) were found during Excel Engineering field investigation in May. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively
Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR 2/1	100	–	–	–	–	sandy loam
3	15	2	10YR 5/2	95	10YR 5/6	5	C	M	loamy sand
15	24	3	10YR 3/1	100	–	–	–	–	sandy loam
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☑ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, S5 and S11 Indicators descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-39 | Sample Point **P-39W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Alnus incana*	65	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	65		

Herb Stratum (Plot size: 2 meter radius)

1.	*Calamagrostis canadensis*	15	Y	OBL
2.	*Symplocarpus foetidus*	5	N	OBL
3.	*GLECHOMA HEDERACEA*	2	N	FACU
4.	*Toxicodendron radicans*	2	N	FAC
5.	*ALLIARIA PETIOLATA*	5	N	FACU
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	29		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	20	x 1 =	20
FACW spp.	65	x 2 =	130
FAC spp.	2	x 3 =	6
FACU spp.	7	x 4 =	28
UPL spp.	0	x 5 =	0
Total	94 (A)		184 (B)

Prevalence Index = B/A = ***1.957***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/19/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	P-40B
Landform:	Depression	Local Relief:	Concave	Sample Point:	P-40BW
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Seasonally Flooded Basin
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were normal. 1.13 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	8	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	5	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR	2/1	100	--	--	--	sandy muck mineral
3	20	2	10YR	6/1	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☑ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 and S1 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-40B Sample Point P-40BW

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex stricta*	65	Y	OBL
2.	*Calamagrostis canadensis*	15	N	OBL
3.	*Lycopus uniflorus*	5	N	OBL
4.	*Thelypteris palustris*	2	N	FACW
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	87		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	85	x 1 =	85
FACW spp.	2	x 2 =	4
FAC spp.	0	x 3 =	0
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	87 (A)		89 (B)

Prevalence Index = B/A = 1.023

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/19/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	P-40C
Landform:	Depression	Local Relief:	Concave	Sample Point:	P-40CW
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Seasonally Flooded Basin
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were normal. 1.13 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☑ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	4	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	surface	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 3 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	6	1	10YR	2/1	100	--	--	--	mucky sand
6	20	2	10YR	6/1	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☑ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 and S1 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-40C | Sample Point P-40CW

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Calamagrostis canadensis*	30	Y	OBL
2.	*Carex stricta*	65	Y	OBL
3.	*Lycopus uniflorus*	5	N	OBL
4.	*Symphyotrichum ontarionis*	5	N	FAC
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	105		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *100.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	100	x 1 =	100
FACW spp.	0	x 2 =	0
FAC spp.	5	x 3 =	15
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	105 (A)		115 (B)

Prevalence Index = B/A = *1.095*

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Dune land	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A
Datum:	N/A		

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☑ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/19/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-40D
Sample Point:	P-40DW
Community ID:	Seasonally Flooded Basin
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. The hydrology of this sample plot is naturally problematic due to lack of primary hydrology indicators during the normal dry season. WETS analysis determined that the antecedent precipitation conditions were normal. 1.13 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth: >20	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 20	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	1	1	10YR 2/1	100	--	--	--	--	sandy loam
1	20	2	10YR 7/1	95	10YR 5/6	5	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☑ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, S5 and S11 Indicators descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-40D Sample Point P-40DW

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Pinus strobus*	5	Y	FACU
2.	*Betula papyrifera*	5	Y	FACU
3.	*Pinus resinosa*	5	Y	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	15		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Calamagrostis canadensis*	50	Y	OBL
2.	*Solidago gigantea*	10	N	FACW
3.	*Juncus balticus*	30	Y	OBL
4.	*Calamagrostis canadensis*	2	N	OBL
5.	*Calamovilfa longifolia*	5	N	UPL
6	*Euthamia graminifolia*	5	N	FAC
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	102		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *40.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	82	x 1 =	82
FACW spp.	10	x 2 =	20
FAC spp.	5	x 3 =	15
FACU spp.	15	x 4 =	60
UPL spp.	5	x 5 =	25
Total	117 (A)		202 (B)

Prevalence Index = B/A = *1.726*

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Hydrophytic vegetation not dominant based on 50/20 rule however prevalence index is 1.726. Based on presence of hydric soils, observed dry season water table, other hydrology indicators, and prevelence of OBL plant species, area was identified as wetland. It is likely that spring ephemeral wetland plant species are present earlier in the growing season.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/19/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	P-40E
Landform:	Depression	Local Relief:	Concave	Sample Point:	P-40EW
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Seasonally Flooded Basin
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☑, Soil ☐, or Hydrology ☑ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. The hydrology of this sample plot is naturally problematic due to lack of primary hydrology indicators during the normal dry season. WETS analysis determined that the antecedent precipitation conditions were normal. 1.13 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation. Atypical situations require the use of professional judgement. Based on landscape position, hydric soils present, and the timing of the delineation, this area appears it may be inundated or saturated for longer periods of time during the early growing season.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☑ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☐ Yes ☑ No	Depth:	>26	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	26	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	1	1	10YR	3/1	100	–	–	–	–	sandy loam
1	26	2	10YR	7/1	95	10YR	5/6	5	C	M	loamy sand
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☑ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☑ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, S1 and S11 Indicators descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-40E | Sample Point P-40EW

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Pinus resinosa*	5	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	5		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Juncus balticus*	20	Y	OBL
2.	*Juniperus horizontalis*	5	N	FACU
3.	*Calamovilfa longifolia*	30	Y	UPL
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	55		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	20	x 1 =	20
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	10	x 4 =	40
UPL spp.	30	x 5 =	150
Total	60 (A)		210 (B)

Prevalence Index = B/A = 3.500

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☑ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic. Wetland spring ephemeral plants mostly l kely would be observed within the seasonally flooded basin in early growing season.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Dune land	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A
Datum:	N/A		

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☑, Soil ☐, or Hydrology ☑ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/19/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-40F
Sample Point:	P-40FW
Community ID:	Seasonally Flooded Basin
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. The hydrology of this sample plot is naturally problematic due to lack of primary hydrology indicators during the normal dry season. WETS analysis determined that the antecedent precipitation conditions were normal. 1.13 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation. Atypical situations require the use of professional judgment. Based on landscape position, hydric soils present, and the timing of the delineation, this area appears it may be inundated or saturated for longer periods of time during the early growing season.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☑ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 30	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 26	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	1	1	10YR 2/1	100	--	--	--	--	sandy loam
1	24	2	10YR 7/1	95	10YR 5/6	5	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☑ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, S5 and S11 Indicators descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-40F Sample Point P-40FW

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Betula papyrifera*	15	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	15		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Pinus strobus*	2	N	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	2		

Herb Stratum (Plot size: 2 meter radius)

1.	*Juncus balticus*	30	Y	OBL
2.	*Juniperus communis*	30	Y	FACU
3.	*BERBERIS THUNBERGII*	5	N	FACU
4.	*Juniperus horizontalis*	5	N	FACU
5.	*Solidago speciosa*	5	N	UPL
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	75		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	30	x 1 =	30
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	57	x 4 =	228
UPL spp.	5	x 5 =	25
Total	92 (A)		283 (B)

Prevalence Index = B/A = 3.076

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☑ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic. Wetland spring ephemeral plants mostly l kely dominate the seasonally flooded basin in early growing season.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/22/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	P-40U
Landform:	Terrace	Local Relief:	Linear	Sample Point:	P-40U
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Upland ridge
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		☑ Yes ☐ No		Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	■ Yes ☑ No

Remarks: Sample plot is located in on an upland ridge. WETS analysis determined that the antecedent precipitation conditions were normal. 0.85 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 to 5 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR	3/2	100	--	--	--	sandy loam
3	20	2	10YR	5/4	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-40U Sample Point **P-40U**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Betula alleghaniensis*	30	Y	FAC
2.	*Pinus resinosa*	25	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	55		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*BERBERIS THUNBERGII*	15	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	15		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex pensylvanica*	65	Y	UPL
2.	*Calamagrostis canadensis*	25	Y	OBL
3.	*CIRSIUM ARVENSE*	5	N	FACU
4.	*Acer rubrum*	2	N	FAC
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	97		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***40.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	25	x 1 =	25
FACW spp.	0	x 2 =	0
FAC spp.	32	x 3 =	96
FACU spp.	45	x 4 =	180
UPL spp.	65	x 5 =	325
Total	167 (A)		626 (B)

Prevalence Index = B/A = ***3.749***

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Dune land	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A
Datum:	N/A		

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/22/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-40
Sample Point:	P-40W
Community ID:	Seasonally Flooded Basin
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ■ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were normal. 0.85 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☑ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 6	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: surface	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 3 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR	2/1	100	--	--	--	--	mucky sand
3	10	2	10YR	7/1	100	--	--	--	--	loamy sand
10	20	3	10YR	5/1	100	--	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☑ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 and S1 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-40 Sample Point **P-40W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	20	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	20		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Alnus incana*	15	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	15		

Herb Stratum (Plot size: 2 meter radius)

1.	*PHALARIS ARUNDINACEA*	35	Y	FACW
2.	*Urtica dioica*	5	N	FAC
3.	*Lycopus uniflorus*	30	Y	OBL
4.	*Carex intumescens*	5	N	FACW
5.	*Calamagrostis canadensis*	15	N	OBL
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	90		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	45	x 1 =	45
FACW spp.	75	x 2 =	150
FAC spp.	5	x 3 =	15
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	125 (A)		210 (B)

Prevalence Index = B/A = ***1.680***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/22/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	P-41
Landform:	Depression	Local Relief:	Concave	Sample Point:	P-41W
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Seasonally Flooded Basin
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		☑ Yes ☐ No		Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were normal. 0.85 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	16	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	12	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 1 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	2	1	10YR	2/1	100	--	--	--	--	sandy loam
2	20	2	10YR	5/1	100	--	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 Indicator described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-41 | Sample Point **P-41W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Alnus incana*	35	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	35		

Herb Stratum (Plot size: 2 meter radius)

1.	*Urtica dioica*	15	N	FAC
2.	*Carex intumescens*	5	N	FACW
3.	*Calamagrostis canadensis*	40	Y	OBL
4.	*BERBERIS THUNBERGII*	5	N	FACU
5.	*Rubus idaeus var. strigosus*	10	N	FAC
6	*Viola palmata*	2	N	FACU
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	77		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	40	x 1 =	40
FACW spp.	40	x 2 =	80
FAC spp.	25	x 3 =	75
FACU spp.	7	x 4 =	28
UPL spp.	0	x 5 =	0
Total	112 (A)		223 (B)

Prevalence Index = B/A = ***1.991***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/22/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	P-42U
Landform:	Terrace	Local Relief:	Linear	Sample Point:	P-42U
Slope (%):	2-6	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Upland ridge
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: Sample plot is located in on an upland ridge. WETS analysis determined that the antecedent precipitation conditions were normal. 0.85 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 to 5 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR	3/2	100	--	--	--	sandy loam
3	16	2	10YR	6/3	100	--	--	--	loamy sand
16	20	3	10YR	5/4	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-42U Sample Point **P-42U**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Quercus rubra*	10	Y	FACU
2.	*Pinus resinosa*	35	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	45		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*BERBERIS THUNBERGII*	55	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	55		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex pensylvanica*	70	Y	UPL
2.	*Rubus idaeus var. strigosus*	15	N	FAC
3.	*Pinus resinosa*	2	N	FACU
4.	*Calamagrostis canadensis*	5	N	OBL
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	92		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	5	x 1 =	5
FACW spp.	0	x 2 =	0
FAC spp.	15	x 3 =	45
FACU spp.	102	x 4 =	408
UPL spp.	70	x 5 =	350
Total	192 (A)		808 (B)

Prevalence Index = B/A = *4.208*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Dune land	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A
Datum:	N/A		

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☑ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/22/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-42
Sample Point:	P-42W
Community ID:	Seasonally Flooded Basin
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. The hydrology of this sample plot is naturally problematic due to lack of primary hydrology indicators during the normal dry season. WETS analysis determined that the antecedent precipitation conditions were normal. 0.85 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth: >20	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 18	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 3 secondary indicators at the sample plot provides evidence of wetland hydrology. Primary indicators of high water table (10 in.) and saturation (6 in.) were found during Excel Engineering field investigation in May. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively
Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	2	1	10YR	2/1	100	--	--	--	sandy loam
2	20	2	10YR	5/1	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
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NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 Indicator described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-42 | Sample Point **P-42W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Alnus incana*	60	Y	FACW
2.	*BERBERIS THUNBERGII*	15	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	75		

Herb Stratum (Plot size: 2 meter radius)

1.	*Urtica dioica*	40	Y	FAC
2.	*Calamagrostis canadensis*	20	Y	OBL
3.	*Rubus idaeus var. strigosus*	15	N	FAC
4.	*Viola palmata*	2	N	FACU
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	77		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *75.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	20	x 1 =	20
FACW spp.	60	x 2 =	120
FAC spp.	55	x 3 =	165
FACU spp.	17	x 4 =	68
UPL spp.	0	x 5 =	0
Total	152 (A)		373 (B)

Prevalence Index = B/A = *2.454*

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Dune land	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/22/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-43
Sample Point:	P-43W
Community ID:	Seasonally Flooded Basin
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were normal. 0.85 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 14	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 10	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 1 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR	2/1	100	--	--	--	sandy loam
4	20	2	10YR	5/1	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 Indicator described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-43 | Sample Point **P-43W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	5	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	5		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Alnus incana*	25	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	25		

Herb Stratum (Plot size: 2 meter radius)

1.	*Calamagrostis canadensis*	55	Y	OBL
2.	*Rubus idaeus var. strigosus*	20	Y	FAC
3.	*Lycopus uniflorus*	10	N	OBL
4.	*Viola palmata*	2	N	FACU
5.	*BERBERIS THUNBERGII*	5	N	FACU
6	*Linnaea borealis*	2	N	FAC
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	94		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	65	x 1 =	65
FACW spp.	30	x 2 =	60
FAC spp.	22	x 3 =	66
FACU spp.	7	x 4 =	28
UPL spp.	0	x 5 =	0
Total	124 (A)		219 (B)

Prevalence Index = B/A = ***1.766***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/19/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	P-44
Landform:	Terrace	Local Relief:	Linear	Sample Point:	P-44AU
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Upland ridge
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		☑ Yes ☐ No		Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	■ Yes ☑ No

Remarks: Sample plot is located in on an upland ridge. WETS analysis determined that the antecedent precipitation conditions were normal. 1.13 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 to 5 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	2	1	10YR	3/8	100	--	--	--	sandy loam
2	20	2	7.5YR	5/6	100	--	--	--	loamy sand
20	24	3	7.5YR	6/3	90	7.5YR	5/6	10	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-44 | Sample Point P-44AU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer saccharum*	45	Y	FACU
2.	*Fagus grandifolia*	10	N	FACU
3.	*Pinus resinosa*	10	N	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	65		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*BERBERIS THUNBERGII*	5	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	5		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex pensylvanica*	40	Y	UPL
2.	*Rubus idaeus var. strigosus*	10	N	FAC
3.	*Acer saccharum*	2	N	FACU
4.	*Fagus grandifolia*	2	N	FACU
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	54		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	10	x 3 =	30
FACU spp.	74	x 4 =	296
UPL spp.	40	x 5 =	200
Total	124 (A)		526 (B)

Prevalence Index = B/A = *4.242*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Dune land	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☑ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/19/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-44A
Sample Point:	P-44AW
Community ID:	Seasonally Flooded Basin
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. The hydrology of this sample plot is naturally problematic due to lack of primary hydrology indicators during the normal dry season. WETS analysis determined that the antecedent precipitation conditions were normal. 1.13 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth: >20	(in.)
Saturation Present?	☐ Yes	☑ No	Depth: >20	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland. No primary indicators were found during Excel Engineerings field investigation in May.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR 2/1	100	--	--	--	--	sandy loam
3	15	2	10YR 5/2	95	10YR 5/6	5	C	M	loamy sand
15	20	3	10YR 6/1	100	--	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☑ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, S5 and S11 Indicators descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-44A Sample Point P-44AW

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	55	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	55		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*BERBERIS THUNBERGII*	5	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	5		

Herb Stratum (Plot size: 2 meter radius)

1.	*Calamagrostis canadensis*	50	Y	OBL
2.	*Rubus idaeus var. strigosus*	35	Y	FAC
3.	*Thelypteris palustris*	5	N	FACW
4.	*BERBERIS THUNBERGII*	10	N	FACU
5.	*Lycopus uniflorus*	2	N	OBL
6	*Dryopteris carthusiana*	5	N	FACW
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	107		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	52	x 1 =	52
FACW spp.	65	x 2 =	130
FAC spp.	35	x 3 =	105
FACU spp.	15	x 4 =	60
UPL spp.	0	x 5 =	0
Total	167 (A)		347 (B)

Prevalence Index = B/A = 2.078

Hydrophytic Vegetation Indicators:

☐ Yes	☑ No	Rapid Test for Hydrophytic Vegetation
☑ Yes	☐ No	Dominance Test is > 50%
☑ Yes	☐ No	Prevalence Index is ≤ 3.0 *
☐ Yes	☐ No	Morphological Adaptations (Explain) *
☐ Yes	☐ No	Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/19/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	P-44
Landform:	Terrace	Local Relief:	Convex	Sample Point:	P-44BU
Slope (%):	2-6	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Upland ridge
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		☑ Yes ☐ No		Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	■ Yes ☑ No

Remarks: Sample plot is located in on an upland ridge. WETS analysis determined that the antecedent precipitation conditions were normal. 1.13 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 to 5 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR	3/2	100	--	--	--	sandy loam
4	10	2	7.5YR	5/4	100	--	--	--	loamy sand
10	20	3	7.5YR	6/4	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-44 Sample Point P-44BU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fagus grandifolia*	15	Y	FACU
2.	*Acer saccharum*	20	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	35		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*BERBERIS THUNBERGII*	15	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	15		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex pensylvanica*	85	Y	UPL
2.	*Rubus idaeus var. strigosus*	5	N	FAC
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	90		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	5	x 3 =	15
FACU spp.	50	x 4 =	200
UPL spp.	85	x 5 =	425
Total	140 (A)		640 (B)

Prevalence Index = B/A = *4.571*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/19/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	P-44B
Landform:	Depression	Local Relief:	Concave	Sample Point:	P-44BW
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Seasonally Flooded Basin
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☑ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. The hydrology of this sample plot is naturally problematic due to lack of primary hydrology indicators during the normal dry season. WETS analysis determined that the antecedent precipitation conditions were normal. 1.13 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	26	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	23	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR 2/1	100	--	--	--	--	sandy loam
4	8	2	10YR 7/2	100	--	--	--	--	loamy sand
8	26	3	10YR 5/2	90	10YR 4/6	10	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 Indicator described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-44B Sample Point P-44BW

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	30	Y	FACW
2.	*Betula papyrifera*	20	Y	FACU
3.	*Acer saccharum*	5	N	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	55		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Calamagrostis canadensis*	65	Y	OBL
2.	*RUBUS IDAEUS VAR. IDAEUS*	25	Y	FAC
3.	*Onoclea sensibilis*	10	N	FACW
4.	*Urtica dioica*	5	N	FAC
5.	*Thelypteris palustris*	5	N	FACW
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	110		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *75.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	65	x 1 =	65
FACW spp.	45	x 2 =	90
FAC spp.	30	x 3 =	90
FACU spp.	25	x 4 =	100
UPL spp.	0	x 5 =	0
Total	165 (A)		345 (B)

Prevalence Index = B/A = *2.091*

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/19/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	P-45
Landform:	Depression	Local Relief:	Concave	Sample Point:	P-45W
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Seasonally Flooded Basin
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		☑ Yes ☐ No		Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were normal. 1.13 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☑ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	14	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	11	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR	2/1	100	--	--	--	mucky sand
3	20	2	10YR	6/1	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☑ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 and S1 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-45 Sample Point **P-45W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	35	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	35		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Lycopus uniflorus*	15	Y	OBL
2.	*BERBERIS THUNBERGII*	20	Y	FACU
3.	*Calamagrostis canadensis*	10	N	OBL
4.	*Onoclea sensibilis*	5	N	FACW
5.	*Carex intumescens*	15	Y	FACW
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	65		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *75.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	25	x 1 =	25
FACW spp.	55	x 2 =	110
FAC spp.	0	x 3 =	0
FACU spp.	20	x 4 =	80
UPL spp.	0	x 5 =	0
Total	100 (A)		215 (B)

Prevalence Index = B/A = *2.150*

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/30/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	P-46
Landform:	Terrace	Local Relief:	Linear	Sample Point:	P-46U
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Upland ridge
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		☐ Yes ☑ No		Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: Sample plot is located in on an upland ridge. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.18 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 to 5 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR	3/2	100	--	--	--	sandy loam
3	20	2	10YR	4/4	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
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NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-46 Sample Point **P-46U**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Prunus serotina*	15	N	FACU
2.	*Pinus strobus*	20	Y	FACU
3.	*Fagus grandifolia*	30	Y	FACU
4.	*Fraxinus pennsylvanica*	10	N	FACW
5.	*Acer saccharum*	10	N	FACU
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	85		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*BERBERIS THUNBERGII*	20	Y	FACU
2.	*Fraxinus pennsylvanica*	2	N	FACW
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	22		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex pensylvanica*	75	Y	UPL
2.	*Acer saccharum*	5	N	FACU
3.	*BERBERIS THUNBERGII*	5	N	FACU
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	85		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	12	x 2 =	24
FAC spp.	0	x 3 =	0
FACU spp.	105	x 4 =	420
UPL spp.	75	x 5 =	375
Total	192 (A)		819 (B)

Prevalence Index = B/A = *4.266*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/30/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	P-46
Landform:	Depression	Local Relief:	Concave	Sample Point:	P-46W
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Seasonally flooded basin
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☐ Yes ☑ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.18 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☑ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☑ Yes ☐ No	Depth:	3	(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	0	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	0	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 3 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR	2/1	100	--	--	--	mucky sand
3	20	2	10YR	5/1	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
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NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☑ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 and S1 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-46 | Sample Point **P-46W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Alnus incana*	5	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	5		

Herb Stratum (Plot size: 2 meter radius)

1.	*Calamagrostis canadensis*	35	Y	OBL
2.	*Carex stricta*	35	Y	OBL
3.	*Urtica dioica*	5	N	FAC
4.	*Dryopteris carthusiana*	15	N	FACW
5.	*Lycopus uniflorus*	10	N	OBL
6	*Symphyotrichum ontarionis*	10	N	FAC
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	110		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	80	x 1 =	80
FACW spp.	20	x 2 =	40
FAC spp.	15	x 3 =	45
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	115 (A)		165 (B)

Prevalence Index = B/A = ***1.435***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/30/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	P-47
Landform:	Depression	Local Relief:	Concave	Sample Point:	P-47W
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Seasonally flooded basin
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☐ Yes ☑ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.18 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☑ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☑ Yes ☐ No	Depth:	2	(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	0	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	0	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 3 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	20	1	10YR 2/1	100	--	--	--	--	organic
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
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NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☑ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A1 Indicator descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-47 Sample Point **P-47W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex stricta*	65	Y	OBL
2.	*Juncus effusus*	20	N	OBL
3.	*Mentha arvensis*	5	N	FACW
4.	*Urtica dioica*	5	N	FAC
5.	*Calamagrostis canadensis*	10	N	OBL
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	105		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	95	x 1 =	95
FACW spp.	5	x 2 =	10
FAC spp.	5	x 3 =	15
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	105 (A)		120 (B)

Prevalence Index = B/A = ***1.143***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Terrace	Local Relief:	Linear
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/30/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-48
Sample Point:	P-48U
Community ID:	Upland ridge
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ■ Yes ☑ No

Remarks: Sample plot is located in on an upland ridge. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.18 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 to 5 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	2	1	10YR	2/1	100	--	--	--	sandy loam
2	14	2	10YR	4/4	100	--	--	--	loamy sand
14	20	3	10YR	6/3	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-48 Sample Point **P-48U**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Quercus rubra*	60	Y	FACU
2.	*Betula alleghaniensis*	15	Y	FAC
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	75		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*BERBERIS THUNBERGII*	85	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	85		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex pensylvanica*	60	Y	UPL
2.	*Rubus idaeus var. strigosus*	15	N	FAC
3.	*Toxicodendron radicans*	2	N	FAC
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	77		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***25.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	32	x 3 =	96
FACU spp.	145	x 4 =	580
UPL spp.	60	x 5 =	300
Total	237 (A)		976 (B)

Prevalence Index = B/A = ***4.118***

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/30/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	N/A	Wetland ID:	P-48
Landform:	Depression	Local Relief:	Concave	Sample Point:	P-48W
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Seasonally flooded basin
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		☐ Yes ☑ No		Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.18 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	13	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	10	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 1 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR	2/1	100	--	--	--	mucky sand
3	20	2	10YR	5/1	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☑ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 and S1 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-48 Sample Point **P-48W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	25	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	25		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Alnus incana*	15	Y	FACW
2.	*Fraxinus pennsylvanica*	5	Y	FACW
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	20		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex stricta*	65	Y	OBL
2.	*Calamagrostis canadensis*	10	N	OBL
3.	*Lycopus uniflorus*	5	N	OBL
4.	*Onoclea sensibilis*	5	N	FACW
5.	*Alnus incana*	5	N	FACW
6	*Mentha arvensis*	2	N	FACW
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	92		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	80	x 1 =	80
FACW spp.	57	x 2 =	114
FAC spp.	0	x 3 =	0
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	137 (A)		194 (B)

Prevalence Index = B/A = ***1.416***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/30/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	N/A	Wetland ID:	P-49
Landform:	Depression	Local Relief:	Concave	Sample Point:	P-49W
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Seasonally flooded basin
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☐ Yes ☑ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.18 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☑ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☑ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☑ Yes ☐ No	Depth:	1	(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	0	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	0	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 4 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	20	1	10YR 2/1	100	--	--	--	--	organic
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☑ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A1 Indicator descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-49 Sample Point **P-49W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	20	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	20		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Lemna minor*	80	Y	OBL
2.	*Cicuta maculata*	25	N	OBL
3.	*Calamagrostis canadensis*	15	N	OBL
4.	*Ranunculus hispidus*	2	N	FAC
5.	*Mentha arvensis*	2	N	FACW
6	*PHALARIS ARUNDINACEA*	5	N	FACW
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	129		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	120	x 1 =	120
FACW spp.	27	x 2 =	54
FAC spp.	2	x 3 =	6
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	149 (A)		180 (B)

Prevalence Index = B/A = ***1.208***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Terrace	Local Relief:	Linear
Slope (%):	0-2	Latitude: N/A	Longitude: N/A
Datum:	N/A		

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/30/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-51
Sample Point:	P-51U
Community ID:	Upland ridge
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ■ Yes ☑ No

Remarks: Sample plot is located in on an upland ridge. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.18 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☐ Yes ☑ No	Depth:	>20	(in.)
Saturation Present?	☐ Yes ☑ No	Depth:	>20	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 to 5 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	2	1	10YR	3/2	100	--	--	--	--	--	sandy loam
2	3	2	10YR	5/2	100	--	--	--	--	--	loamy sand
3	12	3	10YR	4/4	100	--	--	--	--	--	loamy sand
12	20	4	10YR	6/3	100	--	--	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-51 Sample Point **P-51U**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer saccharum*	45	Y	FACU
2.	*Fagus grandifolia*	15	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	60		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Fagus grandifolia*	5	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	5		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex pensylvanica*	85	Y	UPL
2.	*Rubus idaeus var. strigosus*	10	N	FAC
3.	*Elymus canadensis*	5	N	FACU
4.	*Fagus grandifolia*	2	N	FACU
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	102		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	10	x 3 =	30
FACU spp.	72	x 4 =	288
UPL spp.	85	x 5 =	425
Total	167 (A)		743 (B)

Prevalence Index = B/A = *4.449*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/30/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Dune land	NWI/WWI Classification:	T3/E2K	Wetland ID:	P-51
Landform:	Depression	Local Relief:	Concave	Sample Point:	P-51W
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Seasonally flooded basin
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☐ Yes ☑ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.18 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	16	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	12	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 1 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Dune land — Series Drainage Class: well to excessively

Taxonomy (Subgroup): NA

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR 2/1	100	--	--	--	--	mucky sand
3	8	2	10YR 2/1	100	--	--	--	--	sandy loam
8	20	3	10YR 5/1	100	--	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☑ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 and S1 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-51 Sample Point **P-51W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	35	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	35		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Alnus incana*	15	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	15		

Herb Stratum (Plot size: 2 meter radius)

1.	*Lycopus uniflorus*	10	Y	OBL
2.	*Impatiens capensis*	2	N	FACW
3.	*Dryopteris carthusiana*	5	N	FACW
4.	*Laportea canadensis*	15	Y	FACW
5.	*Calamagrostis canadensis*	5	N	OBL
6	*Galium triflorum*	2	N	FACU
7.	*Scutellaria galericulata*	2	N	OBL
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	41		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	17	x 1 =	17
FACW spp.	72	x 2 =	144
FAC spp.	0	x 3 =	0
FACU spp.	2	x 4 =	8
UPL spp.	0	x 5 =	0
Total	91 (A)		169 (B)

Prevalence Index = B/A = ***1.857***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☑, Soil ☐, or Hydrology ☑ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	09/30/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-52W
Sample Point:	P-52W
Community ID:	Seasonally flooded basin
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.18 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation. Atypical situations require the use of professional judgement. Based on landscape position, hydric soils present, and the timing of the delineation, this area appears it may be inundated or saturated for longer periods of time during the early growing season.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☐ Yes ☑ No	Depth:	>20	(in.)
Saturation Present?	☐ Yes ☑ No	Depth:	>20	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of only one secondary indicator at the sample plot does not provide sufficient evidence of wetland hydrology. Field observations of high water table (18 inches) and saturation (14 inches) were found during Excel Engineering field investigation in May. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR 2/1	100	--	--	--	--	sandy loam
4	20	2	10YR 5/2	95	10YR 5/6	5	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☑ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, S5 and S11 Indicators descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-52W | Sample Point **P-52W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Urtica dioica*	30	Y	FAC
2.	*Calamagrostis canadensis*	2	N	OBL
3.	*BERBERIS THUNBERGII*	40	Y	FACU
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	72		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Remarks: Dominant vegetation was determined through use of 50/20 rule. Vegetation at the sample plot is not hydrophytic. Wetland spring ephemeral plants mostly likely occur within the seasonally flooded basin in early growing season. Berberis also seems to dominate in both wetland and upland areas within this portion of the site.

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***50.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	2	x 1 =	2
FACW spp.	0	x 2 =	0
FAC spp.	30	x 3 =	90
FACU spp.	40	x 4 =	160
UPL spp.	0	x 5 =	0
Total	72 (A)		252 (B)

Prevalence Index = B/A = ***3.500***

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☑ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/30/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A	Wetland ID:	P-53W
Landform:	Depression	Local Relief:	Concave	Sample Point:	P-53W
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Seasonally flooded basin
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☐ Yes ☑ No		Section: 14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?			Township: 14 N
Are Vegetation ☑, Soil ☐, or Hydrology ☑ naturally problematic?		☑ Yes ☐ No			Range: 23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.18 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation. Atypical situations require the use of professional judgement. Based on landscape position, wetland hydrology, hydric soils present, and the timing of the delineation, this area appears it may be inundated or saturated for longer periods of time during the early growing season.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☑ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☐ Yes ☑ No	Depth:	>20	(in.)
Saturation Present?	☐ Yes ☑ No	Depth:	>20	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 1 primary and 1 secondary indicators at the sample plot provides evidence of wetland hydrology. Field observations of high water table (18 inches) and saturation (14 inches) were found during Excel Engineering field investigation in May. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	2	1	10YR 2/1	100	--	--	--	--	sandy loam
2	20	2	10YR 5/2	97	10YR 5/6	3	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☑ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, S5 and S11 Indicators descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-53W Sample Point **P-53W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	10	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	10		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Acer saccharum*	5	Y	FACU
2.	*Carex blanda*	2	N	FAC
3.	*Carex pensylvanica*	5	Y	UPL
4.	*BERBERIS THUNBERGII*	2	N	FACU
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	14		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *33.3%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	10	x 2 =	20
FAC spp.	2	x 3 =	6
FACU spp.	7	x 4 =	28
UPL spp.	5	x 5 =	25
Total	24 (A)		79 (B)

Prevalence Index = B/A = *3.292*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☑ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic. Wetland spring ephemeral plants mostly l kely are present within the seasonally flooded basin in early growing season.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Terrace	Local Relief:	Linear
Slope (%):	0-2	Latitude: N/A	Longitude: N/A
Datum:	N/A		

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/23/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-54
Sample Point:	P-54U
Community ID:	Upland forest
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ Yes ☑ No

Remarks: Sample plot is located in on an upland ridge. WETS analysis determined that the antecedent precipitation conditions were normal. 2.43 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 to 5 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR	3/2	100	--	--	--	loamy sand
4	16	2	10YR	5/4	100	--	--	--	loamy sand
16	20	3	10YR	4/6	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-54 Sample Point **P-54U**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fagus grandifolia*	40	Y	FACU
2.	*Pinus strobus*	5	N	FACU
3.	*Acer saccharum*	25	Y	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	70		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Fagus grandifolia*	5	Y	FACU
2.	*BERBERIS THUNBERGII*	2	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	7		

Herb Stratum (Plot size: 2 meter radius)

1.	*Lycopodium digitatum*	20	Y	UPL
2.	*Carex pensylvanica*	70	Y	UPL
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	90		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	77	x 4 =	308
UPL spp.	90	x 5 =	450
Total	167 (A)		758 (B)

Prevalence Index = B/A = *4.539*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/23/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf	State:	Wisconsin
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A	Wetland ID:	P-54
Landform:	Depression	Local Relief:	Concave	Sample Point:	P-54W
Slope (%):	0-2 Latitude: N/A	Longitude:	N/A	Datum: N/A	Community ID: Seasonally Flooded Basin
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were normal. 2.43 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	6	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	4	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR 3/2	100	--	--	--	--	loam
4	14	2	10YR 4/2	95	10YR 4/4	5	C	M	loamy sand
14	20	3	10YR 5/2	95	10YR 4/4	5	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☑ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, S5 and S11 Indicators descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-54 | Sample Point **P-54W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Glyceria striata*	90	Y	OBL
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	90		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	90	x 1 =	90
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	90 (A)		90 (B)

Prevalence Index = B/A = ***1.000***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	09/30/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Chuck Herrmann	State:	Wisconsin
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	N/A	Wetland ID:	P-55W
Landform:	Depression	Local Relief:	Concave	Sample Point:	P-55W
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Seasonally flooded basin
					Section: 14
					Township: 14 N
					Range: 23 Dir: E

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☑ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. The hydrology of this sample plot is naturally problematic due to lack of primary hydrology indicators during the normal dry season. WETS analysis determined that the antecedent precipitation conditions were drier than normal. 0.18 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	26	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	22	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 secondary indicators at the sample plot provides evidence of wetland hydrology. Field observations of high water table (18 inches) and saturation (14 inches) were found during Excel Engineering field investigation in May. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	2	1	10YR	2/1	100	–	–	–	–	sandy loam
2	8	2	10YR	4/2	95	10YR	5/6	5	C	M	loamy sand
8	20	3	10YR	4/1	100	–	–	–	–	–	loamy sand
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☑ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, S5 and S11 Indicators descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-55W Sample Point **P-55W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	25	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	25		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex aquatilis*	10	N	OBL
2.	*Dryopteris carthusiana*	10	N	FACW
3.	*Calamagrostis canadensis*	10	N	OBL
4.	*BERBERIS THUNBERGII*	35	Y	FACU
5.	*Lycopus uniflorus*	5	N	OBL
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	70		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***50.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	25	x 1 =	25
FACW spp.	35	x 2 =	70
FAC spp.	0	x 3 =	0
FACU spp.	35	x 4 =	140
UPL spp.	0	x 5 =	0
Total	95 (A)		235 (B)

Prevalence Index = B/A = ***2.474***

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the prevalence index. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/23/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf	State:	Wisconsin
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A	Wetland ID:	P-56
Landform:	Depression	Local Relief:	Concave	Sample Point:	P-56U
Slope (%):	0-2 Latitude: N/A	Longitude:	N/A	Datum: N/A	Community ID: Upland swale
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: Sample plot is located in an upland swale. WETS analysis determined that the antecedent precipitation conditions were normal. 2.43 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of only one secondary indicator at the sample plot does not provide sufficient evidence of wetland hydrology.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR	3/2	100	–	–	–	–	sandy loam
3	12	2	10YR	5/2	100	–	–	–	–	loamy sand
12	26	3	10YR	4/3	100	–	–	–	–	loamy sand
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-56 | Sample Point **P-56U**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Dryopteris carthusiana*	5	Y	FACW
2.	*Lycopodium digitatum*	5	Y	UPL
3.	*Elymus virginicus*	2	N	FACW
4.	*Pinus strobus*	2	N	FACU
5.	*Fagus grandifolia*	2	N	FACU
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	16		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***50.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	7	x 2 =	14
FAC spp.	0	x 3 =	0
FACU spp.	4	x 4 =	16
UPL spp.	5	x 5 =	25
Total	16 (A)		55 (B)

Prevalence Index = B/A = ***3.438***

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Shoulder	Local Relief:	Convex
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/23/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-57
Sample Point:	P-57U
Community ID:	Upland ridge
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ Yes ☑ No

Remarks: Sample plot is located on an upland ridge. WETS analysis determined that the antecedent precipitation conditions were normal. 2.43 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 to 5 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	2	1	10YR	3/2	100	--	--	--	sandy loam
2	7	2	10YR	5/4	100	--	--	--	loamy sand
7	24	3	10YR	5/6	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-57 | Sample Point: P-57U

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind. Status
1.	*Fagus grandifolia*	30	Y	FACU
2.	*Acer saccharum*	30	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	60		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Prunus serotina*	10	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	10		

Herb Stratum (Plot size: 2 meter radius)

1.	*Lycopodium digitatum*	50	Y	UPL
2.	*Pinus strobus*	2	N	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	52		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	72	x 4 =	288
UPL spp.	50	x 5 =	250
Total	122 (A)		538 (B)

Prevalence Index = B/A = 4.410

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☑, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/23/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-57
Sample Point:	P-57W
Community ID:	Seasonally Flooded Basin
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were normal. 2.43 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation. Using best professional judgment this area is a wetland, as both hydrology and soils meet wetland classification. Even when vegetation does not meet classification at this specific time during the growing season.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☑ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 26	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 22	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 1 primary and 2 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR 3/2	100	--	--	--	--	loam
3	12	2	10YR 5/2	95	10YR 4/4	5	C	M	loamy sand
12	26	3	10YR 4/2	95	10YR 4/6	5	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☑ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, S11, and S5 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-57 | Sample Point **P-57W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	0		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: NA (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	0 (A)		0 (B)

Prevalence Index = B/A = NA

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☑ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Unvegetated concave surface. No vegetation present within depression. L kely a result of dense leaf litter, shading, time of year, and/or recent ponding.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/23/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-58
Sample Point:	P-58W
Community ID:	Seasonally Flooded Basin
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ■ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were normal. 2.43 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 22	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 18	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR 2/1	100	--	--	--	--	mucky silt loam
4	17	2	10YR 4/1	95	10YR 4/4	5	C	M	loamy sand
17	24	3	10YR 5/2	97	10YR 4/4	3	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☑ S11 - High Chroma Sands
- ☑ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, S5, S11 and F1 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-58 | Sample Point **P-58W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Calamagrostis canadensis*	30	Y	OBL
2.	*Pinus strobus*	2	N	FACU
3.	*Carex intumescens*	5	N	FACW
4.	*Carex pensylvanica*	20	Y	UPL
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	57		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***50.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	30	x 1 =	30
FACW spp.	5	x 2 =	10
FAC spp.	0	x 3 =	0
FACU spp.	2	x 4 =	8
UPL spp.	20	x 5 =	100
Total	57 (A)		148 (B)

Prevalence Index = B/A = ***2.596***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the prevalence index. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Shoulder	Local Relief:	Convex
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/23/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-59
Sample Point:	P-59U
Community ID:	Upland ridge
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ Yes ☑ No

Remarks: Sample plot is located on an upland ridge. WETS analysis determined that the antecedent precipitation conditions were normal. 2.43 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 to 5 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR	3/2	100	--	--	--	sandy loam
3	4	2	10YR	5/5	100	--	--	--	loamy sand
4	24	3	10YR	5/6	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-59 Sample Point **P-59U**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Pinus strobus*	10	N	FACU
2.	*Acer saccharum*	60	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	70		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Acer saccharum*	5	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	5		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex pensylvanica*	90	Y	UPL
2.	*Rubus idaeus var. strigosus*	2	N	FAC
3.	*Dryopteris carthusiana*	2	N	FACW
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	94		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	2	x 2 =	4
FAC spp.	2	x 3 =	6
FACU spp.	75	x 4 =	300
UPL spp.	90	x 5 =	450
Total	169 (A)		760 (B)

Prevalence Index = B/A = *4.497*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/23/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-59
Sample Point:	P-59W
Community ID:	Seasonally Flooded Basin
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were normal. 2.43 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 9	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 6	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR 2/1	100	--	--	--	--	mucky silt loam
3	6	2	10YR 3/1	97	10YR 4/4	3	C	M	loamy sand
6	18	3	10YR 4/1	97	10YR 4/4	3	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☑ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, S5 and S11 Indicators descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-59 | Sample Point **P-59W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Glyceria striata*	30	Y	OBL
2.	*Carex intumescens*	20	Y	FACW
3.	*Thelypteris palustris*	5	N	FACW
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	55		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	30	x 1 =	30
FACW spp.	25	x 2 =	50
FAC spp.	0	x 3 =	0
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	55 (A)		80 (B)

Prevalence Index = B/A = ***1.455***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/23/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-60
Sample Point:	P-60W
Community ID:	Seasonally Flooded Basin
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ■ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were normal. 2.43 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 4	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 2	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	5	1	10YR 2/1	100	--	--	--	--	mucky silt loam
5	8	2	10YR 3/1	97	10YR 4/4	3	C	M	sandy loam
8	18	3	10YR 4/2	97	10YR 4/4	3	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☑ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 and F1 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-60 | Sample Point **P-60W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Lycopus uniflorus*	30	Y	OBL
2.	*Calamagrostis canadensis*	15	Y	OBL
3.	*Carex intumescens*	10	N	FACW
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	55		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	45	x 1 =	45
FACW spp.	10	x 2 =	20
FAC spp.	0	x 3 =	0
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	55 (A)		65 (B)

Prevalence Index = B/A = ***1.182***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/23/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf	State:	Wisconsin
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A	Wetland ID:	P-61
Landform:	Depression	Local Relief:	Concave	Sample Point:	P-61W
Slope (%):	0-2 Latitude: N/A	Longitude:	N/A	Datum: N/A	Community ID: Seasonally Flooded Basin
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were normal. 2.43 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☑ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	14	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	12	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR 2/1	100	--	--	--	--	mucky silt loam
4	12	2	10YR 4/2	97	10YR 4/4	3	C	M	loamy sand
12	24	3	10YR 4/3	98	10YR 4/4	2	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☑ S11 - High Chroma Sands
- ☑ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, S5, S11 and F1 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-61 | Sample Point **P-61W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Urtica dioica*	2	N	FAC
2.	*Elymus virginicus*	2	N	FACW
3.	*Quercus rubra*	2	N	FACU
4.	*Lycopus uniflorus*	15	Y	OBL
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	21		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	15	x 1 =	15
FACW spp.	2	x 2 =	4
FAC spp.	2	x 3 =	6
FACU spp.	2	x 4 =	8
UPL spp.	0	x 5 =	0
Total	21 (A)		33 (B)

Prevalence Index = B/A = ***1.571***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Side slope	Local Relief:	Linear
Slope (%):	2-6	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/23/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-62
Sample Point:	P-62U
Community ID:	Upland ridge
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ Yes ☑ No

Remarks: Sample plot is located on an upland ridge. WETS analysis determined that the antecedent precipitation conditions were normal. 2.43 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 to 5 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR	3/1	100	–	–	–	–	sandy loam
3	5	2	10YR	5/2	100	–	–	–	–	loamy sand
5	24	3	10YR	5/6	100	–	–	–	–	loamy sand
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-62 Sample Point **P-62U**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Pinus strobus*	25	Y	FACU
2.	*Quercus rubra*	20	Y	FACU
3.	*Acer saccharum*	25	Y	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	70		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Quercus rubra*	5	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	5		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex pensylvanica*	80	Y	UPL
2.	*Dryopteris carthusiana*	2	N	FACW
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	82		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	2	x 2 =	4
FAC spp.	0	x 3 =	0
FACU spp.	75	x 4 =	300
UPL spp.	80	x 5 =	400
Total	157 (A)		704 (B)

Prevalence Index = B/A = *4.484*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/23/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-62
Sample Point:	P-62W
Community ID:	Seasonally Flooded Basin
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were normal. 2.43 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☑ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 20	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 17	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 1 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. Primary indicators of high water table (2 in.) and saturation (surface) were found in May field investigation. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Oakville loamy fine sand Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR 3/2	100	--	--	--	--	silt loam
3	12	2	10YR 5/2	95	10YR 4/4	5	C	M	loamy sand
12	26	3	10YR 4/2	95	10YR 4/6	5	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☑ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, S5 and S11 Indicators descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-62 | Sample Point **P-62W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Glyceria striata*	10	Y	OBL
2.	*Onoclea sensibilis*	5	Y	FACW
3.	*Dryopteris carthusiana*	2	N	FACW
4.	*Elymus virginicus*	5	Y	FACW
5.	*Urtica dioica*	2	N	FAC
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	24		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	10	x 1 =	10
FACW spp.	12	x 2 =	24
FAC spp.	2	x 3 =	6
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	24 (A)		40 (B)

Prevalence Index = B/A = ***1.667***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/23/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-64
Sample Point:	P-64W
Community ID:	Seasonally Flooded Basin
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were normal. 2.43 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 15	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 12	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 1 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR 2/1	100	--	--	--	--	mucky silt loam
3	7	2	10YR 4/1	95	10YR 4/6	5	C	M	loamy sand
7	18	3	10YR 4/2	95	10YR 4/6	5	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☑ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, S5 and S11 Indicators descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-64 | Sample Point **P-64W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Calamagrostis canadensis*	15	Y	OBL
2.	*Lycopus uniflorus*	15	Y	OBL
3.	*Carex pensylvanica*	5	N	UPL
4.	*Carex intumescens*	5	N	FACW
5.	*Urtica dioica*	2	N	FAC
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	42		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	30	x 1 =	30
FACW spp.	5	x 2 =	10
FAC spp.	2	x 3 =	6
FACU spp.	0	x 4 =	0
UPL spp.	5	x 5 =	25
Total	42 (A)		71 (B)

Prevalence Index = B/A = ***1.690***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Terrace	Local Relief:	Convex
Slope (%):	0-2	Latitude: N/A	Longitude: N/A
Datum:	N/A		

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/23/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-65
Sample Point:	P-65U
Community ID:	Upland ridge
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ Yes ☑ No

Remarks: Sample plot is located on an upland ridge. WETS analysis determined that the antecedent precipitation conditions were normal. 2.43 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 to 5 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR	3/2	100	–	–	–	sandy loam
3	6	2	10YR	4/2	100	–	–	–	loamy sand
6	24	3	10YR	5/6	100	–	–	–	loamy sand
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-65 Sample Point **P-65U**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Pinus strobus*	10	N	FACU
2.	*Acer saccharum*	60	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	70		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Quercus rubra*	15	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	15		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex pensylvanica*	90	Y	UPL
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	90		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***0.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	85	x 4 =	340
UPL spp.	90	x 5 =	450
Total	175 (A)		790 (B)

Prevalence Index = B/A = ***4.514***

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/23/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-65
Sample Point:	P-65W
Community ID:	Seasonally Flooded Basin
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were normal. 2.43 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☑ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 13	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 9	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR 2/1	100	--	--	--	--	mucky silt loam
4	8	2	10YR 4/1	95	10YR 4/6	5	C	M	loamy sand
8	18	3	10YR 5/2	95	10YR 5/6	5	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☑ S11 - High Chroma Sands
- ☑ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, S5, S11 and F1 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-65 Sample Point **P-65W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	30	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	30		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*BERBERIS THUNBERGII*	2	N	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	2		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex intumescens*	5	Y	FACW
2.	*Elymus virginicus*	5	Y	FACW
3.	*Juncus tenuis*	2	N	FAC
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	12		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	40	x 2 =	80
FAC spp.	2	x 3 =	6
FACU spp.	2	x 4 =	8
UPL spp.	0	x 5 =	0
Total	44 (A)		94 (B)

Prevalence Index = B/A = ***2.136***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/23/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf	State:	Wisconsin
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A	Wetland ID:	P-66
Landform:	Depression	Local Relief:	Concave	Sample Point:	P-66W
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Seasonally Flooded Basin
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were normal. 2.43 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☑ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	13	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	10	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR 2/1	100	--	--	--	--	mucky silt loam
3	5	2	10YR 4/2	100	--	--	--	--	sandy loam
5	18	3	10YR 5/2	95	10YR 4/4	5	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 and S5 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-66 | Sample Point **P-66W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	10	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	10		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Urtica dioica*	15	Y	FAC
2.	*Carex intumescens*	2	N	FACW
3.	*Glyceria striata*	2	N	OBL
4.	*Lycopus uniflorus*	2	N	OBL
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	21		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	4	x 1 =	4
FACW spp.	12	x 2 =	24
FAC spp.	15	x 3 =	45
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	31 (A)		73 (B)

Prevalence Index = B/A = ***2.355***

Hydrophytic Vegetation Indicators:

☐ Yes	☑ No	Rapid Test for Hydrophytic Vegetation
☑ Yes	☐ No	Dominance Test is > 50%
☑ Yes	☐ No	Prevalence Index is ≤ 3.0 *
☐ Yes	☐ No	Morphological Adaptations (Explain) *
☐ Yes	☐ No	Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/23/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-68
Sample Point:	P-68W
Community ID:	Seasonally Flooded Basin
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ■ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were normal. 2.43 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 16	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 12	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 1 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR	2/1	100	--	--	--	--	mucky silt loam
4	20	2	10YR	5/2	95	10YR	4/4	5	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
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--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☑ S11 - High Chroma Sands
- ☑ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, S5, S11 and F1 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-68 Sample Point **P-68W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Lycopus uniflorus*	15	Y	OBL
2.	*Glyceria striata*	10	N	OBL
3.	*Elymus virginicus*	30	Y	FACW
4.	*Thelypteris palustris*	5	N	FACW
5.	*Urtica dioica*	2	N	FAC
6	*Symphyotrichum ontarionis*	2	N	FAC
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	64		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	25	x 1 =	25
FACW spp.	35	x 2 =	70
FAC spp.	4	x 3 =	12
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	64 (A)		107 (B)

Prevalence Index = B/A = ***1.672***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/23/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-69
Sample Point:	P-69U
Community ID:	Upland swale
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ Yes ☑ No

Remarks: Sample plot is located in an upland swale. WETS analysis determined that the antecedent precipitation conditions were normal. 2.43 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 28	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of only one secondary indicator at the sample plot does not provide sufficient evidence of wetland hydrology.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR 3/2	100	--	--	--	--	sandy loam
4	10	2	10YR 5/2	100	--	--	--	--	loamy sand
20	28	3	10YR 4/3	97	10YR	4/4	3	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-69 | Sample Point **P-69U**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	5	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	5		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex pensylvanica*	50	Y	UPL
2.	*Pinus strobus*	2	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	52		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *33.3%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	5	x 2 =	10
FAC spp.	0	x 3 =	0
FACU spp.	2	x 4 =	8
UPL spp.	50	x 5 =	250
Total	57 (A)		268 (B)

Prevalence Index = B/A = *4.702*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Terrace	Local Relief:	Convex
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/23/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-70
Sample Point:	P-70U
Community ID:	Upland forest
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ Yes ☑ No

Remarks: Sample plot is located on an upland ridge. WETS analysis determined that the antecedent precipitation conditions were normal. 2.43 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 to 5 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR	3/2	100	–	–	–	–	sandy loam
3	4	2	10YR	4/2	100	–	–	–	–	loamy sand
4	24	3	10YR	5/6	100	–	–	–	–	loamy sand
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-70 Sample Point **P-70U**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fagus grandifolia*	25	Y	FACU
2.	*Acer saccharum*	40	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	65		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex pensylvanica*	80	Y	UPL
2.	*Urtica dioica*	2	N	FAC
3.	*CIRSIUM ARVENSE*	2	N	FACU
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	84		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	2	x 3 =	6
FACU spp.	67	x 4 =	268
UPL spp.	80	x 5 =	400
Total	149 (A)		674 (B)

Prevalence Index = B/A = *4.523*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/23/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf	State:	Wisconsin
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A	Wetland ID:	P-70
Landform:	Depression	Local Relief:	Concave	Sample Point:	P-70W
Slope (%):	0-2 Latitude: N/A	Longitude:	N/A	Datum: N/A	Community ID: Seasonally Flooded Basin
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were normal. 2.43 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	17	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	14	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 3 secondary indicators at the sample plot provides evidence of wetland hydrology. Field observations of high water table (14 inches) and saturation (10 inches) were found during Excel Engineering field investigation in May. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR 2/1	100	--	--	--	--	mucky silt loam
4	10	2	10YR 5/1	95	10YR 4/6	5	C	M	loamy sand
10	16	3	10YR 5/3	95	10YR 4/6	5	C	M	loamy sand
16	24	4	10YR 4/1	95	10YR 4/6	5	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☑ S11 - High Chroma Sands
- ☑ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, S5, S11 and F1 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-70 | Sample Point **P-70W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	40	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	40		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Elymus virginicus*	15	Y	FACW
2.	*Carex intumescens*	2	N	FACW
3.	*Lycopus uniflorus*	5	Y	OBL
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	22		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	5	x 1 =	5
FACW spp.	57	x 2 =	114
FAC spp.	0	x 3 =	0
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	62 (A)		119 (B)

Prevalence Index = B/A = ***1.919***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/23/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf	State:	Wisconsin
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A	Wetland ID:	P-71
Landform:	Depression	Local Relief:	Concave	Sample Point:	P-71W
Slope (%):	0-2 Latitude: N/A	Longitude:	N/A	Datum: N/A	Community ID: Seasonally Flooded Basin
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☑ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were normal. 2.43 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation. Naturally problematic hydrology due to seasonal nature of saturation/inundation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	16	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	14	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 3 secondary indicators at the sample plot provides evidence of wetland hydrology. Field observations of high water table (6 inches) and saturation (2 inches) were found during Excel Engineering field investigation in May. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	5	1	10YR 2/1	100	--	--	--	--	mucky silt loam
5	13	2	10YR 5/1	95	10YR 4/6	5	C	M	loamy sand
13	24	3	10YR 4/2	95	10YR 4/6	5	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☑ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, S5 and F1 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-71 | Sample Point **P-71W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	10	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	10		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Lycopus uniflorus*	15	Y	OBL
2.	*Urtica dioica*	10	Y	FAC
3.	*Thelypteris palustris*	2	N	FACW
4.	*Elymus virginicus*	5	N	FACW
5.	*Carex stricta*	10	Y	OBL
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	42		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	25	x 1 =	25
FACW spp.	17	x 2 =	34
FAC spp.	10	x 3 =	30
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	52 (A)		89 (B)

Prevalence Index = B/A = ***1.712***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/23/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf	State:	Wisconsin
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A	Wetland ID:	P-72
Landform:	Shoulder	Local Relief:	Convex	Sample Point:	P-72U
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Upland ridge
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: Sample plot is located on an upland ridge. WETS analysis determined that the antecedent precipitation conditions were normal. 2.43 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 to 5 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR	3/2	100	--	--	--	sandy loam
3	4	2	10YR	4/2	100	--	--	--	loamy sand
4	24	3	10YR	5/6	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-72 | Sample Point: P-72U

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind. Status
1.	*Quercus rubra*	25	Y	FACU
2.	*Acer saccharum*	40	Y	FACU
3.	*Prunus serotina*	5	N	FACU
4.	*Pinus strobus*	20	Y	FACU
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	90		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex pensylvanica*	95	Y	UPL
2.	*Fagus grandifolia*	2	N	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	97		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	92	x 4 =	368
UPL spp.	95	x 5 =	475
Total	187 (A)		843 (B)

Prevalence Index = B/A = 4.508

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/23/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-72
Sample Point:	P-72W
Community ID:	Seasonally Flooded Basin
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ■ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were normal. 2.43 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 11	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 8	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR 2/1	100	--	--	--	--	mucky silt loam
4	20	2	10YR 4/2	95	10YR 4/6	5	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☑ S11 - High Chroma Sands
- ☑ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, S5, S11, and F1 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-72 | Sample Point **P-72W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind. Status
1.	*Fraxinus pennsylvanica*	20	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	20		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Fraxinus pennsylvanica*	5	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	5		

Herb Stratum (Plot size: 2 meter radius)

1.	*Elymus virginicus*	2	N	FACW
2.	*Lycopus uniflorus*	20	Y	OBL
3.	*Solidago gigantea*	2	N	FACW
4.	*Carex blanda*	5	N	FAC
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	29		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	20	x 1 =	20
FACW spp.	29	x 2 =	58
FAC spp.	5	x 3 =	15
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	54 (A)		93 (B)

Prevalence Index = B/A = ***1.722***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Side slope	Local Relief:	Linear
Slope (%):	2-6	Latitude: N/A	Longitude: N/A
Datum:	N/A		

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/23/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-73
Sample Point:	P-73U
Community ID:	Upland ridge
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ Yes ☑ No

Remarks: Sample plot is located on an upland ridge. WETS analysis determined that the antecedent precipitation conditions were normal. 2.43 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 to 5 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR	3/1	100	--	--	--	sandy loam
4	6	2	10YR	4/3	100	--	--	--	loamy sand
6	24	3	10YR	5/4	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-73 | Sample Point **P-73U**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer saccharum*	50	Y	FACU
2.	*Prunus serotina*	10	N	FACU
3.	*Betula papyrifera*	15	Y	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	75		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex pensylvanica*	70	Y	UPL
2.	*LONICERA X BELLA*	2	N	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	72		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	77	x 4 =	308
UPL spp.	70	x 5 =	350
Total	147 (A)		658 (B)

Prevalence Index = B/A = *4.476*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☑ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/23/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-73
Sample Point:	P-73W
Community ID:	Seasonally Flooded Basin
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were normal. 2.43 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation. Naturally problematic hydrology identified due to seasonal occurence of inundation/saturation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 16	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 14	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 3 secondary indicators at the sample plot provides evidence of wetland hydrology. Field observations of high water table (10 inches) and saturation (6 inches) were found during Excel Engineering field investigation in May. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Oakville loamy fine sand Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR 2/1	100	--	--	--	--	sandy loam
3	15	2	10YR 4/1	95	10YR 4/6	5	C	M	loamy sand
15	20	3	10YR 5/2	98	10YR 4/4	2	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☑ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, S5 and S11 Indicators descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-73 | Sample Point **P-73W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Alnus incana*	5	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	5		

Herb Stratum (Plot size: 2 meter radius)

1.	*Solidago gigantea*	5	N	FACW
2.	*Elymus virginicus*	25	Y	FACW
3.	*Rubus idaeus var. strigosus*	10	Y	FAC
4.	*Symphyotrichum ontarionis*	5	N	FAC
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	45		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	35	x 2 =	70
FAC spp.	15	x 3 =	45
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	50 (A)		115 (B)

Prevalence Index = B/A = ***2.300***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/23/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-74
Sample Point:	P-74W
Community ID:	Seasonally Flooded Basin
Section:	11
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were normal. 2.43 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 14	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 12	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 1 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR 2/1	100	--	--	--	--	mucky silt loam
4	10	2	10YR 4/1	97	10YR 4/4	3	C	M	loamy sand
10	20	3	10YR 4/2	95	10YR 4/6	5	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☑ S11 - High Chroma Sands
- ☑ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, S5, S11 and F1 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-74 Sample Point **P-74W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	40	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	40		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*BERBERIS THUNBERGII*	2	N	FACU
2.	*Fraxinus pennsylvanica*	20	Y	FACW
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	22		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex intumescens*	2	N	FACW
2.	*Symphyotrichum ontarionis*	2	N	FAC
3.	*Glyceria striata*	20	Y	OBL
4.	*Elymus virginicus*	15	Y	FACW
5.	*GLECHOMA HEDERACEA*	5	N	FACU
6	*Carex blanda*	5	N	FAC
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	49		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	20	x 1 =	20
FACW spp.	77	x 2 =	154
FAC spp.	7	x 3 =	21
FACU spp.	7	x 4 =	28
UPL spp.	0	x 5 =	0
Total	111 (A)		223 (B)

Prevalence Index = B/A = ***2.009***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Side slope	Local Relief:	Convex
Slope (%):	2-6	Latitude: N/A	Longitude: N/A
Datum:	N/A		

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/23/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-75U
Sample Point:	P-75U
Community ID:	Upland ridge
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ Yes ☑ No

Remarks: Sample plot is located on an upland ridge. WETS analysis determined that the antecedent precipitation conditions were normal. 2.43 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 to 5 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR	3/2	100	–	–	–	sandy loam
3	5	2	10YR	5/2	100	–	–	–	loamy sand
5	24	3	10YR	5/6	100	–	–	–	loamy sand
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-75U Sample Point **P-75U**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer saccharum*	40	Y	FACU
2.	*Pinus strobus*	15	N	FACU
3.	*Fagus grandifolia*	25	Y	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	80		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex pensylvanica*	60	Y	UPL
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	60		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***0.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	80	x 4 =	320
UPL spp.	60	x 5 =	300
Total	140 (A)		620 (B)

Prevalence Index = B/A = ***4.429***

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/23/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-75
Sample Point:	P-75W
Community ID:	Seasonally Flooded Basin
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ■ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were normal. 2.43 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☑ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 13	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 10	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR 2/1	100	--	--	--	--	mucky silt loam
4	9	2	10YR 4/1	97	10YR 4/4	3	C	M	loamy sand
9	20	3	10YR 4/2	95	10YR 4/4	5	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☑ S11 - High Chroma Sands
- ☑ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, S5, S11 and F1 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-75 | Sample Point **P-75W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Glyceria striata*	25	Y	OBL
2.	*Lycopus uniflorus*	5	N	OBL
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	30		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	30	x 1 =	30
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	30 (A)		30 (B)

Prevalence Index = B/A = ***1.000***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/23/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf	State:	Wisconsin
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A	Wetland ID:	P-76
Landform:	Shoulder	Local Relief:	Convex	Sample Point:	P-76U
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Upland ridge
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		☑ Yes ☐ No		Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: Sample plot is located on an upland ridge. WETS analysis determined that the antecedent precipitation conditions were normal. 2.43 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot. The sample plot is located approximately 3 to 5 feet higher in elevation than associated wetland.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR	3/2	100	--	--	--	sandy loam
3	5	2	10YR	4/3	100	--	--	--	loamy sand
5	24	3	10YR	5/6	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-76 | Sample Point: P-76U

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind. Status
1.	*Fagus grandifolia*	20	Y	FACU
2.	*Pinus strobus*	20	Y	FACU
3.	*Acer saccharum*	15	N	FACU
4.	*Quercus rubra*	30	Y	FACU
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	85		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Lycopodium digitatum*	40	Y	UPL
2.	*Carex pensylvanica*	40	Y	UPL
3.	*Fagus grandifolia*	2	N	FACU
4.	*Pinus strobus*	2	N	FACU
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	84		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	89	x 4 =	356
UPL spp.	80	x 5 =	400
Total	169 (A)		756 (B)

Prevalence Index = B/A = 4.473

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/23/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf	State:	Wisconsin
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A	Wetland ID:	P-76
Landform:	Depression	Local Relief:	Concave	Sample Point:	P-76W
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Seasonally Flooded Basin
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale. WETS analysis determined that the antecedent precipitation conditions were normal. 2.43 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	16	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	12	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 1 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology. The sample plot is located approximately 3 to 5 feet lower in elevation than surrounding upland.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR 2/1	100	--	--	--	--	mucky silt loam
3	12	2	10YR 5/2	95	10YR 4/6	5	C	M	loamy sand
12	20	3	10YR 5/4	97	10YR 4/6	3	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☑ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11, S5 and S11 Indicators descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-76 | Sample Point **P-76W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Lycopus uniflorus*	5	N	OBL
2.	*Dryopteris carthusiana*	2	N	FACW
3.	*Glyceria striata*	10	Y	OBL
4.	*Fagus grandifolia*	2	N	FACU
5.	*Carex stricta*	10	Y	OBL
6	*Thelypteris palustris*	5	N	FACW
7.	*Carex pensylvanica*	5	N	UPL
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	39		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	25	x 1 =	25
FACW spp.	7	x 2 =	14
FAC spp.	0	x 3 =	0
FACU spp.	2	x 4 =	8
UPL spp.	5	x 5 =	25
Total	39 (A)		72 (B)

Prevalence Index = B/A = ***1.846***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/22/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf	State:	Wisconsin
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A	Wetland ID:	P-77
Landform:	Shoulder	Local Relief:	Convex	Sample Point:	P-77U
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Upland forest
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		☑ Yes ☐ No		Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: The sample plot is located in an upland forest withing the growing season. WETS analysis determined that the antecedent precipitation conditions were normal. 2.30 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR	3/2	100	--	--	--	--	sandy loam
4	7	2	10YR	5/3	100	--	--	--	--	loamy sand
7	24	3	7.5YR	4/6	100	--	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--	--
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NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: P-77 | Sample Point: P-77U

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind. Status
1.	*Fagus grandifolia*	40	Y	FACU
2.	*Pinus strobus*	10	N	FACU
3.	*Quercus rubra*	5	N	FACU
4.	*Acer saccharum*	10	N	FACU
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	65		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Fagus grandifolia*	10	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	10		

Herb Stratum (Plot size: 2 meter radius)

1.	*Lycopodium digitatum*	80	Y	UPL
2.	*Pinus strobus*	2	N	FACU
3.	*Dryopteris carthusiana*	2	N	FACW
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	84		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	2	x 2 =	4
FAC spp.	0	x 3 =	0
FACU spp.	77	x 4 =	308
UPL spp.	80	x 5 =	400
Total	159 (A)		712 (B)

Prevalence Index = B/A = 4.478

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/22/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	P-77
Sample Point:	P-77W
Community ID:	Wet meadow
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale within the growing season. The hydrology of this sample plot is naturally problematic due to lack of primary hydrology indicators during the normal dry season. WETS analysis determined that the antecedent precipitation conditions were normal. 2.30 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth: -	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 20	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 16	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 3 secondary indicators at the sample plot provides evidence of wetland hydrology. Primary indicators of high water table (8 in.) and saturation (4 in.) were found in May field investigation.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR 3/2	100	--	--	--	--	sandy loam
4	14	2	10YR 4/4	95	10YR 4/6	5	C	M	loamy sand
14	24	3	10YR 5/3	95	10YR 4/6	5	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☑ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the S11 Indicator described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-77 Sample Point **P-77W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Calamagrostis canadensis*	60	Y	OBL
2.	*BERBERIS THUNBERGII*	5	N	FACU
3.	*Thelypteris palustris*	3	N	FACW
4.	*Carex lacustris*	5	N	OBL
5.	*Solidago gigantea*	2	N	FACW
6	*Rubus idaeus var. strigosus*	2	N	FAC
7.	*Quercus rubra*	2	N	FACU
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	79		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	65	x 1 =	65
FACW spp.	5	x 2 =	10
FAC spp.	2	x 3 =	6
FACU spp.	7	x 4 =	28
UPL spp.	0	x 5 =	0
Total	79 (A)		109 (B)

Prevalence Index = B/A = ***1.380***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/22/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf	State:	Wisconsin
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A	Wetland ID:	P-78
Landform:	Depression	Local Relief:	Concave	Sample Point:	P-78W
Slope (%):	0-2 Latitude: N/A	Longitude:	N/A	Datum: N/A	Community ID: Seasonally Flooded Basin
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☑, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Sample plot is located in a seasonally inundated or saturated interdunal swale within the growing season. WETS analysis determined that the antecedent precipitation conditions were normal. 2.30 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation. Atypical situations require the use of professional judgment. Based upon the landscape position, wetland hydrology and hydric soil parameters observed, the sample plot is located in a wetland.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☑ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:	-	(in.)
Water Table Present?	☐ Yes ☑ No	Depth:	-	(in.)
Saturation Present?	☐ Yes ☑ No	Depth:	-	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 1 primary and 1 secondary indicators at the sample plot provides evidence of wetland hydrology.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR 2/1	100	--	--	--	--	mucky silt loam
4	9	2	10YR 4/2	90	10YR 4/6	10	C	M	loamy sand
9	30	3	10YR 4/3	90	10YR 5/6	10	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☑ S11 - High Chroma Sands
- ☑ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the F1, S5 and S11 Indicator described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: P-78 Sample Point **P-78W**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fagus grandifolia*	20	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	20		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Fagus grandifolia*	10	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	10		

Herb Stratum (Plot size: 2 meter radius)

1.	*Calamagrostis canadensis*	2	N	OBL
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	2		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	2	x 1 =	2
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	30	x 4 =	120
UPL spp.	0	x 5 =	0
Total	32 (A)		122 (B)

Prevalence Index = B/A = *3.813*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☑ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic. Wetland spring ephemeral plants mostly likely dominate the seasonally flooded basin in early growing season.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Shoulder	Local Relief:	Convex
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/23/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	RT2A
Sample Point:	RT2AU
Community ID:	Upland ridge
Section:	11
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ Yes ☑ No

Remarks: The sample plot is located in an upland within the growing season. WETS analysis determined that the antecedent precipitation conditions were normal. 2.43 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	2	1	10YR	3/2	100	--	--	--	--	--	sandy loam
2	3	2	10YR	4/3	100	--	--	--	--	--	loamy sand
3	24	3	7.5YR	3/4	100	--	--	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: RT2A Sample Point **RT2AU**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer saccharum*	40	Y	FACU
2.	*Fagus grandifolia*	5	N	FACU
3.	*Quercus rubra*	30	Y	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	75		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Fagus grandifolia*	5	Y	FACU
2.	*BERBERIS THUNBERGII*	5	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	10		

Herb Stratum (Plot size: 2 meter radius)

1.	*BERBERIS THUNBERGII*	20	Y	FACU
2.	*Carex blanda*	2	N	FAC
3.	*Carex pensylvanica*	2	N	UPL
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	24		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	2	x 3 =	6
FACU spp.	105	x 4 =	420
UPL spp.	2	x 5 =	10
Total	109 (A)		436 (B)

Prevalence Index = B/A = *4.000*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Granby loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☑, Soil ☐, or Hydrology ☑ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/23/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	RT2A
Sample Point:	RT2AW
Community ID:	Hardwood swamp/basin
Section:	11
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Still the growing season. WETS analysis determined that the antecedent precipitation conditions were normal. 2.43 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation. Atypical situations require the use of professional judgment. Based on landscape position, hydric soils and indicators of hydrology present, and the timing of the delineation, this area appears it may be inundated or saturated for longer periods of time during the early growing season.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☑ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:	-	(in.)
Water Table Present?	☐ Yes ☑ No	Depth:	>24	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	24	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 1 primary and 2 secondary indicators at the sample plot provides sufficient evidence of wetland hydrology. Field observations of high water table (4 inches) and saturation (to the surface) were found during Excel Engineering field investigation in May. Naturally problematic hydrology identified given the seasonal nature of inudation/saturation.

SOILS

Map Unit Name: Granby loamy fine sand — Series Drainage Class: very poorly to poorly

Taxonomy (Subgroup): Typic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	6	1	10YR 2/1	100						silt loam
6	10	2	10YR 4/2	90	10YR	4/6	10	C	M	loamy sand
10	20	3	10YR 5/6	95	7.5YR	5/6	5	C	M	loamy sand
20	24	4	10YR 6/1	95	10YR	5/6	5	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the S5 Indicator descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: RT2A | Sample Point **RT2AW**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	15	Y	FACW
2.	*Acer saccharum*	15	Y	FACU
3.	*Quercus rubra*	20	Y	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	50		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*BERBERIS THUNBERGII*	5	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	5		

Herb Stratum (Plot size: 2 meter radius)

1.	*BERBERIS THUNBERGII*	2	Y	FACU
2.	*Carex intumescens*	2	Y	FACW
3.	*Glyceria striata*	2	Y	OBL
4.	*Calamagrostis canadensis*	2	Y	OBL
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	8		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***50.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	4	x 1 =	4
FACW spp.	17	x 2 =	34
FAC spp.	0	x 3 =	0
FACU spp.	42	x 4 =	168
UPL spp.	0	x 5 =	0
Total	63 (A)		206 (B)

Prevalence Index = B/A = ***3.270***

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☑ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic. Wetland spring ephemeral plants mostly likely occur within the seasonally flooded basin in early growing season.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Oakville loamy fine sand	NWI/WWI Classification:	N/A
Landform:	Side slope	Local Relief:	Linear
Slope (%):	2-6	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/23/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	RT6A
Sample Point:	RT6AU
Community ID:	Upland forest
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ Yes ☑ No

Remarks: The sample plot is located in an upland forest within the growing season. WETS analysis determined that the antecedent precipitation conditions were normal. 2.43 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot.

SOILS

Map Unit Name: Oakville loamy fine sand — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Udipsamments

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	6	1	10YR	3/2	100	--	--	--	sandy loam
6	24	2	10YR	5/6	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
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NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: RT6A Sample Point RT6AU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fagus grandifolia*	65	Y	FACU
2.	*Acer saccharum*	20	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	85		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Fagus grandifolia*	20	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	20		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex pensylvanica*	60	Y	UPL
2.	*Fagus grandifolia*	10	N	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	70		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	115	x 4 =	460
UPL spp.	60	x 5 =	300
Total	175 (A)		760 (B)

Prevalence Index = B/A = 4.343

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Alluvial land - wet	NWI/WWI Classification:	N/A
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/23/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	RT6A
Sample Point:	RT6AW
Community ID:	Hardwood swamp
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: The sample plot is in a hardwood swamp within the growing season. WETS analysis determined that the antecedent precipitation conditions were normal. 2.43 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth: -	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 18	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 12	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 1 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology.

SOILS

Map Unit Name: Alluvial land - wet Series Drainage Class: #N/A

Taxonomy (Subgroup): #N/A

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	9	1	10YR	2/1	100	--	--	--	--	--	mucky silt loam
9	28	2	N	2.5/0	100	--	--	--	--	--	muck
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
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--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☑ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☑ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A1 and F1 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: RT6A | Sample Point RT6AW

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	40	Y	FACW
2.	*Carpinus caroliniana*	15	Y	FAC
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	55		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Alnus incana*	10	Y	FACW
2.	*Fraxinus pennsylvanica*	10	Y	FACW
3.	*Carpinus caroliniana*	10	Y	FAC
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	30		

Herb Stratum (Plot size: 2 meter radius)

1.	*HESPERIS MATRONALIS*	5	N	FACU
2.	*Osmundastrum cinnamomeum*	20	Y	FACW
3.	*Symphyotrichum ontarionis*	5	N	FAC
4.	*Geum canadense*	10	Y	FAC
5.	*Solidago gigantea*	5	N	FACW
6	*Calamagrostis canadensis*	10	N	OBL
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	55		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	10	x 1 =	10
FACW spp.	85	x 2 =	170
FAC spp.	40	x 3 =	120
FACU spp.	5	x 4 =	20
UPL spp.	0	x 5 =	0
Total	140 (A)		320 (B)

Prevalence Index = B/A = 2.286

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Palms muck	NWI/WWI Classification:	N/A
Landform:	Side slope	Local Relief:	Linear
Slope (%):	2-6	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/23/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	RT6B
Sample Point:	RT6BU
Community ID:	Upland ridge
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ■ Yes ☑ No

Remarks: The sample plot is located in an upland ridge within the growing season. WETS analysis determined that the antecedent precipitation conditions were normal. 2.43 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot.

SOILS

Map Unit Name: Palms muck — Series Drainage Class: very poorly

Taxonomy (Subgroup): Terric Haplosaprists

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	5	1	10YR	3/2	100	--	--	--	sandy loam
5	6	2	10YR	4/2	100	--	--	--	loamy sand
6	24	3	7.5YR	5/6	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: RT6B Sample Point **RT6BU**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Pinus strobus*	20	Y	FACU
2.	*Pinus resinosa*	25	Y	FACU
3.	*Picea mariana*	10	N	FACW
4.	*Prunus serotina*	5	Y	FACU
5.	*Betula papyrifera*	20	Y	FACU
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	80		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*BERBERIS THUNBERGII*	5	Y	FACU
2.	*Prunus serotina*	5	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	10		

Herb Stratum (Plot size: 2 meter radius)

1.	*BERBERIS THUNBERGII*	60	Y	FACU
2.	*Carex pensylvanica*	40	Y	UPL
3.	*Geum canadense*	5	N	FAC
4.	–	–	–	–
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	105		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	10	x 2 =	20
FAC spp.	5	x 3 =	15
FACU spp.	140	x 4 =	560
UPL spp.	40	x 5 =	200
Total	195 (A)		795 (B)

Prevalence Index = B/A = *4.077*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/23/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf	State:	Wisconsin
Soil Unit:	Palms muck	NWI/WWI Classification:	N/A	Wetland ID:	RT6B
Landform:	Depression	Local Relief:	Concave	Sample Point:	RT6BW
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Hardwood swamp
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	14
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: The sample plot is located in a hardwood swamp within the growing season. WETS analysis determined that the antecedent precipitation conditions were normal. 2.43 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:	-	(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	16	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	10	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 1 primary and 3 secondary indicators at the sample plot provides evidence of wetland hydrology.

SOILS

Map Unit Name: Palms muck — Series Drainage Class: very poorly

Taxonomy (Subgroup): Terric Haplosaprists

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	13	1	10YR	2/1	100	--	--	--	muck
13	24	2	10YR	3/2	100	--	--	--	muck
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☑ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A — Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A1 Indicator descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: RT6B Sample Point RT6BW

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	50	Y	FACW
2.	*Betula papyrifera*	10	N	FACU
3.	*Pinus strobus*	5	N	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	65		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Fraxinus pennsylvanica*	10	Y	FACW
2.	*BERBERIS THUNBERGII*	10	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	20		

Herb Stratum (Plot size: 2 meter radius)

1.	*BERBERIS THUNBERGII*	5	N	FACU
2.	*Solidago gigantea*	10	N	FACW
3.	*Geum canadense*	25	Y	FAC
4.	*Calamagrostis canadensis*	15	Y	OBL
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	55		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *80.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	15	x 1 =	15
FACW spp.	70	x 2 =	140
FAC spp.	25	x 3 =	75
FACU spp.	30	x 4 =	120
UPL spp.	0	x 5 =	0
Total	140 (A)		350 (B)

Prevalence Index = B/A = *2.500*

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Palms muck	NWI/WWI Classification:	T3K
Landform:	Shoulder	Local Relief:	Convex
Slope (%):	0-2	Latitude: N/A	Longitude: N/A
Datum:	N/A		

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/23/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	RT6C
Sample Point:	RT6CU
Community ID:	Upland ridge
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ Yes ☑ No

Remarks: The sample plot is located in an upland ridge within the growing season. WETS analysis determined that the antecedent precipitation conditions were normal. 2.43 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot.

SOILS

Map Unit Name: Palms muck — Series Drainage Class: very poorly

Taxonomy (Subgroup): Terric Haplosaprists

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	5	1	10YR	3/2	100	--	--	--	sandy loam
5	7	2	10YR	4/4	100	--	--	--	loamy sand
7	24	3	10YR	4/6	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: RT6C Sample Point RT6CU

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Prunus serotina*	30	Y	FACU
2.	*Pinus strobus*	25	Y	FACU
3.	*Fagus grandifolia*	10	N	FACU
4.	*Pinus resinosa*	30	Y	FACU
5.	*Picea glauca*	10	N	FACU
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	105		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Fagus grandifolia*	2	N	FACU
2.	*Crataegus crus-galli*	5	Y	FAC
3.	*BERBERIS THUNBERGII*	5	Y	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	12		

Herb Stratum (Plot size: 2 meter radius)

1.	*BERBERIS THUNBERGII*	10	N	FACU
2.	*Carex pensylvanica*	70	Y	UPL
3.	*ALLIARIA PETIOLATA*	2	N	FACU
4.	*Carex blanda*	2	N	FAC
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	84		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 16.7% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	7	x 3 =	21
FACU spp.	124	x 4 =	496
UPL spp.	70	x 5 =	350
Total	201 (A)		867 (B)

Prevalence Index = B/A = 4.313

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Palms muck	NWI/WWI Classification:	T3K
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☑ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/23/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	RT6C
Sample Point:	RT6CW
Community ID:	Alder thicket
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: The sample plot is located in an alder thicket within the growing season. WETS analysis determined that the antecedent precipitation conditions were normal. 2.43 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth: -	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 22	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 18	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 3 secondary indicators at the sample plot provides evidence of wetland hydrology. Naturally problematic hydrology identified due to season occurrence of inundation/saturation.

SOILS

Map Unit Name: Palms muck Series Drainage Class: very poorly

Taxonomy (Subgroup): Terric Haplosaprists

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	9	1	10YR 3/2	100	--	--	--	--	silty clay loam
9	18	2	10YR 4/2	90	10YR 5/6	10	C	M	silty clay
18	24	3	10YR 5/1	95	10YR 4/6	5	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
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NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☑ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 and F3 Indicator descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: RT6C Sample Point RT6CW

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	20	Y	FACW
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	20		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Crataegus crus-galli*	15	Y	FAC
2.	*Fraxinus pennsylvanica*	5	N	FACW
3.	*Alnus incana*	20	Y	FACW
4.	*ROSA MULTIFLORA*	2	N	FACU
5.	*BERBERIS THUNBERGII*	5	N	FACU
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	47		

Herb Stratum (Plot size: 2 meter radius)

1.	*HESPERIS MATRONALIS*	5	Y	FACU
2.	*Solidago gigantea*	5	Y	FACW
3.	*Elymus virginicus*	2	N	FACW
4.	*BERBERIS THUNBERGII*	5	Y	FACU
5.	*Geum canadense*	5	Y	FAC
6	*Carex blanda*	2	N	FAC
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	24		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71.4% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	52	x 2 =	104
FAC spp.	22	x 3 =	66
FACU spp.	17	x 4 =	68
UPL spp.	0	x 5 =	0
Total	91 (A)		238 (B)

Prevalence Index = B/A = 2.615

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Houghton muck	NWI/WWI Classification:	T3K
Landform:	Shoulder	Local Relief:	Convex
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/23/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	RT6D
Sample Point:	RT6DU
Community ID:	Upland forest
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ Yes ☑ No

Remarks: The sample plot is located in an upland forest within the growing season. WETS analysis determined that the antecedent precipitation conditions were normal. 2.43 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot.

SOILS

Map Unit Name: Houghton muck — Series Drainage Class: very poorly

Taxonomy (Subgroup): Typic Haplosaprists

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	8	1	10YR	3/2	100	--	--	--	loamy sand
8	24	2	10YR	4/4	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
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NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: RT6D Sample Point **RT6DU**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Pinus strobus*	20	Y	FACU
2.	*Acer saccharum*	10	N	FACU
3.	*Pinus resinosa*	30	Y	FACU
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	60		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Fagus grandifolia*	20	Y	FACU
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	20		

Herb Stratum (Plot size: 2 meter radius)

1.	*BERBERIS THUNBERGII*	5	Y	FACU
2.	*Acer saccharum*	1	N	FACU
3.	*Fagus grandifolia*	1	N	FACU
4.	*Carex pensylvanica*	2	Y	UPL
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	9		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	87	x 4 =	348
UPL spp.	2	x 5 =	10
Total	89 (A)		358 (B)

Prevalence Index = B/A = *4.022*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Houghton muck	NWI/WWI Classification:	T3K
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/23/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	RT6D
Sample Point:	RT6DW
Community ID:	Hardwood swamp
Section:	14
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: The sample plot is located in a hardwood swamp within the growing season. WETS analysis determined that the antecedent precipitation conditions were normal. 2.43 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth: -	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 12	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 10	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 2 primary and 2 secondary indicators at the sample plot provides evidence of wetland hydrology.

SOILS

Map Unit Name: Houghton muck — Series Drainage Class: very poorly

Taxonomy (Subgroup): Typic Haplosaprists

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	7	1	10YR 2/1	100	--	--	--	--	mucky silt loam
7	11	2	10YR 4/2	92	10YR 5/6	8	C	M	sandy loam
11	20	3	10YR 5/2	95	10YR 4/6	5	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--
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NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☑ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☑ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 F1, and F3 Indicator descr bed in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: RT6D | Sample Point RT6DW

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Prunus serotina*	5	N	FACU
2.	*Pinus strobus*	10	Y	FACU
3.	*Fraxinus pennsylvanica*	20	Y	FACW
4.	*Quercus rubra*	10	N	FACU
5.	*Acer rubrum*	10	N	FAC
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	55		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Crataegus crus-galli*	20	Y	FAC
2.	*BERBERIS THUNBERGII*	5	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	25		

Herb Stratum (Plot size: 2 meter radius)

1.	*BERBERIS THUNBERGII*	15	Y	FACU
2.	*Solidago gigantea*	5	Y	FACW
3.	*Geum canadense*	5	Y	FAC
4.	*Thelypteris palustris*	5	Y	FACW
5.	*Elymus virginicus*	2	N	FACW
6	*LONICERA X BELLA*	2	N	FACU
7.	*Carex intumescens*	2	N	FACW
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	36		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 62.5% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	34	x 2 =	68
FAC spp.	35	x 3 =	105
FACU spp.	47	x 4 =	188
UPL spp.	0	x 5 =	0
Total	116 (A)		361 (B)

Prevalence Index = B/A = 3.112

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078
Applicant:	Kohler		
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf
Soil Unit:	Houghton muck	NWI/WWI Classification:	N/A
Landform:	Shoulder	Local Relief:	Convex
Slope (%):	0-2	Latitude: N/A	Longitude: N/A Datum: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/23/14
County:	Sheboygan
State:	Wisconsin
Wetland ID:	RT6E
Sample Point:	RT6EU
Community ID:	Upland forest
Section:	11
Township:	14 N
Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ Yes ☑ No

Remarks: The smaple plot is located in an upland forest within the growing season. WETS analysis determined that the antecedent precipitation conditions were normal. 2.43 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: No evidence of wetland hydrology was observed at the sample plot.

SOILS

Map Unit Name: Houghton muck — Series Drainage Class: very poorly

Taxonomy (Subgroup): Typic Haplosaprists

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	6	1	10YR	3/2	100	--	--	--	sandy loam
6	7	2	10YR	4/2	100	--	--	--	loamy sand
7	24	3	10YR	4/4	100	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks: The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course | Wetland ID: RT6E | Sample Point **RT6EU**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer saccharum*	40	Y	FACU
2.	*Pinus strobus*	20	Y	FACU
3.	*Fagus grandifolia*	20	Y	FACU
4.	*Pinus resinosa*	5	N	FACU
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	85		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Fagus grandifolia*	15	Y	FACU
2.	*Acer saccharum*	5	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	20		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex pensylvanica*	80	Y	UPL
2.	*BERBERIS THUNBERGII*	2	N	FACU
3.	*Acer saccharum*	10	N	FACU
4.	*Fagus grandifolia*	2	N	FACU
5.	–	–	–	–
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	94		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: *0.0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	119	x 4 =	476
UPL spp.	80	x 5 =	400
Total	199 (A)		876 (B)

Prevalence Index = B/A = *4.402*

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Additional Remarks:

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Kohler Golf Course	Stantec Project #:	193703078	Date:	10/23/14
Applicant:	Kohler			County:	Sheboygan
Investigator #1:	Jeff Kraemer	Investigator #2:	Everett Grosskopf	State:	Wisconsin
Soil Unit:	Houghton muck	NWI/WWI Classification:	N/A	Wetland ID:	RT6E
Landform:	Toeslope	Local Relief:	Concave	Sample Point:	RT6EW
Slope (%):	0-2 Latitude: N/A	Longitude:	N/A	Datum: N/A	Community ID: Hardwood swamp
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	11
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	14 N
Are Vegetation ☐, Soil ☐, or Hydrology ☑ naturally problematic?		☑ Yes ☐ No		Range:	23 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: The sample plot is located in a hardwood swamp within the growing season. WETS analysis determined that the antecedent precipitation conditions were normal. 2.43 inches of rainfall was recorded near the Project 2 weeks prior of the wetland delineation.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B10 - Drainage Patterns
- ☐ B16 - Moss Trim Lines
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☐ D3 - Shallow Aquitard
- ☐ D4 - Microtopographic Relief
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth: -	(in.)
Water Table Present?	☐ Yes	☑ No	Depth: -	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 20	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks: The presence of 3 secondary indicators at the sample plot provides evidence of wetland hydrology. Hydrology identified as naturally problematic due to seasonal occurrence of inundation/saturation.

SOILS

Map Unit Name: Houghton muck — Series Drainage Class: very poorly

Taxonomy (Subgroup): Typic Haplosaprists

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C Concentration, D Depletion, RM Reduced Matrix, CS Covered/Coated Sand Grains; Location: PL Pore Lining, M Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Redox Features Color (Moist)	Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	6	1	10YR 3/2	100	--	--	--	--	silt loam
6	8	2	10YR 3/2	95	10YR 4/6	5	C	M	silt loam
8	20	3	7.5YR 5/2	90	7.5YR 5/6	10	C	M	silty clay
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ S11 - High Chroma Sands
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☑ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed): Type: N/A Depth: N/A

Hydric Soil Present? ☑ Yes ☐ No

Remarks: The soil at the sample plot meets the A11 and F3 Indicators described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

Stantec

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Kohler Golf Course Wetland ID: RT6E Sample Point **RT6EW**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	15	Y	FACW
2.	*Acer saccharum*	20	Y	FACU
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	35		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Alnus incana*	15	Y	FACW
2.	*Acer saccharum*	5	N	FACU
3.	*Crataegus crus-galli*	5	N	FAC
4.	*Fagus grandifolia*	2	N	FACU
5.	*BERBERIS THUNBERGII*	2	N	FACU
6.	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
	Total Cover =	29		

Herb Stratum (Plot size: 2 meter radius)

1.	*BERBERIS THUNBERGII*	2	N	FACU
2.	*Osmundastrum cinnamomeum*	5	Y	FACW
3.	*Geum canadense*	5	Y	FAC
4.	*Elymus virginicus*	2	N	FACW
5.	*Equisetum arvense*	2	N	FAC
6	–	–	–	–
7.	–	–	–	–
8.	–	–	–	–
9.	–	–	–	–
10.	–	–	–	–
11.	–	–	–	–
12.	–	–	–	–
13.	–	–	–	–
14.	–	–	–	–
15.	–	–	–	–
	Total Cover =	16		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	–	–	–	–
2.	–	–	–	–
3.	–	–	–	–
4.	–	–	–	–
5.	–	–	–	–
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***80.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	37	x 2 =	74
FAC spp.	12	x 3 =	36
FACU spp.	31	x 4 =	124
UPL spp.	0	x 5 =	0
Total	80 (A)		234 (B)

Prevalence Index = B/A = ***2.925***

Hydrophytic Vegetation Indicators:

- ☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

Appendix D – Site Photographs

Photo 1: br-10c-w looking north, Mosaic Beech/Maple complex.

Photo 2: br-10d-u looking south, Mosaic Beech/Maple complex.

Photo 3: br-11b-u looking north, Mosaic Beech/Maple complex.

Photo 4: 14bu looking west, old fallow field.

Photo 5: 17cw looking north, Alder thicket.

Photo 6: 10cw looking south, Alder thicket.

Photo 7: 10bu looking west, Upland forest.

Photo 8: 22bu looking south, Mesic forest.

Photo 9: P40dw looking east, Seasonally flooded basin.

Photo 10: P36u looking north, Upland ridge.

Photo 11: P33u looking north, Upland ridge.

Photo 12: P33w looking north, Wetland swale complex.

Photo 13: ne-2-w looking south, Wet meadow.

Photo 14: ne-2b-u looking north, Upland ridge.

Photo 15: 21cu looking north, Upland ridge.

Photo 16: 21cw looking west, Hardwood swamp.

Appendix E – Wetland Summary Table

Proposed Golf Course Project
Project Area Wetland Summary
November 2014

Wetland ID	Map Page	Acreage (on-site)	Wetland Delineation Community Type	NHI Classification	WWI Classification	Wetland Description/Dominant Plant Species	Wetland Sample Points	Wetland Quality1	Landownership	
									Kohler	State of WI
BR	1, 2, 4, 5	115.56	Alder Thicket, Hardwood Swamp, Mosaic Beech/Maple Complex, Wet Meadow	Alder Thicket, Forested Swamp, Hardwood Swamp/ Forest Swamp, Northern Mesic Forest, Wet Meadow	T3/E1K, T3K, E2K, T3/S3K	Large wetland complex within the Black River floodplain and tributary streams. Contains mosaic beech/maple complex (cradle knoll wetland) in the northeast portion. Dominant plant species include blue-joint grass, common lake sedge, common tussock sedge, green ash, reed canary grass, speckled alder.	8w, 9/10w, 10bw, 10cw, 12bw, 12dw, 13w, 14bw, 15dw, 17bw, 17cw, 17dw,18w, 19w, 19bw, 20w, 21bw, 21cw, 25w, 25bw, 25dw, 25ew, 25ew2, br-2a-w, br-3a-w, br-4a-w, br-5a-w, br-6a-w, br-8a-w, br-9a-w, br-9b-w, br-10b-w, br-10c-w, br-11-w, br-12a-w,br-13a-w, br-14a-w, br-14b-w, br-14c-w, rt-6b-w, rt-6c-w, rt-6d-w, rt-6e-w	Low - High	X	X
NE	3, 6	2.94	Alder Thicket, Wet Meadow	Swale Wetland Complex	T3/E2K	Linear wetland complex located within the interdunal swale landforms. Dominant plant species include blue-joint grass, common lake sedge, common tussock sedge, green ash, red maple and speckled alder.	ne-1-w, ne-2-w, ne-3-w, ne-4-w, ne-5-w, ne-6-w	High	X	
P-1	3	0.02	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include red raspberry and stinging nettle.	p-1w	High	X	
P-10	3	0.02	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include northern water-horehound.	p-10w	High	X	
P-13	3, 6	0.09	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include blue-joint grass, northern water-horehound and rice cut grass.	p-13w	High	X	
P-14	3, 6	0.02	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include northern water-horehound.	p-14w	High	X	
P-15	3	0.02	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include northern water-horehound and stinging nettle.	p-15w	High	X	
P-15b	3, 6	0.05	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include fowl manna grass and green ash.	p-15bw	High	X	
P-15c	3	0.01	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include blue-joint grass, green ash and toothed wood fern.	p-15cw	High	X	
P-16	3	0.04	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include blue-joint grass and northern water-horehound.	p-16w	High	X	
P-19	3, 6	0.04	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include blue-joint grass.	p-19w	High	X	
P-2	3	0.03	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include common tussock sedge, green ash and red raspberry.	p-2w	High	X	
P-20	3, 6	0.03	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include blue-joint grass.	p-20w	High	X	
P-21	3, 6	0.02	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include blue-joint grass and eastern willow-herb.	p-21w	High	X	
P-22	3, 6	0.01	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include blue-joint grass.	p-22w	High	X	
P-23	3, 6	0.02	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include blue-joint grass and Japanese barberry.	p-23w	High	X	
P-25	3, 6	0.05	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include blue-joint grass, green ash and speckled alder.	p-25w	High	X	
P-26	3, 6	0.01	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include blue-joint grass and toothed wood fern.	p-26w	High	X	
P-27	6	0.01	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include blue-joint grass, green ash and Pennsylvania sedge.	p-27w	High	X	
P-29	6	0.01	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include greater bladder sedge, Japanese barberry and northern water-horehound.	p-29w	High	X	
P-3	3	0.01	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include blue-joint grass.	p-3w	High	X	
P-30	6	0.04	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include blue-joint grass and northern water-horehound.	p-30w	High	X	
P-31	6	0.04	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include fowl manna grass and speckled alder.	p-31w	High	X	
P-32	6	0.01	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include blue-joint grass and reed canary grass.	p-32w	High	X	
P-33	6	0.01	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include toothed wood fern.	p-33w	High	X	
P-34	6	0.01	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include Canadain wood-nettle.	p-34w	High	X	
P-36	6	0.01	Seasonally Flooded Basin	Interdunal Wetland	N/A	Interdunal swale wetland. Dominant plant species include Pennsylvania sedge.	p-36w	High	X	
P-36b	6	0.01	Seasonally Flooded Basin	Interdunal Wetland	N/A	Interdunal swale wetland. Dominant plant species include Baltic rush and creeping juniper.	p-36bw	High	X	
P-36c	3, 6	0.01	Seasonally Flooded Basin	Interdunal Wetland	N/A	Interdunal swale wetland. Dominant plant species include Baltic rush.	p-36cw	High	X	
P-37	6	0.01	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include blue-joint grass and green ash.	p-37w	High	X	
P-38	6	0.06	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include blue-joint grass, green ash, northern water-horehound and speckled alder.	p-38w	High	X	
P-39	6	0.02	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include blue-joint grass and speckled alder.	p-39w	High	X	
P-4	3	0.11	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include blue-joint grass and speckled alder.	p-4w	High	X	
P-40	5, 6	0.06	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include green ash, northern water-horehound, reed canary grass and speckled alder.	p-40w	High	X	
P-40b	5, 6	0.01	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include common tussock sedge.	p-40bw	High	X	
P-40c	5, 6	0.03	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include blue-joint grass and common tussock sedge.	p-40cw	High	X	
P-40d	6	0.08	Seasonally Flooded Basin	Interdunal Wetland	N/A	Interdunal swale wetland. Dominant plant species include Baltic rush, blue-joint grass, paper birch, red pine and white pine.	p-40dw	High	X	
P-40e	6	0.02	Seasonally Flooded Basin	Interdunal Wetland	N/A	Interdunal swale wetland. Dominant plant species include Baltic rush, prairie sand-reed and red pine.	p-40ew	High	X	
P-40f	6	0.16	Seasonally Flooded Basin	Interdunal Wetland	N/A	Interdunal swale wetland. Dominant plant species include Baltic rush, common juniper and paper birch.	p-40fw	High	X	
P-41	5, 6	0.01	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include blue-joint grass and speckled alder.	p-41w	High	X	
P-42	5, 6	0.02	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include blue-joint grass, Japanese barberry, speckled alder and stinging nettle.	p-42w	High	X	
P-43	5, 6	0.01	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include blue-joint grass, green ash, red raspberry and speckled alder.	p-43w	High	X	
P-44	5, 6	0.05	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include blue-joint grass, green ash, Japanese barberry and red raspberry.	p-44aw	High	X	
P-44b	5, 6	0.04	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include blue-joint grass, green ash, paper birch and red raspberry.	p-44bw	High	X	

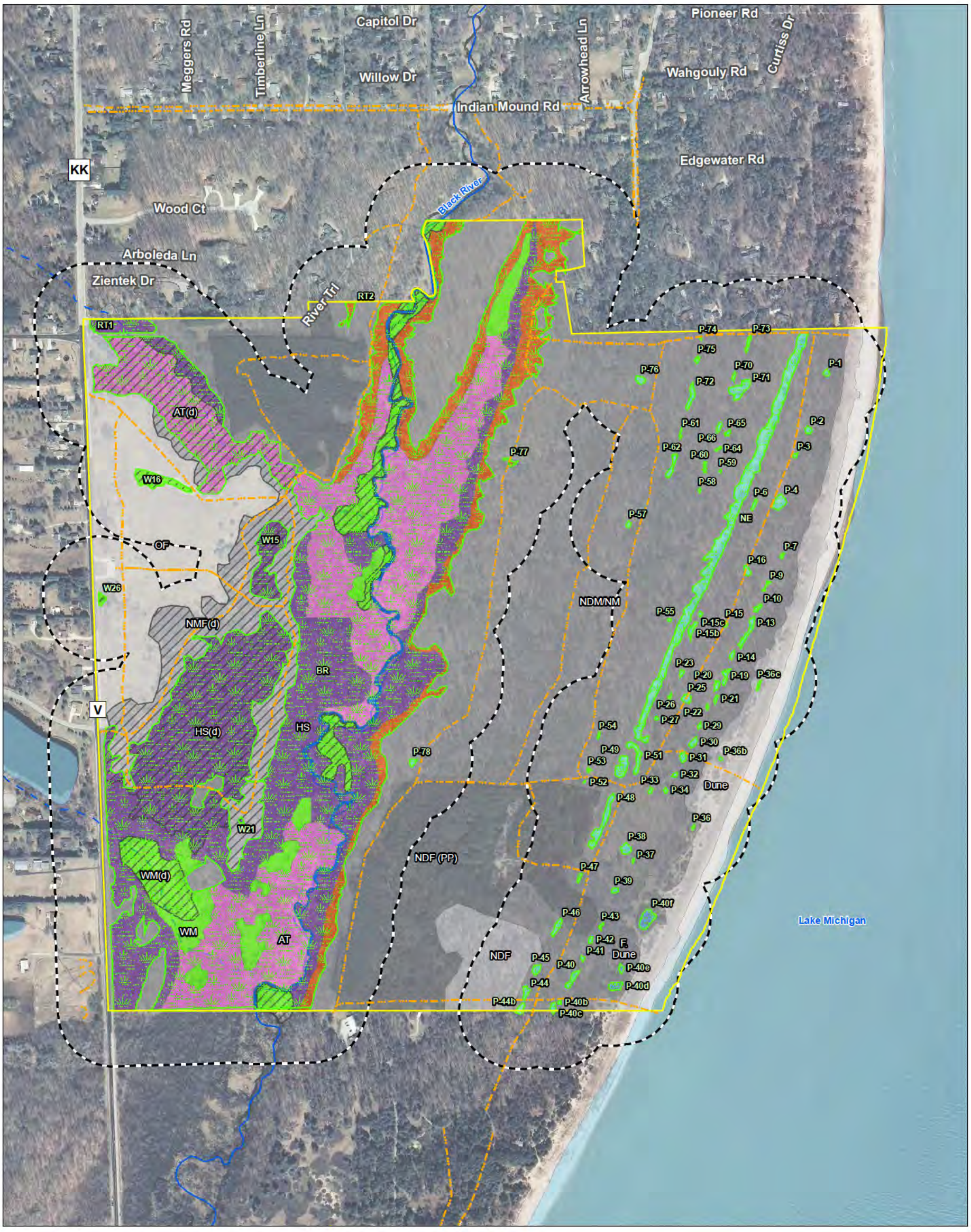
Proposed Golf Course Project
Project Area Wetland Summary
November 2014

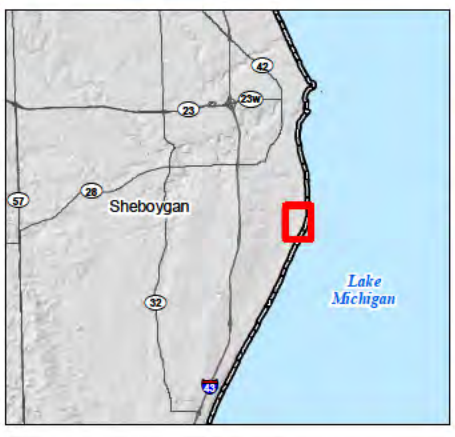
Wetland ID	Map Page	Acreage (on-site)	Wetland Delineation Community Type	NHI Classification	WWI Classification	Wetland Description/Dominant Plant Species	Wetland Sample Points	Wetland Quality[1]	Landownership	
									Kohler	State of WI
P-45	5, 6	0.05	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include greater bladder sedge, green ash, Japanese barberry and northern water-horehound.	p-45w	High	X	
P-46	5, 6	0.06	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include blue-joint grass and common tussock sedge.	p-46w	High	X	
P-47	5, 6	0.02	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include common tussock sedge.	p-47w	High	X	
P-48	5, 6	0.23	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include common tussock sedge, green ash and speckled alder.	p-48w	High	X	
P-49	6	0.15	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include common duckweed, and green ash.	p-49w	High	X	
P-51	6	0.11	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include Canadain wood-nettle, green ash, northern water-horehound and speckled alder.	p-51w	High	X	
P-52	5, 6	0.00	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include Japanese barberry and stinging nettle.	p-52w	High	X	
P-53	5, 6	0.01	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include green ash, Pennsylvania sedge and sugar maple.	p-53w	High	X	
P-54	5, 6	0.01	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include fowl manna grass.	p-54w	High	X	
P-55	3	0.01	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include green ash and Japanese barberry.	p-55w	High	X	
P-57	2, 3	0.02	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. No plant species were observed.	p-57w	High	X	
P-58	3	0.01	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include blue-joint grass and Pennsylvania sedge.	p-58w	High	X	
P-59	3	0.00	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include fowl manna grass and greater bladder sedge.	p-59w	High	X	
P-6	3	0.02	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include blue-joint grass, green ash and sugar maple.	p-6w	High	X	
P-60	3	0.02	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include blue-joint grass and northern water-horehound.	p-60w	High	X	
P-61	3	0.01	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include northern water-horehound.	p-61w	High	X	
P-62	3	0.07	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include common eastern wild-rye, fowl manna grass and sensitive fern.	p-62w	High	X	
P-64	3	0.01	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include blue-joint grass and northern water-horehound.	p-64w	High	X	
P-65	3	0.02	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include common eastern wild-rye, greater bladder sedge and green ash.	p-65w	High	X	
P-66	3	0.02	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include green ash and stinging nettle.	p-66w	High	X	
P-7	3	0.01	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include blue-joint grass and sugar maple.	p-7w	High	X	
P-70	3	0.01	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include common eastern wild-rye, green ash and northern water-horehound.	p-70w	High	X	
P-71	3	0.17	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include common tussock sedge, green ash, northern water-horehound and stinging nettle.	p-68w, p-71w	High	X	
P-72	3	0.07	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include green ash and northern water-horehound.	p-72w	High	X	
P-73	3	0.03	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include common eastern wild-rye, red raspberry and speckled alder.	p-73w	High	X	
P-74	3	0.00	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include fowl manna grass and green ash.	p-74w	High	X	
P-75	3	0.01	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include fowl manna grass.	p-75w	High	X	
P-76	3	0.05	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include common tussock sedge and fowl manna grass.	p-76w	High	X	
P-77	2	0.03	Wet Meadow	Swale Wetland Complex	N/A	Wet meadow wetland. Dominant plant species include blue-joint grass.	p-77w	High	X	
P-78	5	0.03	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include American beech.	p-78w	High	X	
P-9	3	0.01	Seasonally Flooded Basin	Swale Wetland Complex	N/A	Great Lakes ridge and swale complex. Dominant plant species include blue-joint grass and common tussock sedge.	p-9w	High	X	
RT1	1	0.67	Hardwood swamp	Hardwood Swamp	T3K	Hardwood swamp wetland. Dominant plant species include American hornbeam, cinnamon fern, green ash, speckled alder and white avens.	rt-6a-w	High	X	
RT2	1, 2	0.11	Hardwood Swamp	Hardwood Swamp, Forested Swamp	N/A	Hardwood swamp wetland. Dominant plant species include blue-joint grass, fowl manna grass, greater bladder sedge, green ash, Japanese barberry and sugar maple.	rt-2a-w	High	X	
W15	1	1.36	Hardwood Swamp	Hardwood Swamp	T3K	Hardwood swamp wetland. Dominant plant species include giant goldenrod, green ash, multiflora rose, paper birch, red maple, reed canary grass and speckled alder.	14w, 15w, 15bw, 15cw	Medium		X
W16	1	0.41	Wet Meadow	Wet Meadow	N/A	Wet meadow wetland. Dominant plant species include reed canary grass.	16w, 17w	Low		X
W21	4	0.02	Seasonally Flooded Basin	Alder Thicket	N/A	Seasonally flooded basin. Dominant plant species include Japanese barberry and speckled alder.	21dw	High		X
W26	1	0.05	Wet Meadow	Wet Meadow	N/A	Wet meadow wetland. Dominant plant species include box elder, Canadian goldenrod, giant goldenrod, green ash and reed canary grass.	26w	Medium		X

[1]Wetland Rapid Assessment Methodology Forms (WRAM) are included in Appendix F.

Appendix F – Wetland Rapid Assessment Methodology Forms (WRAM)

R:\GIS\other PCs\193703195_Excel Eng Kohler Golf\07 g Arnold\Kohler_Co1_WRAM_figure.mxd Revised 2015-03-19 By: mpichler





Notes
1. Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet
2. Data Sources Include: Stantec Excel WDNR WDOT
3. Orthophotography: 2010 WROC

Legend

- Approximate Project Boundary
- Existing Trail
- Field Delineated Wetland
- 100m Wetland Buffer

Botanical Community (total acres [degraded acres])

- AT - Alder Thicket (38.4ac [7.7ac degraded])
- HS - Hardwood Swamp (50.1ac [18.9ac degraded])
- HS/FS - Hardwood Swamp/Forested Seep (13.1ac)
- IW - Interdunal Wetland (0.3ac)
- OW - Open Water (2.9ac)
- SWC - Swale Wetland Complex (5.3ac)
- WM - Wet Meadow (13.8ac [8.1ac degraded])
- Degraded Area (d)*

DNR 24k Hydrography

- Perennial Stream
- Intermittent Stream
- Waterbody

Figure No.
5

Title
Wisconsin Wetland Rapid Assessment Area and 100-m Buffer

Client/Project
Kohler Company
Proposed Golf Course - Town of Wilson

Project Location
T14N R23E S11; 14
T of Wilson Sheboygan Co WI

193703078
Prepared by MCP on 2014-11-06
Technical Review by JS on 2014-11-06
Independent Review by JG on 2015-03-19

0 300 600 Feet
1 7 200 (At Original document size of 11x17)

N

Stantec

Wisconsin Department of Natural Resources
Wetland Rapid Assessment Methodology – version 2.0

WETLAND IDENTIFICATION	
Project name: Kohler Golf Course	Evaluator(s): M. Curran, J. Sulman, M. Knickelbine
File #: 193703078	Date of visit(s): 9/22, 9/24, 10/2/14
Location: PLSS: T14N, R23E S14 NW4; SW4 Lat:_____ Long: _____ County: Sheboygan Town/City/Village: Wilson	Ecological Landscape: Central Lake Michigan Coastal Watershed: Black River, SH02
SITE DESCRIPTION	
Soils: Mapped Type(s): Gb, Ag, Hu, An, Pa Field Verified: Y	WWI Class: T3K, T3/E1K, T3/S3K Wetland Type(s): Alder Thicket Wetland Size: 30.7 acres | Wetland Area Impacted NA Vegetation/Plant Community Description(s): Alder thicket occurs extensively within the Black River floodplain. The community is characterized by a shrub stratum of speckled alder (*Alnus incana*), and a herbaceous groundlayer. Occasional trees of green and black ash occur, but do not exceed 30% canopy.
Hydrology: seasonal or permanent high water table and/or saturation, as evidenced by water table at depth of 10", and saturation at 6" measured on 8/14/14. Located in floodplains and drainageways.	

SITE MAP

See Attached Figure

SECTION 1: Functional Value Assessment

HU	Y/N	Potential	**Human Use Values: recreation, culture, education, science, natural scenic beauty**
1	Y		Used for recreation (hunting, birding, hiking, etc.). List: hunting, birding, hiking; state park uses
2	Y		Used for educational or scientific purposes
3	Y		Visually or physically accessible to public
4	Y		Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	Y		In or adjacent to RED FLAG areas List: State park; Lake Michigan
6	Y*		Supports or provides habitat for endangered, threatened or special concern species
7	Y*		In or adjacent to archaeological or cultural resource site
WH			**Wildlife Habitat**
1	Y		Wetland and contiguous habitat >10 acres
2	Y		3 or more strata present (>10% cover)
3	Y		Within or adjacent to habitat corridor or established wildlife habitat area
4	Y		100 m buffer – natural land cover ≥50%(south) 75% (north) intact
5	Y		Occurs in a Joint Venture priority township
6	Y		Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.)
7	Y*		Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans
8	Y		Part of a large habitat block that supports area sensitive species
9	Y		Ephemeral pond with water present ≥ 45 days
10	Y		Standing water provides habitat for amphibians and aquatic invertebrates
11	N		Seasonally exposed mudflats present
12	Y*		Provides habitat scarce in the area (urban, agricultural, etc.)
FA			**Fish and Aquatic Life Habitat**
1	Y		Wetland is connected or contiguous with perennial stream or lake
2	Y		Standing water provides habitat for amphibians and aquatic invertebrates
3	N	Y	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
4	Y		Vegetation is inundated in spring
SP			**Shoreline Protection**
1	Y		Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable
2	N		Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows – if no, not applicable
3	Y		Densely rooted emergent or woody vegetation
ST			**Storm and Floodwater Storage**
1	Y		Basin wetland, constricted outlet, has through-flow or is adjacent to a stream
2	Y		Water flow through wetland is NOT channelized
3	Y		Dense, persistent vegetation
4	N		Evidence of flashy hydrology
5	Y		Point or non-point source inflow
6	Y		Impervious surfaces cover >10% of land surface within the watershed
7	Y		Within a watershed with ≤10% wetland
8	Y		Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event
WQ			**Water Quality Protection**
1	Y		Provides substantial storage of storm and floodwater based on previous section
2	Y		Basin wetland or constricted outlet
3	Y		Water flow through wetland is NOT channelized
4	Y		Vegetated wetland associated with a lake or stream
5	Y		Dense, persistent vegetation
6	Y*		Signs of excess nutrients, such as algae blooms, heavy macrophyte growth
7	N*		Stormwater or surface water from agricultural land is major hydrology source
8	Y		Discharge to surface water
9	Y		Natural land cover in 100m buffer area < 50%
GW			**Groundwater Processes**
1	Y*		Springs, seeps or indicators of groundwater present
2	N		Location near a groundwater divide or a headwater wetland
3	Y		Wetland remains saturated for an extended time period with no additional water inputs
4	Y*		Wetland soils are organic
5	N*		Wetland is within a wellhead protection area

Section 1 Comments (Refer to Section 1 numbers)

*see comment below
HU 6. TES species onsite, e.g. blue-winged teal; wetlands provide or support TES species habitat functions.
HU 7. Archaeological resources documented in concurrent study.
WH 7. SGCN/Priority Species with suitable habitat include kingfisher, tufted titmouse
WH 12. Alder Thicket is relatively infrequent within surrounding agricultural and urban context.
WQ 6. Dense reed canary grass may indicate excess nutrient inputs from upstream sources.
WQ 7. Upstream inputs into Black River affect Alder Thicket, but groundwater is main hydrology source.
GW 1. Indicators of groundwater discharge include vegetation, saturation at or near the surface, and shallow water table.
GW 4. Wetland soils include organic and mineral components.
GW 5. Sheboygan Water Utilities use Lake Michigan as source.

Wildlife Habitat and Species Observation (including amphibians and reptiles)
List: direct observation, tracks, scat, other sign; type of habitat: nesting, migratory, winter, etc.

Observed	Potential	Species/Habitat/Comments
Y		Spring peeper/hardwood swamp/vocalizations
N	Y	Pileated woodpecker/ pine plantation/visual
N	Y	Black-capped chickadee/ pine plantation/visual
Y		Wood frog/hardwood swamp, pine plantation/visual
N	Y	Common garter snake/ pine plantation/visual
N	Y	Blue jay/pine plantation/visual
N	Y	Northern long-eared bat/mature tree canopy near water
N	Y	Red-shouldered hawk/hardwood swamp
Y		Blue-winged teal/Black River channel/visual
Y		Snapping turtle/Black River channel/visual
Y		White tailed deer/wetland and upland, various habitat types/visual, tracks, browse
N	Y	Bald eagle/near water/ previous onsite observations
N	Y	Blue-spotted Salamander/ swale wetland, hardwood swamp forested seep/visual, under logs
N	Y	Eastern Red-backed Salamander/ swale wetland, hardwood swamp forested seep/visual, under logs

Fish and Aquatic Life Habitat and Species Observations
List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc.

Observed	Potential	Species/Habitat
		See above for aquatic species (frog, turtle)

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

	Low	Medium	High	Exceptional
Invasive species cover	> 50%	20-50%	10-20%	<10%
Strata	Missing stratum(a) or bare due to invasive species	All strata present but reduced native species	All strata present and good assemblage of native species	All strata present, conservative species represented
NHI plant community ranking	S4	S3	S2	S1-S2 (S2 high quality)
Relative frequency of plant community in watershed	Abundant	Common	Uncommon	Rare
FQI (optional)	<13	13-23	23-32	>32
Mean C (optional)	<2.4	2.4-4.2	4.3-4.7	>4.7

***Note: separate plant communities are described independently**

Plant Species List (* dominant species) see attached list for complete species inventory

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
*Alnus incana**	Speckled alder	4		
*Myosotis scorpioides**	Forget-me-not	0		
*Lycopus uniflorus**	Water horehound	4		
*Phalaris arundinacea**	Reed canary grass	0		
*Fraxinus pennsylvanica**	Green ash	2		

SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities)

Alder Thicket occurs within the floodplain of the Black River, where reed canary grass occurrence varies from less than 10% to over 50%. Higher densities of reed canary grass have a negative impact on groundlayer diversity. Two or three strata occur: An open tree canopy of green and black ash; a dense shrub layer; and a herbaceous layer. Groundlayer diversity is moderate and includes both native and introduced herbaceous hydrophytes.

SECTION 3: Condition Assessment of Wetland Assessment Area (AA) and Buffer (100 m)

Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
N	Y	Y	L	UC	Filling, berms (non-impounding)
N	N	N	n/a	n/a	Drainage – tiles, ditches
N	Y	Y	M	UC	Hydrologic changes - high capacity wells, impounded water, increased runoff
Y	Y	Y	L	C	Point source or stormwater discharge
Y	Y	Y	L	C	Polluted runoff
N	N	N	n/a	n/a	Pond construction
N	N	N	n/a	n/a	Agriculture – row crops
N	N	N	n/a	n/a	Agriculture – hay
N	N	Y	L	UC	Agriculture – pasture
N	Y	Y	L	UC	Roads or railroad
N	Y	N	n/a	n/a	Utility corridor (above or subsurface)
N	N	N	n/a	n/a	Dams, dikes or levees
N	N	N	n/a	n/a	Soil subsidence, loss of soil structure
N	Y	Y	M	UC	Sediment input
N	Y	N	L	UC	Removal of herbaceous stratum – mowing, grading, earthworms, etc.
N	Y	Y	L	UC	Removal of tree or shrub strata – logging, unprescribed fire
Y	Y	Y	L	UC	Human trails – unpaved
N	Y	N	n/a	n/a	Human trails – paved
N	Y	Y	L	UC	Removal of large woody debris
Y	Y	Y	L/M	UC/C	Cover of non-native and/or invasive species
N	Y	N	M	C	Residential land use
N	Y	N	M	C	Urban, commercial or industrial use
N	Y	N	L	UC	Parking lot
N	N	N	n/a	n/a	Golf course
N	N	N	n/a	n/a	Gravel pit
Y	Y	Y	M	C	Recreational use (boating, ATVs, etc.)
N	Y	N	n/a	n/a	Excavation or soil grading
					Other (list below):

* L= Low, M = Medium, H = High
**Relative frequency of the impact in comparison to the general condition of wetlands and buffer areas in the region or watershed (C=Common, UC=Uncommon)

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The alder thicket is in moderate to good condition, occurring as a component in a complex of Black River floodplain wetlands.
The most significant stressors appear to be inflows of silt and excess nutrients from sources upstream in the Black River
and tributaries, and the cover of non-native species, primarily reed canary grass. Historic agricultural use occurred within the
buffer area, probably limited to pasture, but current impacts are minimal. Recreational usage is limited to the unpaved trails
that run through the State Park Portion of the area; access through the Alder Thicket on foot is difficult.

SUMMARY OF FUNCTIONAL VALUES

FUNCTION	SIGNIFICANCE				
	Low	Medium	High	Exceptional	NA
Floristic Integrity		Y			
Human Use Values		Y			
Wildlife Habitat			Y		
Fish and Aquatic Life Habitat			Y		
Shoreline Protection			Y		
Flood and Stormwater Storage			Y		
Water Quality Protection			Y		
Groundwater Processes			Y		

FUNCTION	RATIONALE
Floristic Integrity	There is a moderate level of species diversity, presence of heterogeneous, adjacent plant communities, and presence of two or three vegetation strata. Some conservative species were present, but rare plant species were lacking. Invasive species occur within this community at moderate to high levels of coverage.
Human Use Values	Public access to the State Park portion of the site is available, but the Alder Thicket is not likely to be used extensively for recreation, hiking, or education. Archaeological resources occur in adjacent areas, and might occur in this community. The alder thicket may offer hunting, birding, and nature study opportunities.
Wildlife Habitat	The combination of a diversity of contiguous upland and wetland plant communities in a large, unfragmented block of habitat adds significance to the site's value for wildlife. A number of species of fauna were observed, are known to occur, or could potentially occur in or adjacent to alder thicket, especially amphibians and birds.
Fish and Aquatic Life Habitat	The Black River and surrounding wetland and upland plant communities provide significant habitat for fish and aquatic life. The river and its tributaries have been somewhat impacted by agricultural and stormwater runoff, but retain a healthy aquatic plant community and is likely important for fish spawning, waterfowl, and amphibians.
Shoreline Protection	The alder thickets adjacent to the Black River contribute vegetative cover along the banks, offering shoreline protection, which has a significant positive effect for the river and downstream communities.
Flood and Stormwater Storage	The wetlands within the Black River floodplain and surrounding areas provide significant value in storing and attenuating peak flows in the river, which may have a positive impact on reducing flooding downstream.
Water Quality Protection	The wetlands surrounding the Black River provide significant value to protecting water quality within the Black River and Lake Michigan. Water quality in the Black River and its tributaries has been negatively impacted by runoff from residential and agricultural areas upstream.
Groundwater Processes	The site retains essentially intact groundwater processes, including groundwater recharge and discharge areas, which has beneficial effects on surface and groundwater quality.

Section 4: Project Impact Assessment

Brief Project Description

The proposed project consists of a golf course on a 247-acre parcel adjacent to Lake Michigan, with an access road to the west, crossing a DNR-owned 135-acre parcel, and the Black River.

Expected Project Impacts

IMPACT: describe (+ or -)	Permanence/Reversibility	Significance (Low, Medium, High)
Direct Impacts Road fill and construction of infrastructure is expected to directly impact wetland resulting in a permanent wetland loss.	Loss of wetland is expected to be permanent.	High
Secondary Impacts (including impacts which are indirectly attributable to the project) Road construction may alter wetland hydrology; increased runoff/nutrient loading; resulting in degradation of wetland habitats and water quality; wells may result in drawdown of water table.	Alterations to wetland hydrology, habitat, water quality, and water table are likely to be permanent.	High
Cumulative Impacts Additional development beyond the current proposed plan has the potential to impact additional wetlands.	Additional wetland loss would be permanent.	High
Spatial/Habitat Integrity Proposed project may result in fragmentation of habitat blocks.	Habitat fragmentation would be permanent.	High
Rare Plant/Animal Communities/ Natural Areas Construction of golf course infrastructure may result in loss or degradation of rare plant communities and rare plant/animal habitats.	No rare plants or plant communities were identified within the alder thicket; it likely supports habitat for rare animals, e.g., blue-winged teal.	Medium

Kohler Golf Course
Sheboygan County, Wisconsin

2014 Species List - Alder Thicket

Scientific Name	Common Name	Native	Physiognomy	Coefficient of Conservatism	Region 3 Wetland Coefficient
Alliaria petiolata	invasive garlic mustard	non-native	forb	0	3
Alnus incana	speckled alder	native	tree	4	-3
Amphicarpaea bracteata	american hog-peanut	native	vine	5	0
Arisaema triphyllum	jack-in-the-pulpit	native	forb	5	0
Asclepias incarnata	marsh milkweed	native	forb	5	-5
Athyrium angustum	common lady fern	native	fern	5	0
Boehmeria cylindrica	small-spike false nettle	native	forb	6	-5
Calamagrostis canadensis	blue-joint grass	native	grass	5	-5
Carex lacustris	common lake sedge	native	sedge	6	-5
Carex stricta	hummock sedge	native	sedge	7	-5
Carex tuckermanii	bent-seeded hop sedge	native	sedge	8	-5
Chelone glabra	turtlehead	native	forb	7	-5
Dryopteris cristata	crested shield fern	native	fern	7	-5
Echinocystis lobata	balsam-apple	native	vine	2	-3
Elymus virginicus	virginia wild-rye	native	grass	6	-3
Epilobium coloratum	cinnamon willow-herb	native	forb	3	-5
Eutrochium maculatum	spotted joe-pye-weed	native	forb	4	-5
Fraxinus nigra	black ash	native	tree	8	-3
Fraxinus pennsylvanica	green ash	native	tree	2	-3
Geum canadense	white avens	native	forb	2	0
Glechoma hederacea	creeping-charlie	non-native	forb	0	3
Glyceria grandis	american manna grass	native	grass	6	-5
Glyceria striata	fowl manna grass	native	grass	4	-5
Helenium autumnale	common sneezeweed	native	forb	4	-3
Hesperis matronalis	dames rocket	non-native	forb	0	3
Ilex verticillata	common winterberry	native	shrub	7	-3
Impatiens capensis	orange jewelweed	native	forb	2	-3
Iris virginica	southern blue flag	native	forb	5	-5
Juncus effusus	soft rush	native	rush	4	-5
Laportea canadensis	canadian wood-nettle	native	forb	4	-3
Lycopus uniflorus	northern bugleweed	native	forb	4	-5
Lysimachia ciliata	fringed loosestrife	native	forb	5	-3
Matteuccia struthiopteris	ostrich fern	native	fern	5	0
Mentha arvensis	wild mint	native	forb	3	-3
Myosotis scorpioides	common forget-me-not	non-native	forb	0	-5
Onoclea sensibilis	sensitive fern	native	fern	5	-3
Osmunda spectabilis	american royal fern	native	fern	7	-5
Osmundastrum cinnamomeum	cinnamon fern	native	fern	7	-3
Pedicularis lanceolata	fen betony	native	forb	8	-3
Persicaria amphibia	water smartweed	native	forb	5	-5
Persicaria sagittata	arrow-leaved tear-thumb	native	forb	6	-5
Phalaris arundinacea	reed canary grass	non-native	grass	0	-3
Pilea pumila	canadian clearweed	native	forb	3	-3
Ranunculus hispidus	hispid buttercup	native	forb	6	0
Rosa palustris	swamp rose	native	shrub	7	-5
Rumex obtusifolius	bitter dock	non-native	forb	0	0
Sagittaria latifolia	broad-leaved arrowhead	native	forb	3	-5

Kohler Golf Course
Sheboygan County, Wisconsin

2014 Species List - Alder Thicket

Scientific Name	Common Name	Native	Physiognomy	Coefficient of Conservatism	Region 3 Wetland Coefficient
Salix amygdaloides	peach-leaved willow	native	tree	4	-3
Salix interior	sandbar willow	native	shrub	2	-3
Scutellaria galericulata	marsh skullcap	native	forb	5	-5
Sium suave	hemlock water-parsnip	native	forb	5	-5
Solanum dulcamara	bittersweet nightshade	non-native	vine	0	0
Solidago gigantea	giant goldenrod	native	forb	3	-3
Stachys tenuifolia	narrow-leaved hedge-nettle	native	forb	6	-3
Symphyotrichum ontarionis	bottomland aster	native	forb	6	0
Symphyotrichum puniceum	purple-stem aster	native	forb	5	-5
Symplocarpus foetidus	skunk-cabbage	native	forb	8	-5
Taraxacum officinale	common dandelion	non-native	forb	0	3
Thelypteris palustris	eastern marsh fern	native	fern	7	-3
Typha latifolia	broad-leaved cat-tail	native	forb	1	-5
Urtica dioica	stinging nettle	native	forb	1	0
Viburnum lentago	nannyberry	native	tree	4	0

FQA Metrics	Species Richness	Mean C Value	FQI
Native	54	4.9	36.0
All Species	62	4.3	33.9

Wisconsin Department of Natural Resources
Wetland Rapid Assessment Methodology – version 2.0

WETLAND IDENTIFICATION	
Project name: Kohler Golf Course	Evaluator(s): M. Curran, J. Sulman, M. Knickelbine
File #: 193703078	Date of visit(s): 9/22, 9/24, 10/2/14
Location: PLSS: T14N, R23E S14 NW4; SW4 Lat:_____ Long: _____ County: Sheboygan Town/City/Village: Wilson	Ecological Landscape: Central Lake Michigan Coastal Watershed: Black River, SH02
SITE DESCRIPTION	
Soils: Mapped Type(s): Pa, An Field Verified: Y	WWI Class: T3K Wetland Type(s): Alder Thicket, degraded Wetland Size: 7.7 acres | Wetland Area Impacted: NA
Hydrology: seasonal or permanent high water table and/or saturation; drainageway, stream with flashy hydrology due to stormwater runoff.	Vegetation/Plant Community Description(s): Degraded Alder thicket occurs in the northwestern portion of the State Property along a tributary to the Black River. The community is characterized by a dense shrub stratum of alder, tree layer of scattered green ash, and a herbaceous groundlayer dominated by invasives.

SITE MAP

See Attached Figure

SECTION 1: Functional Value Assessment

HU	Y/N	Potential	**Human Use Values: recreation, culture, education, science, natural scenic beauty**
1	Y		Used for recreation (hunting, birding, hiking, etc.). List: hunting, birding, hiking; state park uses
2	Y		Used for educational or scientific purposes
3	Y		Visually or physically accessible to public
4	Y		Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	Y		In or adjacent to RED FLAG areas List: State park
6	Y*		Supports or provides habitat for endangered, threatened or special concern species
7	Y*		In or adjacent to archaeological or cultural resource site
WH			**Wildlife Habitat**
1	Y		Wetland and contiguous habitat >10 acres
2	Y		3 or more strata present (>10% cover)
3	Y		Within or adjacent to habitat corridor or established wildlife habitat area
4	Y		100 m buffer – natural land cover ≥50%(south) 75% (north) intact
5	Y		Occurs in a Joint Venture priority township
6	Y		Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.)
7	Y*		Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans
8	Y		Part of a large habitat block that supports area sensitive species
9	N		Ephemeral pond with water present ≥ 45 days
10	Y		Standing water provides habitat for amphibians and aquatic invertebrates
11	N		Seasonally exposed mudflats present
12	Y*		Provides habitat scarce in the area (urban, agricultural, etc.)
FA			**Fish and Aquatic Life Habitat**
1	Y		Wetland is connected or contiguous with perennial stream or lake
2	Y		Standing water provides habitat for amphibians and aquatic invertebrates
3	N	Y	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
4	Y		Vegetation is inundated in spring
SP			**Shoreline Protection**
1	Y		Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable
2	Y		Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows – if no, not applicable
3	Y		Densely rooted emergent or woody vegetation
ST			**Storm and Floodwater Storage**
1	Y		Basin wetland, constricted outlet, has through-flow or is adjacent to a stream
2	Y		Water flow through wetland is NOT channelized
3	Y		Dense, persistent vegetation
4	Y		Evidence of flashy hydrology
5	Y		Point or non-point source inflow
6	Y		Impervious surfaces cover >10% of land surface within the watershed
7	Y		Within a watershed with ≤10% wetland
8	Y		Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event
WQ			**Water Quality Protection**
1	Y		Provides substantial storage of storm and floodwater based on previous section
2	N		Basin wetland or constricted outlet
3	Y		Water flow through wetland is NOT channelized
4	Y		Vegetated wetland associated with a lake or stream
5	Y		Dense, persistent vegetation
6	Y*		Signs of excess nutrients, such as algae blooms, heavy macrophyte growth
7	Y*		Stormwater or surface water from agricultural land is major hydrology source
8	Y		Discharge to surface water
9	Y		Natural land cover in 100m buffer area < 50%
GW			**Groundwater Processes**
1	Y		Springs, seeps or indicators of groundwater present
2	N		Location near a groundwater divide or a headwater wetland
3	N		Wetland remains saturated for an extended time period with no additional water inputs
4	Y*		Wetland soils are organic
5	N*		Wetland is within a wellhead protection area

Section 1 Comments (Refer to Section 1 numbers)

*see comment below
HU 6. Wetlands provide or support TES species habitat functions.
HU 7. Archaeological resources documented in concurrent study.
WH 7. SGCN/Priority Species with suitable habitat, e.g., tufted titmouse
WH 12. Alder Thicket is relatively infrequent within surrounding agricultural and urban context.
WQ 6. Siltation, reed canary grass suggest excess nutrient inputs from upstream sources.
WQ 7. Upstream watershed is primarily agricultural and residential; receives substantial stormwater, silt inputs.
GW 4. Wetland soils include organic and mineral components.
GW 5. Sheboygan Water Utilities use Lake Michigan as source.

Wildlife Habitat and Species Observation (including amphibians and reptiles)
List: direct observation, tracks, scat, other sign; type of habitat: nesting, migratory, winter, etc.

Observed	Potential	Species/Habitat/Comments
N	Y	Spring peeper/hardwood swamp/vocalizations
N	Y	Pileated woodpecker/ pine plantation/visual
N	Y	Black-capped chickadee/ pine plantation/visual
N	Y	Wood frog/hardwood swamp, pine plantation/visual
N	Y	Common garter snake/ pine plantation/visual
N	Y	Blue jay/pine plantation/visual
N	Y	Northern long-eared bat/mature trees with nearby water
N	Y	Red-shouldered hawk/hardwood swamp
N	Y	Blue-winged teal/Black River channel/visual
N	Y	White tailed deer/wetland and upland, various habitat types/visual, tracks, browse
N	Y	Bald eagle/near water/ previous onsite observations
N	Y	Blue-spotted Salamander/ swale wetland, hardwood swamp forested seep/visual, under logs
N	Y	Eastern Red-backed Salamander/ swale wetland, hardwood swamp forested seep/visual, under logs

Fish and Aquatic Life Habitat and Species Observations
List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc.

Observed	Potential	Species/Habitat

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

	Low	Medium	High	Exceptional
Invasive species cover	> 50%	0-50%	10-20%	<10%
Strata	Missing stratum(a) or bare due to invasive species	ll strata resent but educed native pecies	All strata present and good assemblage of native species	All strata present, conservative species represented
NHI plant community ranking	S4	S3	S2	S1-S2 (S2 high quality)
Relative frequency of plant community in watershed	Abundant	Common	Uncommon	Rare
FQI (optional)	<13	13-23	23-32	>32
Mean C (optional)	<2.4	2.4-4.2	4.3-4.7	>4.7

***Note: separate plant communities are described independently**

Plant Species List (* dominant species) see Alder Thicket list for detailed species report

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
*Alnus incana**	Speckled alder	4		
*Hesperis matronalis**	Dame's Rocket	0		
*Alliaria petiolata**	Garlic mustard	0		
*Fraxinus pennsylvanica**	Green ash	2		
*Myosotis scorpioides**	Forget-me-not	0		

SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities)

Degraded Alder Thicket occurs within a drainageway receiving sediment and nutrient-enriched stormwater runoff, which has impacted the floristic integrity of the plant community. High densities of invasive herbaceous species dominate the understory.

SECTION 3: Condition Assessment of Wetland Assessment Area (AA) and Buffer (100 m)

Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
N	N	Y	L	UC	Filling, berms (non-impounding)
N	N	N	n/a	n/a	Drainage – tiles, ditches
N	Y	Y	H	C	Hydrologic changes - high capacity wells, impounded water, increased runoff
Y	Y	Y	H	C	Point source or stormwater discharge
Y	Y	Y	L	C	Polluted runoff
N	N	N	n/a	n/a	Pond construction
N	N	N	n/a	n/a	Agriculture – row crops
N	N	N	n/a	n/a	Agriculture – hay
N	N	Y	L	UC	Agriculture – pasture
Y	Y	Y	H	C	Roads or railroad
N	Y	N	n/a	n/a	Utility corridor (above or subsurface)
N	N	N	n/a	n/a	Dams, dikes or levees
N	N	N	n/a	n/a	Soil subsidence, loss of soil structure
Y	Y	Y	H	C	Sediment input
N	Y	N	n/a	n/a	Removal of herbaceous stratum – mowing, grading, earthworms, etc.
N	Y	Y	L	UC	Removal of tree or shrub strata – logging, unprescribed fire
N	Y	Y	L	UC	Human trails – unpaved
N	N	N	n/a	n/a	Human trails – paved
N	Y	Y	L	UC	Removal of large woody debris
Y	Y	Y	H	C	Cover of non-native and/or invasive species
N	Y	Y	M	C	Residential land use
N	Y	N	n/a	n/a	Urban, commercial or industrial use
N	N	N	n/a	n/a	Parking lot
N	N	N	n/a	n/a	Golf course
N	N	N	n/a	n/a	Gravel pit
N	Y	N	n/a	n/a	Recreational use (boating, ATVs, etc.)
N	Y	N	n/a	n/a	Excavation or soil grading
					Other (list below):

* L= Low, M = Medium, H = High
**Relative frequency of the impact in comparison to the general condition of wetlands and buffer areas in the region or watershed (C=Common, UC=Uncommon)

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The degraded alder thicket is generally in fair to poor condition.
The most significant stressors appear to be inflows of silt and excess nutrients from sources upstream;
dominance in the groundlayer by non-native species. Historic agricultural use occurred within the
buffer area, probably limited to pasture, but current impacts are minimal. Recreational usage is limited to the unpaved trails
that run in the vicinity of the area; access through the Alder Thicket on foot is difficult.
The functional value of this community is reduced due to the low coverage of native or perennial plants in the understory,
the erosion and depth of the stream channel conduct water through the area quickly, rather than allowing for storage.

SUMMARY OF FUNCTIONAL VALUES

FUNCTION	SIGNIFICANCE				
	Low	Medium	High	Exceptional	NA
Floristic Integrity	Y				
Human Use Values		Y			
Wildlife Habitat	Y				
Fish and Aquatic Life Habitat	Y				
Shoreline Protection		Y			
Flood and Stormwater Storage	Y				
Water Quality Protection	Y				
Groundwater Processes	Y				

FUNCTION	RATIONALE
Floristic Integrity	There is a low level of species diversity, adjacent upland and degraded plant communities, and presence of two or three vegetation strata. Highly conservative/rare plant species were lacking, and high levels of invasive species dominate the groundlayer within this community.
Human Use Values	Public access to the State Park portion of the site is available, but the Alder Thicket is not likely to be used extensively for recreation, hiking, or education. Archaeological resources occur in adjacent areas, and might occur in this community.
Wildlife Habitat	The small size and fragmentation of habitat lowers the site's value for wildlife. A number of species of fauna were observed, are known to occur, or could potentially occur in or adjacent to the degraded alder thicket, and the community may provide a corridor for wildlife including generalist mammals and birds.
Fish and Aquatic Life Habitat	The degraded alder thicket probably has little potential value for fish and aquatic life, due to the flashy nature of stream flows and degraded water quality due to stormwater and agricultural runoff.
Shoreline Protection	The degraded alder thicket may offer some shoreline protection through the vegetative cover along the banks, however the flashy nature of stream flows have resulted in significant erosion and undercutting of the banks.
Flood and Stormwater Storage	The degraded alder thicket offers limited capacity for storing and attenuating peak flows in the adjacent stream, because the deep channel serves to conduct water through rather than allowing floodwaters to spread out.
Water Quality Protection	The degraded alder thicket provides limited value in protecting water quality within the Black River watershed. Water quality in the Black River and its tributaries has been negatively impacted by runoff from residential and agricultural areas upstream.
Groundwater Processes	Groundwater processes within the degraded alder thicket may include groundwater recharge and discharge, which may provide limited benefits to surface and groundwater quality.

Section 4: Project Impact Assessment

Brief Project Description

The proposed project consists of a golf course on a 247-acre parcel adjacent to Lake Michigan, with an access road to the west, crossing a DNR-owned 135-acre parcel, and the Black River.

Expected Project Impacts

IMPACT: describe (+ or -)	Permanence/Reversibility	Significance (Low, Medium, High)
Direct Impacts Road fill and construction of infrastructure is expected to directly impact wetland resulting in a permanent wetland loss.	Loss of wetland is expected to be permanent.	Low
Secondary Impacts (including impacts which are indirectly attributable to the project) Road construction may alter wetland hydrology; increased runoff/nutrient loading; resulting in degradation of wetland habitats and water quality; wells may result in drawdown of water table.	Alterations to wetland hydrology, habitat, water quality, and water table are likely to be permanent.	Low
Cumulative Impacts Additional development beyond the current proposed plan has the potential to impact additional wetlands.	Additional wetland loss would be permanent.	Medium
Spatial/Habitat Integrity Proposed project may result in fragmentation of habitat blocks.	Habitat fragmentation would be permanent.	Medium
Rare Plant/Animal Communities/ Natural Areas Construction of golf course infrastructure may result in loss or degradation of rare plant communities and rare plant/animal habitats.	No rare plants or plant communities were identified within the degraded alder thicket.	Low

Wisconsin Department of Natural Resources
Wetland Rapid Assessment Methodology – version 2.0

WETLAND IDENTIFICATION	
Project name: Kohler Golf Course	Evaluator(s): M. Curran, J. Sulman, M. Knickelbine
File #: 193703078	Date of visit(s): 9/22, 9/24, 10/2/14
Location: PLSS: T14N, R23E S14 NW4; SW4 Lat:_____ Long: _____ County: Sheboygan Town/City/Village: Wilson	Ecological Landscape: Central Lake Michigan Coastal Watershed: Black River, SH02
SITE DESCRIPTION	
Soils: Mapped Type(s): Gb, Ag, Hu, An Field Verified: Y	WWI Class: T3K Wetland Type(s): Hardwood Swamp Wetland Size: 31.2 acres | Wetland Area Impacted: NA Vegetation/Plant Community Description(s):
Hydrology: seasonal or permanent high water table and/or saturation, as evidenced by water table at depth of 8", and surface saturation measured on 8/13/14.	Hardwood Swamp is characterized by a canopy of green and black ash, a scattered shrub layer of speckled alder and a herbaceous groundlayer of forbs and grasses.

SITE MAP

See Attached Figure

SECTION 1: Functional Value Assessment

HU	Y/N	Potential	**Human Use Values: recreation, culture, education, science, natural scenic beauty**
1	Y		Used for recreation (hunting, birding, hiking, etc.). List: hunting, birding, hiking; state park uses
2	Y		Used for educational or scientific purposes
3	Y		Visually or physically accessible to public
4	Y		Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	Y		In or adjacent to RED FLAG areas List: State park; Lake Michigan
6	Y*		Supports or provides habitat for endangered, threatened or special concern species
7	Y*		In or adjacent to archaeological or cultural resource site
WH			**Wildlife Habitat**
1	Y		Wetland and contiguous habitat >10 acres
2	Y		3 or more strata present (>10% cover)
3	Y		Within or adjacent to habitat corridor or established wildlife habitat area
4	Y		100 m buffer – natural land cover ≥50%(south) 75% (north) intact
5	Y		Occurs in a Joint Venture priority township
6	Y		Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.)
7	Y*		Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans
8	Y		Part of a large habitat block that supports area sensitive species
9	Y		Ephemeral pond with water present ≥ 45 days
10	Y		Standing water provides habitat for amphibians and aquatic invertebrates
11	N		Seasonally exposed mudflats present
12	Y*		Provides habitat scarce in the area (urban, agricultural, etc.)
FA			**Fish and Aquatic Life Habitat**
1	Y		Wetland is connected or contiguous with perennial stream or lake
2	Y		Standing water provides habitat for amphibians and aquatic invertebrates
3	N	Y	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
4	Y		Vegetation is inundated in spring
SP			**Shoreline Protection**
1	Y		Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable
2	N		Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows – if no, not applicable
3	Y		Densely rooted emergent or woody vegetation
ST			**Storm and Floodwater Storage**
1	Y		Basin wetland, constricted outlet, has through-flow or is adjacent to a stream
2	Y		Water flow through wetland is NOT channelized
3	Y		Dense, persistent vegetation
4	N		Evidence of flashy hydrology
5	Y		Point or non-point source inflow
6	Y		Impervious surfaces cover >10% of land surface within the watershed
7	Y		Within a watershed with ≤10% wetland
8	Y		Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event
WQ			**Water Quality Protection**
1	Y		Provides substantial storage of storm and floodwater based on previous section
2	Y		Basin wetland or constricted outlet
3	Y		Water flow through wetland is NOT channelized
4	Y		Vegetated wetland associated with a lake or stream
5	Y		Dense, persistent vegetation
6	Y*		Signs of excess nutrients, such as algae blooms, heavy macrophyte growth
7	N*		Stormwater or surface water from agricultural land is major hydrology source
8	Y		Discharge to surface water
9	Y		Natural land cover in 100m buffer area < 50%
GW			**Groundwater Processes**
1	Y*		Springs, seeps or indicators of groundwater present
2	N		Location near a groundwater divide or a headwater wetland
3	Y		Wetland remains saturated for an extended time period with no additional water inputs
4	Y*		Wetland soils are organic
5	N*		Wetland is within a wellhead protection area

Section 1 Comments (Refer to Section 1 numbers)

*see comment below
HU 6. TES species onsite include blue-winged teal; wetlands likely provide or support additional TES species habitat functions.
HU 7. Archaeological resources documented in concurrent study.
WH 7. SGCN/Priority Species onsite, e.g., blue-winged teal, kingfisher, tufted titmouse
WH 12. Hardwood Swamp is relatively infrequent within surrounding agricultural and urban context.
WQ 6. Dense reed canary grass may indicate excess nutrient inputs from upstream sources; but no excess algae/macrophytes.
WQ 7. Upstream inputs into Black River include surface runoff from agricultural and residential areas; but not primary source.
GW 1. Indicators of groundwater include vegetation, saturation at or near the surface, and shallow water table.
GW 4. Wetland soils include organic and mineral components.
GW 5. Sheboygan Water Utilities use Lake Michigan as source.

Wildlife Habitat and Species Observation (including amphibians and reptiles)
List: direct observation, tracks, scat, other sign; type of habitat: nesting, migratory, winter, etc.

Observed	Potential	Species/Habitat/Comments
Y		Spring peeper/hardwood swamp/vocalizations
N	Y	Pileated woodpecker/ pine plantation/visual
N	Y	Black-capped chickadee/ pine plantation/visual
Y		Wood frog/hardwood swamp, pine plantation/visual
N	Y	Common garter snake/ pine plantation/visual
N	Y	Blue jay/pine plantation/visual
N	Y	Northern long-eared bat/mature tree canopy with nearby water
N	Y	Red-shouldered hawk/hardwood swamp
Y		Blue-winged teal/Black River channel/visual
Y		Snapping turtle/Black River channel/visual
Y		White tailed deer/wetland and upland, various habitat types/visual, tracks, browse
N	Y	Bald eagle/near water/ previous onsite observations
Y		Blue-spotted Salamander/ vernal pools, hardwood swamp forested seep/visual, under logs
Y		Eastern Red-backed Salamander/ vernal pools, hardwood swamp forested seep/visual, under logs

Fish and Aquatic Life Habitat and Species Observations
List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc.

Observed	Potential	Species/Habitat
		See above for aquatic species (frog, turtle)

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

	Low	Medium	High	Exceptional
Invasive species cover	> 50%	20-50%	10-20%	<10%
Strata	Missing stratum(a) or bare due to invasive species	All strata present but reduced native species	All strata present and good assemblage of native species	All strata present, conservative species represented
NHI plant community ranking	S4	S3	S2	S1-S2 (S2 high quality)
Relative frequency of plant community in watershed	Abundant	Common	Uncommon	Rare
FQI (optional)	<13	13-23	23-32	>32
Mean C (optional)	<2.4	2.4-4.2	4.3-4.7	>4.7

***Note: separate plant communities are described independently**

Plant Species List (* dominant species) see attached complete list for additional species

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
*Fraxinus pennsylvanica**	Green ash	2		
*Fraxinus nigra**	Black ash	8		
*Lycopus uniflorus**	Water horehound	4		
*Symphyotrichum ontarionis**	Bottomland aster	6		
*Cinna arundinacea**	Wood reed	5		
*Phalaris arundinacea**	Reed canary grass	0		

SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities)

Hardwood Swamp occurs within the floodplain of the Black River and in basins on the State Park Property. Reed canary grass occurrences impact groundlayer diversity locally. Two or three strata occur: tree canopy of ash, occasional shrub layer of speckled alder; and a herbaceous groundlayer of moderate to high diversity. The community has a high species richness of 80 native species, owing to its large extent and variability of microhabitats.

SECTION 3: Condition Assessment of Wetland Assessment Area (AA) and Buffer (100 m)

Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
N	N	N	n/a	n/a	Filling, berms (non-impounding)
N	N	N	n/a	n/a	Drainage – tiles, ditches
N	Y	Y	M	UC	Hydrologic changes - high capacity wells, impounded water, increased runoff
Y	Y	Y	M	UC	Point source or stormwater discharge
Y	Y	Y	M	C	Polluted runoff
N	N	N	n/a	n/a	Pond construction
N	N	N	n/a	n/a	Agriculture – row crops
N	N	N	n/a	n/a	Agriculture – hay
N	N	Y	L	UC	Agriculture – pasture
N	Y	N	L	UC	Roads or railroad
N	Y	N	n/a	n/a	Utility corridor (above or subsurface)
N	N	N	n/a	n/a	Dams, dikes or levees
N	N	N	n/a	n/a	Soil subsidence, loss of soil structure
Y	Y	Y	M	UC	Sediment input
N	Y	Y	L	UC	Removal of herbaceous stratum – mowing, grading, earthworms, etc.
N	Y	Y	L	UC	Removal of tree or shrub strata – logging, unprescribed fire
Y	Y	Y	L	UC	Human trails – unpaved
N	Y	N	n/a	n/a	Human trails – paved
N	Y	Y	L	UC	Removal of large woody debris
Y	Y	Y	M	C	Cover of non-native and/or invasive species
N	Y	N	L	UC	Residential land use
N	Y	N	n/a	n/a	Urban, commercial or industrial use
N	Y	N	n/a	n/a	Parking lot
N	N	N	n/a	n/a	Golf course
N	N	N	n/a	n/a	Gravel pit
Y	Y	N	L	C	Recreational use (boating, ATVs, etc.)
N	Y	Y	L	UC	Excavation or soil grading
					Other (list below):

* L= Low, M = Medium, H = High
**Relative frequency of the impact in comparison to the general condition of wetlands and buffer areas in the region or watershed (C=Common, UC=Uncommon)

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The hardwood swamp is generally in moderate to good condition, with the majority of stressors either absent or limited to the
buffer. The most significant stressors appear to be siltation and excess nutrients from sources upstream in the Black R.
and tributaries, and the cover of non-native species, primarily reed canary grass. Historic agricultural use within the
buffer was probably limited to pasture, but current impacts are minimal. Recreational usage is limited to the unpaved trails
that run through the State Park Portion of the area.

SUMMARY OF FUNCTIONAL VALUES (for both components unless otherwise noted)

FUNCTION	SIGNIFICANCE				
	Low	Medium	High	Exceptional	NA
Floristic Integrity			Y		
Human Use Values		Y			
Wildlife Habitat			Y		
Fish and Aquatic Life Habitat			Y		
Shoreline Protection			Y		
Flood and Stormwater Storage			Y		
Water Quality Protection			Y		
Groundwater Processes			Y		

FUNCTION	RATIONALE
Floristic Integrity	The Hardwood Swamp has a high level of species diversity, presence of heterogeneous, adjacent plant communities, and presence of three vegetation strata. Highly conservative/rare plant species were lacking, and moderate to high levels of invasive species occur.
Human Use Values	Public access to the State Park portion of the site provides substantial value for recreation, hiking, and education, and archaeological resources on the site have historical significance. While there are trails through the wetland areas, they are probably underused by the public compared with the beach and dune areas.
Wildlife Habitat	The diversity of contiguous upland and wetland plant communities in a large, unfragmented block of habitat adds significance to the site's value for wildlife. A number of species were observed, are known to occur, or could occur onsite, including rare, protected, SGCN, and Priority Species, e.g. blue-winged teal.
Fish and Aquatic Life Habitat	The Black River and surrounding wetland and upland plant communities provide significant habitat for fish and aquatic life. The river and its tributaries have been impacted by agricultural and stormwater runoff, but retain a healthy aquatic plant community that is likely to support fish, waterfowl, and amphibians.
Shoreline Protection	The hardwood swamp provides vegetative cover along the banks of the Black River, offering shoreline protection, which has a significant positive effect for the river and downstream communities.
Flood and Stormwater Storage	The hardwood swamp within the Black River floodplain and surrounding areas provide significant value in storing floodwater and attenuating peak flows in the river, which may have a positive impact on reducing flooding downstream.
Water Quality Protection	The hardwood swamp surrounding the Black River provides significant value in protecting water quality within the Black River and Lake Michigan. Water quality in the Black River and its tributaries has been negatively impacted by runoff from residential and agricultural areas upstream.
Groundwater Processes	The hardwood swamp retains important groundwater function, including recharge and discharge, which has beneficial effects on surface and groundwater quality. Surface water inputs are probably significant during peak flows on the Black River, but groundwater is the primary source of hydrology year-round.

Section 4: Project Impact Assessment

Brief Project Description

The proposed project consists of a golf course on a 247-acre parcel adjacent to Lake Michigan, with an access road to the west, crossing a DNR-owned 135-acre parcel, and the Black River.

Expected Project Impacts (significance for both components unless otherwise noted)

IMPACT: describe (+ or -)	Permanence/Reversibility	Significance (Low, Medium, High)
Direct Impacts Road fill and construction of infrastructure is expected to directly impact wetland resulting in a permanent wetland loss.	Loss of wetland is expected to be permanent.	High
Secondary Impacts (including impacts which are indirectly attributable to the project) Road construction may alter wetland hydrology; increased runoff/nutrient loading; resulting in degradation of wetland habitats and water quality; wells may result in drawdown of water table.	Alterations to wetland hydrology, habitat, water quality, and water table are likely to be permanent.	High
Cumulative Impacts Additional development beyond the current proposed plan has the potential to impact additional wetlands.	Additional wetland loss would be permanent.	High
Spatial/Habitat Integrity Proposed project may result in fragmentation of habitat blocks.	Habitat fragmentation is expected to be permanent.	High
Rare Plant/Animal Communities/ Natural Areas Construction of golf course infrastructure may result in loss or degradation of rare plant communities including Great Lakes Ridge and Swale and interdunal wetland.	Loss of rare plant communities is expected to be permanent and irreversible; some species are likely to be supported by Hardwood Swamp.	Medium

Kohler Golf Course
Sheboygan County, Wisconsin

2014 Species List - Hardwood Swamp

Scientific Name	Common Name	Native	Physiognomy	Coefficient of Conservatism	Region 3 Wetland Coefficient
Acer rubrum	red maple	native	tree	3	0
Achillea millefolium	common yarrow	native	forb	1	3
Agrimonia gryposepala	common agrimony	native	forb	2	3
Alnus incana	speckled alder	native	tree	4	-3
Amphicarpaea bracteata	american hog-peanut	native	vine	5	0
Arisaema triphyllum	jack-in-the-pulpit	native	forb	5	0
Asclepias incarnata	marsh milkweed	native	forb	5	-5
Asclepias syriaca	common milkweed	native	forb	1	5
Athyrium angustum	common lady fern	native	fern	5	0
Berberis thunbergii	japanese barberry	non-native	shrub	0	3
Betula allegheniensis	yellow birch	native	tree	7	0
Betula papyrifera	paper birch	native	tree	3	3
Bidens frondosa	common beggar-ticks	native	forb	1	-3
Blephilia hirsuta	hairy wood mint	native	forb	7	3
Boehmeria cylindrica	small-spike false nettle	native	forb	6	-5
Bromus latiglumis	ear-leaved brome	native	grass	6	-3
Calamagrostis canadensis	blue-joint grass	native	grass	5	-5
Carex cristatella	crested oval sedge	native	sedge	4	-3
Carex intumescens	greater bladder sedge	native	sedge	5	-3
Carex lupulina	common hop sedge	native	sedge	6	-5
Carex radiata	straight-styled wood sedge	native	sedge	4	0
Carex stricta	hummock sedge	native	sedge	7	-5
Carex tuckermanii	bent-seeded hop sedge	native	sedge	8	-5
Cicuta maculata	common water-hemlock	native	forb	6	-5
Cinna arundinacea	common wood-reed	native	grass	5	-3
Cirsium arvense	canada thistle	non-native	forb	0	3
Clematis virginiana	virgins-bower	native	vine	4	0
Cornus alba	red-osier dogwood	native	shrub	3	-3
Crataegus punctata	dotted hawthorn	native	tree	2	5
Cryptotaenia canadensis	canadian honewort	native	forb	4	0
Dactylis glomerata	orchard grass	non-native	grass	0	3
Dryopteris carthusiana	spinulose wood fern	native	fern	7	-3
Elymus virginicus	virginia wild-rye	native	grass	6	-3
Epilobium coloratum	cinnamon willow-herb	native	forb	3	-5
Equisetum arvense	common horsetail	native	fern ally	1	0
Eurybia macrophylla	large-leaved aster	native	forb	4	5
Eutrochium maculatum	spotted joe-pye-weed	native	forb	4	-5
Fagus grandifolia	american beech	native	tree	8	3
Fragaria virginiana	wild strawberry	native	forb	1	3
Fraxinus nigra	black ash	native	tree	8	-3
Fraxinus pennsylvanica	green ash	native	tree	2	-3
Geum canadense	white avens	native	forb	2	0
Glyceria striata	fowl manna grass	native	grass	4	-5
Helenium autumnale	common sneezeweed	native	forb	4	-3
Hesperis matronalis	dames rocket	non-native	forb	0	3
Ilex verticillata	common winterberry	native	shrub	7	-3

Kohler Golf Course
Sheboygan County, Wisconsin

2014 Species List - Hardwood Swamp

Scientific Name	Common Name	Native	Physiognomy	Coefficient of Conservatism	Region 3 Wetland Coefficient
Impatiens capensis	orange jewelweed	native	forb	2	-3
Iris virginica	southern blue flag	native	forb	5	-5
Juncus effusus	soft rush	native	rush	4	-5
Juniperus communis	common juniper	native	shrub	3	3
Laportea canadensis	canadian wood-nettle	native	forb	4	-3
Leersia oryzoides	rice cut grass	native	grass	3	-5
Lobelia siphilitica	great blue lobelia	native	forb	5	-3
Lycopus uniflorus	northern bugleweed	native	forb	4	-5
Matteuccia struthiopteris	ostrich fern	native	fern	5	0
Mentha arvensis	wild mint	native	forb	3	-3
Myosotis scorpioides	common forget-me-not	non-native	forb	0	-5
Onoclea sensibilis	sensitive fern	native	fern	5	-3
Osmorhiza longistylis	smooth sweet cicely	native	forb	4	3
Osmunda claytoniana	interrupted fern	native	fern	6	0
Parthenocissus quinquefolia	virginia creeper	native	vine	5	3
Pedicularis lanceolata	fen betony	native	forb	8	-3
Phalaris arundinacea	reed canary grass	non-native	grass	0	-3
Phleum pratense	timothy	non-native	grass	0	3
Picea glauca	white spruce	native	tree	7	3
Pinus strobus	eastern white pine	native	tree	5	3
Populus deltoides	eastern cottonwood	native	tree	2	0
Populus tremuloides	quaking aspen	native	tree	2	0
Prunella vulgaris ssp. vulgaris	european heal-all	non-native	forb	0	0
Prunus serotina	wild black cherry	native	tree	3	3
Quercus macrocarpa	bur oak	native	tree	5	3
Ranunculus acris	tall european buttercup	non-native	forb	0	0
Ranunculus hispidus	hispid buttercup	native	forb	6	0
Ranunculus recurvatus	hooked buttercup	native	forb	5	-3
Rosa multiflora	multiflora invasive rose	non-native	shrub	0	3
Rubus allegheniensis	common blackberry	native	shrub	2	3
Rubus idaeus var. strigosus	american red raspberry	native	shrub	3	3
Sanicula odorata	cluster sanicle	native	forb	3	0
Sium suave	hemlock water-parsnip	native	forb	5	-5
Solanum dulcamara	bittersweet nightshade	non-native	vine	0	0
Solidago flexicaulis	zigzag goldenrod	native	forb	6	3
Solidago gigantea	giant goldenrod	native	forb	3	-3
Spiraea alba	white meadowsweet	native	shrub	4	-3
Symphyotrichum novae-angliae	new england aster	native	forb	3	-3
Symphyotrichum ontarionis	bottomland aster	native	forb	6	0
Symplocarpus foetidus	skunk-cabbage	native	forb	8	-5
Taraxacum officinale	common dandelion	non-native	forb	0	3
Thalictrum dasycarpum	tall meadow-rue	native	forb	4	-3
Thuja occidentalis	eastern white cedar	native	tree	9	-3
Urtica dioica	stinging nettle	native	forb	1	0
Viburnum lentago	nannyberry	native	tree	4	0
Viola sororia	common blue violet	native	forb	3	0

FQA Metrics	Species Richness	Mean C Value	FQI
Native	80	4.4	39.4
All Species	92	3.8	36.4

Wisconsin Department of Natural Resources
Wetland Rapid Assessment Methodology – version 2.0

WETLAND IDENTIFICATION	
Project name: Kohler Golf Course	Evaluator(s): M. Curran, J. Sulman, M. Knickelbine
File #: 193703078	Date of visit(s): 9/22, 9/24, 10/2/14
Location: PLSS: T14N, R23E S14 NW4 Lat:_____ Long: _____ County: Sheboygan Town/City/Village: Wilson	Ecological Landscape: Central Lake Michigan Coastal Watershed: Black River, SH02
SITE DESCRIPTION	
Soils: Mapped Type(s): Gb, Ag, Pa, An Field Verified: Y	WWI Class: T3K Wetland Type(s): Hardwood Swamp, degraded Wetland Size: 18.9 acres | Wetland Area Impacted: NA Vegetation/ Plant Community Description(s): The degraded Hardwood Swamp is characterized by green ash canopy and a dense shrub layer dominated by invasive Japanese barberry and multiflora rose, and an invasive-dominated groundlayer. This community occurs west of the Black River, in depressions and drainageways on the State Property.
Hydrology: saturation, dry season water table and geomorphic position within shallow depressions are typical, as evidenced by saturation at 9 in and water table at 13 in., measured on 8/13/2014.	

SITE MAP

See Attached Figure

SECTION 1: Functional Value Assessment

HU	Y/N	Potential	**Human Use Values: recreation, culture, education, science, natural scenic beauty**
1	Y		Used for recreation (hunting, birding, hiking, etc.). List: hunting, birding, hiking; state park uses
2	Y		Used for educational or scientific purposes
3	Y		Visually or physically accessible to public
4	Y		Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	Y		In or adjacent to RED FLAG areas List: State park; Lake Michigan
6	Y*		Supports or provides habitat for endangered, threatened or special concern species
7	Y*		In or adjacent to archaeological or cultural resource site
WH			**Wildlife Habitat**
1	Y		Wetland and contiguous habitat >10 acres
2	Y		3 or more strata present (>10% cover)
3	Y		Within or adjacent to habitat corridor or established wildlife habitat area
4	Y		100 m buffer – natural land cover ≥50%(south) 75% (north) intact
5	Y		Occurs in a Joint Venture priority township
6	Y		Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.)
7	Y*		Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans
8	Y		Part of a large habitat block that supports area sensitive species
9	Y		Ephemeral pond with water present ≥ 45 days
10	Y		Standing water provides habitat for amphibians and aquatic invertebrates
11	Y		Seasonally exposed mudflats present
12	Y		Provides habitat scarce in the area (urban, agricultural, etc.)
FA			**Fish and Aquatic Life Habitat**
1	Y		Wetland is connected or contiguous with perennial stream or lake
2	Y		Standing water provides habitat for amphibians and aquatic invertebrates
3	N	Y	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
4	Y*		Vegetation is inundated in spring
SP			**Shoreline Protection**
1	Y		Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable
2	N		Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows – if no, not applicable
3	Y		Densely rooted emergent or woody vegetation
ST			**Storm and Floodwater Storage**
1	Y		Basin wetland, constricted outlet, has through-flow or is adjacent to a stream
2	Y		Water flow through wetland is NOT channelized
3	Y		Dense, persistent vegetation
4	Y*		Evidence of flashy hydrology
5	Y		Point or non-point source inflow
6	Y		Impervious surfaces cover >10% of land surface within the watershed
7	Y		Within a watershed with ≤10% wetland
8	Y		Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event
WQ			**Water Quality Protection**
1	N		Provides substantial storage of storm and floodwater based on previous section
2	Y		Basin wetland or constricted outlet
3	Y		Water flow through wetland is NOT channelized
4	Y		Vegetated wetland associated with a lake or stream
5	Y		Dense, persistent vegetation
6	Y*		Signs of excess nutrients, such as algae blooms, heavy macrophyte growth
7	Y*		Stormwater or surface water from agricultural land is major hydrology source
8	Y		Discharge to surface water
9	Y		Natural land cover in 100m buffer area < 50%
GW			**Groundwater Processes**
1	Y*		Springs, seeps or indicators of groundwater present
2	N		Location near a groundwater divide or a headwater wetland
3	Y		Wetland remains saturated for an extended time period with no additional water inputs
4	Y*		Wetland soils are organic
5	N*		Wetland is within a wellhead protection area

Section 1 Comments (Refer to Section 1 numbers)

*see comment below
FA 4. Portions of the community are inundated
HU 6. TES species occur elsewhere onsite; wetlands within site assumed to provide or support TES species habitat functions.
HU 7. Archaeological resources documented in concurrent study.
WH 7. SGCN/Priority Species with suitable habitat occur in adjacent wetlands, e.g. blue-winged teal
ST 4. Tributary stream draining residential from northwest has signs of flashy hydrology.
WQ 6. Dense reed canary grass may indicate excess nutrient inputs from upstream sources; but no excess algae/macrophytes.
WQ 7. Upstream inputs into Black River include surface runoff from agricultural and residential areas.
GW 1. Indicators of groundwater include saturation, and dry season water table.
GW 4. Wetland soils include organic and mineral components.
GW 5. Sheboygan Water Utilities use Lake Michigan as source.

Wildlife Habitat and Species Observation (including amphibians and reptiles)
List: direct observation, tracks, scat, other sign; type of habitat: nesting, migratory, winter, etc.

Observed	Potential	Species/Habitat/Comments
Y		Spring peeper/hardwood swamp/vocalizations
N	Y	Pileated woodpecker/ pine plantation/visual
N	Y	Black-capped chickadee/ pine plantation/visual
Y		Wood frog/hardwood swamp, pine plantation/visual
N	Y	Common garter snake/ pine plantation/visual
N	Y	Blue jay/pine plantation/visual
N	Y	Northern long-eared bat/ mature tree canopy near water
N	Y	Red-shouldered hawk/hardwood swamp
Y		White tailed deer/wetland and upland, various habitat types/visual, tracks, browse
N	Y	Bald eagle/near water /previous onsite observations

Fish and Aquatic Life Habitat and Species Observations
List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc.

Observed	Potential	Species/Habitat

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

	Low	Medium	High	Exceptional
Invasive species cover	> 50%	20-50%	10-20%	<10%
Strata	Missing stratum(a) or bare due to invasive species	All strata present but reduced native species	All strata present and good assemblage of native species	All strata present, conservative species represented
NHI plant community ranking	S4	S3	S2	S1-S2 (S2 high quality)
Relative frequency of plant community in watershed	Abundant	Common	Uncommon	Rare
FQI (optional)	<13	13-23	23-32	>32
Mean C (optional)	<2.4	2.4-4.2	4.3-4.7	>4.7

***Note: separate plant communities are described independently**

Plant Species List (* dominant species only) see attached list of additional species for Hardwood Swamp

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
*Fraxinus pennsylvanica**	Green ash	2		
*Phalaris arundinacea**	Reed canary grass	0		
*Berberis thunbergii**	Japanese barberry	0		
*Hesperis matronalis**	Dame's rocket	0		
*Rosa multiflora**	Multiflora rose	0		

SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities)

The community is early-successional, with an open tree canopy and shrub and herb strata dominated by invasive species.
This community has been impacted by past agricultural land use and current upstream land use.
Native plant diversity is low, and no conservative or rare species were identified in the degraded hardwood swamp.

SECTION 3: Condition Assessment of Wetland Assessment Area (AA) and Buffer (100 m)

Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
N	N	Y	L	UC	Filling, berms (non-impounding)
N	N	N	n/a	n/a	Drainage – tiles, ditches
Y	Y	Y	M	C	Hydrologic changes - high capacity wells, impounded water, increased runoff
Y	Y	Y	M	C	Point source or stormwater discharge
Y	Y	Y	L	C	Polluted runoff
N	N	N	n/a	n/a	Pond construction
N	N	N	n/a	n/a	Agriculture – row crops
N	N	N	n/a	n/a	Agriculture – hay
N	N	Y	L	UC	Agriculture – pasture
Y	Y	Y	L	UC	Roads or railroad
N	Y	N	n/a	n/a	Utility corridor (above or subsurface)
N	N	N	n/a	n/a	Dams, dikes or levees
N	N	N	n/a	n/a	Soil subsidence, loss of soil structure
N	Y	Y	M	UC	Sediment input
N	Y	Y	L	UC	Removal of herbaceous stratum – mowing, grading, earthworms, etc.
N	Y	Y	L	UC	Removal of tree or shrub strata – logging, unprescribed fire
Y	Y	Y	L	UC	Human trails – unpaved
N	Y	N	n/a	n/a	Human trails – paved
N	Y	Y	L	UC	Removal of large woody debris
Y	Y	Y	H	C	Cover of non-native and/or invasive species
N	Y	Y	L	UC	Residential land use
N	Y	N	n/a	n/a	Urban, commercial or industrial use
N	Y	N	n/a	n/a	Parking lot
N	N	N	n/a	n/a	Golf course
N	N	N	n/a	n/a	Gravel pit
Y	Y	Y	M	C	Recreational use (boating, ATVs, etc.)
N	Y	Y	L	UC	Excavation or soil grading
					Other (list below):

* L= Low, M = Medium, H = High
**Relative frequency of the impact in comparison to the general condition of wetlands and buffer areas in the region or watershed (C=Common, UC=Uncommon)

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The hardwood swamp-degraded is in fair to poor condition, resulting from historical and current stressors.
The most significant stressors appear to be inflows of silt and excess nutrients from sources upstream,
the cover of non-native species, and the legacy of historic agricultural use.
Recreational usage is limited to the unpaved trails that run through the area.

SUMMARY OF FUNCTIONAL VALUES

FUNCTION	SIGNIFICANCE				
	Low	Medium	High	Exceptional	NA
Floristic Integrity	Y				
Human Use Values		Y			
Wildlife Habitat		Y			
Fish and Aquatic Life Habitat	Y				
Shoreline Protection	Y				
Flood and Stormwater Storage		Y			
Water Quality Protection		Y			
Groundwater Processes		Y			

FUNCTION	RATIONALE
Floristic Integrity	There is a low level of floristic diversity, and vegetation is primarily early successional with an open tree canopy and dense shrub layer. Highly conservative/rare plant species were lacking, and high levels of invasive species dominate the community.
Human Use Values	Public access to the State Park property allows for recreation, hiking. While there are trails through the wetland areas, the degraded hardwood swamp offers limited recreational potential.
Wildlife Habitat	The combination of a diversity of contiguous upland and wetland plant communities in a large, unfragmented block of habitat adds significance to the site's value for wildlife. The presence of tree and shrub canopy provides suitable habitat for a variety of woodland bird and mammal species.
Fish and Aquatic Life Habitat	The Black River and surrounding wetland and upland plant communities provide significant habitat for fish and aquatic life. Tributary stream adjacent to this community has been impacted by stormwater runoff, and provides low quality aquatic habitat.
Shoreline Protection	The wetlands adjacent to the Black River tributary provide relatively consistent vegetative cover along the banks, offering limited shoreline protection and erosion control along a small section of bank, which has a positive effect for the river and downstream communities.
Flood and Stormwater Storage	The degraded hardwood swamp adjacent to the Black River tributary and in depressions west of the river offer limited value in storing and attenuating peak flows in the river, which may have a small positive impact on reducing flooding downstream.
Water Quality Protection	The degraded hardwood swamps adjacent to the Black River tributary and in depressions west of the river provide limited function in protecting water quality by allowing infiltration and absorbing runoff. Water quality in the Black River and its tributaries has been negatively impacted by runoff from residential and agricultural areas upstream.
Groundwater Processes	The degraded hardwood swamp retains groundwater functions, including groundwater recharge and discharge, which have beneficial effects on surface and groundwater quality. However, historical agricultural use and drainage may have altered groundwater processes in the depressions west of the river.

Section 4: Project Impact Assessment

Brief Project Description

The proposed project consists of a golf course on a 247-acre parcel adjacent to Lake Michigan, with an access road to the west, crossing a DNR-owned 135-acre parcel, and the Black River.

Expected Project Impacts

IMPACT: describe (+ or -)	Permanence/Reversibility	Significance (Low, Medium, High)
Direct Impacts Road fill and construction of infrastructure is expected to directly impact wetland resulting in a permanent wetland loss.	Loss of wetland is expected to be permanent.	Medium
Secondary Impacts (including impacts which are indirectly attributable to the project) Road construction may alter wetland hydrology; increased runoff/nutrient loading; resulting in degradation of wetland habitats and water quality; wells may result in drawdown of water table.	Alterations to wetland hydrology, habitat, water quality, and water table are likely to be permanent.	Medium
Cumulative Impacts Additional development beyond the current proposed plan has the potential to impact additional wetlands.	Additional wetland loss would be permanent.	
Spatial/Habitat Integrity Proposed project may result in fragmentation of habitat blocks.	Habitat fragmentation would be permanent.	Medium
Rare Plant/Animal Communities/ Natural Areas No rare Plant/Animal Communities were identified in the degraded Hardwood Swamp, and habitat value of the community is likely limited.	Loss of rare plant communities is not expected to occur within the degraded hardwood swamp community type.	Low

Wisconsin Department of Natural Resources
Wetland Rapid Assessment Methodology – version 2.0

WETLAND IDENTIFICATION	
Project name: Kohler Golf Course	Evaluator(s): M. Curran, J. Sulman, M. Knickelbine
File #: 193703078	Date of visit(s): 9/22, 9/24, 10/2/14
Location: PLSS: T14N, R23E S14 NW4; SW4 Lat:_____ Long: _____ County: Sheboygan Town/City/Village: Wilson	Ecological Landscape: Central Lake Michigan Coastal Watershed: Black River, SH02
SITE DESCRIPTION	
Soils: Mapped Type(s): Gb, Ag, Hu Field Verified: Y	WWI Class: T3K Wetland Type(s): Hardwood Swamp (Eggers & Reed), Forested Seep (NHI) Wetland Size: 13.1 acres | Wetland Area Impacted: NA Vegetation/Plant Community Description(s): This community occurs on gentle slopes along edges of the Black River floodplain. Canopy dominants include yellow birch, green ash, red maple and beech. Understory is open, with skunk cabbage and ostrich fern. Tip ups are frequent, leading to formation of cradle knoll microtopography.
Hydrology: seasonal or permanent high water table and/or saturation, as evidenced by water table at depth of 8", and surface saturation measured on 8/13/14. Occurrence of skunk cabbage, surface saturation indicates groundwater discharge.	

SITE MAP

See Attached Figure

SECTION 1: Functional Value Assessment

HU	Y/N	Potential	**Human Use Values: recreation, culture, education, science, natural scenic beauty**
1	Y		Used for recreation (hunting, birding, hiking, etc.). List: hunting, birding, hiking; state park uses
2	Y		Used for educational or scientific purposes
3	Y*		Visually or physically accessible to public
4	Y		Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	Y		In or adjacent to RED FLAG areas List: State park; Lake Michigan
6	Y*		Supports or provides habitat for endangered, threatened or special concern species
7	Y*		In or adjacent to archaeological or cultural resource site
WH			**Wildlife Habitat**
1	Y		Wetland and contiguous habitat >10 acres
2	Y		3 or more strata present (>10% cover)
3	Y		Within or adjacent to habitat corridor or established wildlife habitat area
4	Y		100 m buffer – natural land cover ≥50%(south) 75% (north) intact
5	Y		Occurs in a Joint Venture priority township
6	Y		Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.)
7	Y*		Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans
8	Y		Part of a large habitat block that supports area sensitive species
9	Y		Ephemeral pond with water present ≥ 45 days
10	Y		Standing water provides habitat for amphibians and aquatic invertebrates
11	N		Seasonally exposed mudflats present
12	Y*		Provides habitat scarce in the area (urban, agricultural, etc.)
FA			**Fish and Aquatic Life Habitat**
1	Y		Wetland is connected or contiguous with perennial stream or lake
2	Y		Standing water provides habitat for amphibians and aquatic invertebrates
3	N	Y	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
4	N		Vegetation is inundated in spring
SP			**Shoreline Protection**
1	Y		Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable
2	N		Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows – if no, not applicable
3	Y		Densely rooted emergent or woody vegetation
ST			**Storm and Floodwater Storage**
1	Y		Basin wetland, constricted outlet, has through-flow or is adjacent to a stream
2	Y		Water flow through wetland is NOT channelized
3	Y		Dense, persistent vegetation
4	N		Evidence of flashy hydrology
5	Y		Point or non-point source inflow
6	Y		Impervious surfaces cover >10% of land surface within the watershed
7	Y		Within a watershed with ≤10% wetland
8	Y		Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event
WQ			**Water Quality Protection**
1	N		Provides substantial storage of storm and floodwater based on previous section
2	N		Basin wetland or constricted outlet
3	Y		Water flow through wetland is NOT channelized
4	Y		Vegetated wetland associated with a lake or stream
5	Y		Dense, persistent vegetation
6	N		Signs of excess nutrients, such as algae blooms, heavy macrophyte growth
7	N		Stormwater or surface water from agricultural land is major hydrology source
8	Y		Discharge to surface water
9	Y		Natural land cover in 100m buffer area < 50%
GW			**Groundwater Processes**
1	Y*		Springs, seeps or indicators of groundwater present
2	N		Location near a groundwater divide or a headwater wetland
3	Y		Wetland remains saturated for an extended time period with no additional water inputs
4	Y*		Wetland soils are organic
5	N*		Wetland is within a wellhead protection area

Section 1 Comments (Refer to Section 1 numbers)

*see comment below
HU 3. State property west of the Black River is open to the public.
HU 6. TES species occurences include blue-winged teal; wetlands provide or support TES species habitat functions.
HU 7. Archaeological resources documented in concurrent study.
WH 7. SGCN/Priority Species with suitable habitat include blue-winged-teal, tufted titmouse
WH 12. Forested Seep is uncommon within surrounding agricultural and urban context.
GW 1. Indicators of groundwater discharge include vegetation, saturation at or near the surface.
GW 4. Wetland soils include organic and mineral components.
GW 5. Sheboygan Water Utilities use Lake Michigan as source.

Wildlife Habitat and Species Observation (including amphibians and reptiles)
List: direct observation, tracks, scat, other sign; type of habitat: nesting, migratory, winter, etc.

Observed	Potential	Species/Habitat/Comments
Y		Spring peeper/hardwood swamp/vocalizations
N	Y	Pileated woodpecker/ pine plantation/visual
N	Y	Black-capped chickadee/ pine plantation/visual
Y		Wood frog/hardwood swamp, pine plantation/visual
N	Y	Common garter snake/ pine plantation/visual
N	Y	Blue jay/pine plantation/visual
N	Y	Northern long-eared bat/ habitats with mature tree canopy, nearby water
N	Y	Red-shouldered hawk/hardwood swamp
N	Y	Blue-winged teal/Black River channel/visual
N	Y	Snapping turtle/Black River channel/visual
Y		White tailed deer/wetland and upland, various habitat types/visual, tracks, browse
N	Y	Bald eagle/near water/ previous onsite observations
Y		Blue-spotted Salamander/ hardwood swamp forested seep/visual, under logs
Y		Eastern Red-backed Salamander/ hardwood swamp forested seep/visual, under logs

Fish and Aquatic Life Habitat and Species Observations
List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc.

Observed	Potential	Species/Habitat
		See above for aquatic species (frog, turtle)

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

	Low	Medium	High	Exceptional
Invasive species cover	> 50%	20-50%	10-20%	<10%
Strata	Missing stratum(a) or bare due to invasive species	All strata present but reduced native species	All strata present and good assemblage of native species	All strata present, conservative species represented
NHI plant community ranking	S4	S3 (HS)	S2	S1-S2 (S2 high quality)
Relative frequency of plant community in watershed	Abundant	Common	Uncommon	Rare
FQI (optional)	<13	13-23	23-32	>32
Mean C (optional)	<2.4	2.4-4.2	4.3-4.7	>4.7

***Note: separate plant communities are described independently**

Plant Species List (* dominant species) see attached complete list for additional species

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
*Fraxinus pennsylvanica**	Green ash	2		
*Fraxinus nigra**	Black ash	8		
*Betula allegheniensis**	Yellow birch	7		
*Acer saccharum**	Sugar maple	5		
*Fagus grandifolia**	American beech	8		
*Symplocarpus foetidus**	Skunk cabbage	8		
*Cinna arundinacea**	Wood reed	5		
*Athyrium angustum**	Lady fern	5		
*Matteuccia struthiopteris**	Ostrich fern	5		
*Lycopus uniflorus**	Water horehound	4		

SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities)

The Forested Seep occurs on the upslope edge of the Black R. floodplain, and is characterized by seepage and high water table. This community has a mature canopy of hydrophytic and nonhydrophytic tree species including sugar maple, American beech, green and black ash, and yellow birch. The groundlayer is relatively open and includes skunk cabbage and ostrich fern. Shallow rooting of the trees leads to frequent tip ups and the development of cradle-knoll microtopography, which provides microhabitats for varied plant and animal species. There is low coverage by invasive species.

SECTION 3: Condition Assessment of Wetland Assessment Area (AA) and Buffer (100 m)

Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
N	Y	N	L	UC	Filling, berms (non-impounding)
N	N	N	n/a	n/a	Drainage – tiles, ditches
N	Y	N	L	UC	Hydrologic changes - high capacity wells, impounded water, increased runoff
Y	Y	Y	L	UC	Point source or stormwater discharge
Y	Y	Y	L	UC	Polluted runoff
N	N	N	n/a	n/a	Pond construction
N	N	N	n/a	n/a	Agriculture – row crops
N	N	N	n/a	n/a	Agriculture – hay
N	N	N	n/a	n/a	Agriculture – pasture
N	Y	N	n/a	n/a	Roads or railroad
N	Y	N	n/a	n/a	Utility corridor (above or subsurface)
N	N	N	n/a	n/a	Dams, dikes or levees
N	N	N	n/a	n/a	Soil subsidence, loss of soil structure
N	Y	N	L	UC	Sediment input
N	Y	Y	L	UC	Removal of herbaceous stratum – mowing, grading, earthworms, etc.
N	Y	Y	L	UC	Removal of tree or shrub strata – logging, unprescribed fire
Y	Y	Y	L	UC	Human trails – unpaved
N	Y	N	L	UC	Human trails – paved
N	Y	Y	L	UC	Removal of large woody debris
Y	Y	Y	L	UC	Cover of non-native and/or invasive species
N	Y	N	L	UC	Residential land use
N	Y	N	L	UC	Urban, commercial or industrial use
N	Y	N	L	UC	Parking lot
N	N	N	n/a	n/a	Golf course
N	N	N	n/a	n/a	Gravel pit
Y	Y	Y	M	C	Recreational use (boating, ATVs, etc.)
N	N	Y	L	UC	Excavation or soil grading
					Other (list below):

* L= Low, M = Medium, H = High
**Relative frequency of the impact in comparison to the general condition of wetlands and buffer areas in the region or watershed (C=Common, UC=Uncommon)

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The forested seep is generally intact, with the majority of stressors either absent or limited to the buffer.
The most significant stressors appear to be the cover of non-native species, primarily barberry, and excessive deer browse.
Recreational usage is limited to the unpaved trails that run through the State Park Portion of the area.
The forested seep has relatively minimal human disturbance. The tree canopy consists of a diverse mix of species. Natural
disturbances, especially windthrow, have led to development of a complex microtopography of cradles and knolls.
This provides increased microhabitat diversity, which is important to regeneration of yellow birch, and provides ideal habitat
for salamanders.

SUMMARY OF FUNCTIONAL VALUES (for both components unless otherwise noted)

FUNCTION	SIGNIFICANCE				
	Low	Medium	High	Exceptional	NA
Floristic Integrity			Y		
Human Use Values			Y		
Wildlife Habitat			Y		
Fish and Aquatic Life Habitat			Y		
Shoreline Protection			Y		
Flood and Stormwater Storage		Y			
Water Quality Protection			Y		
Groundwater Processes			Y		

FUNCTION	RATIONALE
Floristic Integrity	The forested seep has a high diversity of canopy and groundlayer species, and conservative species associated with groundwater discharge are represented. Invasives coverage is low. This community is part of an intact transition between adjacent hardwood swamp communities and northern mesic forest uplands.
Human Use Values	Public access to the State Park portion of the site provides opportunities for recreation, hiking, and education, and archaeological resources on the site have historical significance.
Wildlife Habitat	The diversity of contiguous upland and wetland plant communities in a large, unfragmented block of habitat adds significance to the site's value for wildlife. A number of species of fauna were observed, are known to occur, or could occur onsite, including rare, protected, SGCN, and Priority Species. The forested seep provides exceptional habitat for amphibians, especially salamanders.
Fish and Aquatic Life Habitat	The Black River and surrounding wetland and upland plant communities provide significant habitat for fish and aquatic life. The forested seep provides value to aquatic life that depends on high quality adjacent wetlands for habitat.
Shoreline Protection	The forested seep adjacent to the Black River provides essentially unbroken vegetative cover along the banks, offering shoreline protection. Forested Seep has limited extent adjacent to the Black River.
Flood and Stormwater Storage	The forested seep along the upslope edge of the Black River floodplain provides limited value in storing and attenuating peak flows in the river, given its small size and linear nature.
Water Quality Protection	The forested seep surrounding the Black River provides sustained groundwater discharge to the Black River, which helps protect and maintain water quality and volume to the Black River year round.
Groundwater Processes	The forested seep has retains essentially intact groundwater function, as evidenced by the presence of a zone of groundwater discharge, indicators of groundwater discharge such as skunk cabbage, and a lack of sediment and nutrient inputs.

Section 4: Project Impact Assessment

Brief Project Description

The proposed project consists of a golf course on a 247-acre parcel adjacent to Lake Michigan, with an access road to the west, crossing a DNR-owned 135-acre parcel, and the Black River.

Expected Project Impacts (significance for both components unless otherwise noted)

IMPACT: describe (+ or -)	Permanence/Reversibility	Significance (Low, Medium, High)
Direct Impacts Road fill and construction of buildings, parking lots and infrastructure is expected to directly impact wetland resulting in a permanent wetland loss.	Loss of wetland is expected to be permanent.	High
Secondary Impacts (including impacts which are indirectly attributable to the project) Road construction may alter wetland hydrology; increased runoff/nutrient loading; resulting in degradation of wetland habitats and water quality; wells may result in drawdown of water table.	Alterations to wetland hydrology, habitat, water quality, and water table are likely to be permanent.	High
Cumulative Impacts Additional development beyond the current proposed plan has the potential to impact additional wetlands.	Additional wetland loss would be permanent.	
Spatial/Habitat Integrity Construction of roads, paths and fairways is expected to result in fragmentation of habitat blocks.	Habitat fragmentation is expected to be permanent.	High
Rare Plant/Animal Communities/ Natural Areas Construction of golf course infrastructure is expected to result in loss or degradation of rare plant communities including Great Lakes Ridge and Swale and interdunal wetland.	Loss of rare plant communities is expected to be permanent and irreversible.	High

Kohler Golf Course
Sheboygan County, Wisconsin

2014 Species List - Hardwood Swamp/Forested Seep

Scientific Name	Common Name	Native	Physiognomy	Coefficient of Conservatism	Region 3 Wetland Coefficient
Acer saccharum	sugar maple	native	tree	5	3
Athyrium angustum	common lady fern	native	fern	5	0
Berberis thunbergii	japanese barberry	non-native	shrub	0	3
Betula allegheniensis	yellow birch	native	tree	7	0
Betula papyrifera	paper birch	native	tree	3	3
Carex eburnea	bristle-leaf sedge	native	sedge	8	3
Carex intumescens	greater bladder sedge	native	sedge	5	-3
Carex pensylvanica	pennsylvania sedge	native	sedge	3	5
Carex stricta	hummock sedge	native	sedge	7	-5
Carpinus caroliniana	musclewood	native	tree	6	0
Chelone glabra	turtlehead	native	forb	7	-5
Cinna arundinacea	common wood-reed	native	grass	5	-3
Coptis trifolia	three-leaved gold-thread	native	forb	8	-3
Elymus virginicus	virginia wild-rye	native	grass	6	-3
Epifagus virginiana	beech-drops	native	forb	9	5
Epipactis helleborine	broad-leaved helleborine	non-native	forb	0	5
Eupatorium perfoliatum	common boneset	native	forb	6	-3
Fagus grandifolia	american beech	native	tree	8	3
Fraxinus nigra	black ash	native	tree	8	-3
Fraxinus pennsylvanica	green ash	native	tree	2	-3
Hamamelis virginiana	american witch-hazel	native	shrub	7	3
Hesperis matronalis	dames rocket	non-native	forb	0	3
Ilex verticillata	common winterberry	native	shrub	7	-3
Impatiens capensis	orange jewelweed	native	forb	2	-3
Iris versicolor	northern blue flag	native	forb	5	-5
Laportea canadensis	canadian wood-nettle	native	forb	4	-3
Lycopus uniflorus	northern bugleweed	native	forb	4	-5
Matteuccia struthiopteris	ostrich fern	native	fern	5	0
Mentha arvensis	wild mint	native	forb	3	-3
Onoclea sensibilis	sensitive fern	native	fern	5	-3
Osmunda spectabilis	american royal fern	native	fern	7	-5
Osmundastrum cinnamomeum	cinnamon fern	native	fern	7	-3
Pilea pumila	canadian clearweed	native	forb	3	-3
Quercus macrocarpa	bur oak	native	tree	5	3
Quercus rubra	northern red oak	native	tree	5	3
Ranunculus acris	tall european buttercup	non-native	forb	0	0
Ranunculus hispidus	hispid buttercup	native	forb	6	0
Rhamnus cathartica	common invasive buckthorn	non-native	tree	0	0
Rumex obtusifolius	bitter dock	non-native	forb	0	0
Schizachne purpurascens	false melic grass	native	grass	7	3
Scirpus cyperinus	wool-grass	native	sedge	4	-5
Symplocarpus foetidus	skunk-cabbage	native	forb	8	-5
Thalictrum dasycarpum	tall meadow-rue	native	forb	4	-3
Thelypteris palustris	eastern marsh fern	native	fern	7	-3
Ulmus americana	american elm	native	tree	3	-3

FQA Metrics	Species Richness	Mean C Value	FQI
Native	39	5.5	34.3
All Species	45	4.8	32.2

Wisconsin Department of Natural Resources
Wetland Rapid Assessment Methodology – version 2.0

WETLAND IDENTIFICATION	
Project name: Kohler Golf Course	Evaluator(s): M. Curran, J. Sulman, M. Knickelbine
File #: 193703078	Date of visit(s): 9/22, 9/24, 10/2/14
Location: PLSS: T14N, R23E S14 NE4; SE4 Lat:_____ Long: _____ County: Sheboygan Town/City/Village: Wilson	Ecological Landscape: Central Lake Michigan Coastal Watershed: Black River, SH02
SITE DESCRIPTION	
Soils: Mapped Type(s): Dn Field Verified: Soils were hydric, consistent with the Gb map unit. These wetlands are small inclusions within the mapped Dune Land unit.	WWI Class: unmapped Wetland Type(s): Interdunal Wetland (NHI) Wetland Size: 0.3 acres Wetland Area Impacted: NA
Hydrology: seasonal high water table, saturation and dry-season water table occur, as evidenced by water table at 4" and saturation at surface, measured on 9/19/14. Hydrology appears to be highly seasonal.	Vegetation/Plant Community Description(s): The Interdunal Wetland occurs in concave positions in interdunal swale landforms with sandy soil. The vegetation is characterized by a mix of hydrophytic and non-hydrophytic species, with moderate tree canopy coverage.

SITE MAP

See Attached Figure

SECTION 1: Functional Value Assessment

HU	Y/N	Potential	**Human Use Values: recreation, culture, education, science, natural scenic beauty**
1	N*	Y	Used for recreation (hunting, birding, hiking, etc.). List: hunting, birding, hiking
2	Y	Y	Used for educational or scientific purposes
3	Y		Visually or physically accessible to public
4	Y		Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	Y		In or adjacent to RED FLAG areas List: Lake Michigan
6	Y*		Supports or provides habitat for endangered, threatened or special concern species
7	Y*		In or adjacent to archaeological or cultural resource site
WH			**Wildlife Habitat**
1	Y		Wetland and contiguous habitat >10 acres
2	Y		3 or more strata present (>10% cover)
3	Y		Within or adjacent to habitat corridor or established wildlife habitat area
4	Y		100 m buffer – natural land cover ≥50%(south) 75% (north) intact
5	Y		Occurs in a Joint Venture priority township
6	Y		Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.)
7	Y*		Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans
8	Y		Part of a large habitat block that supports area sensitive species
9	Y		Ephemeral pond with water present ≥ 45 days
10	Y		Standing water provides habitat for amphibians and aquatic invertebrates
11	N		Seasonally exposed mudflats present
12	Y*		Provides habitat scarce in the area (urban, agricultural, etc.)
FA			**Fish and Aquatic Life Habitat**
1	N		Wetland is connected or contiguous with perennial stream or lake
2	Y		Standing water provides habitat for amphibians and aquatic invertebrates
3	N		Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
4	Y		Vegetation is inundated in spring
SP			**Shoreline Protection**
1	N		Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable
2	N		Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows – if no, not applicable
3	Y		Densely rooted emergent or woody vegetation
ST			**Storm and Floodwater Storage**
1	Y		Basin wetland, constricted outlet, has through-flow or is adjacent to a stream
2	N*		Water flow through wetland is NOT channelized
3	Y		Dense, persistent vegetation
4	N		Evidence of flashy hydrology
5	N		Point or non-point source inflow
6	N		Impervious surfaces cover >10% of land surface within the watershed
7	Y		Within a watershed with ≤10% wetland
8	Y		Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event
WQ			**Water Quality Protection**
1	N		Provides substantial storage of storm and floodwater based on previous section
2	Y		Basin wetland or constricted outlet
3	n/a		Water flow through wetland is NOT channelized
4	N		Vegetated wetland associated with a lake or stream
5	Y		Dense, persistent vegetation
6	N		Signs of excess nutrients, such as algae blooms, heavy macrophyte growth
7	N		Stormwater or surface water from agricultural land is major hydrology source
8	N		Discharge to surface water
9	N		Natural land cover in 100m buffer area < 50%
GW			**Groundwater Processes**
1	Y*		Springs, seeps or indicators of groundwater present
2	N		Location near a groundwater divide or a headwater wetland
3	Y		Wetland remains saturated for an extended time period with no additional water inputs
4	N		Wetland soils are organic
5	N		Wetland is within a wellhead protection area

Section 1 Comments (Refer to Section 1 numbers)

*see comment below
HU 1. Area is on private land, off limits to public.
HU 6. TES species occur within interdunal wetland and in adjacent dune habitat, including plants and animals.
HU 7. Archaeological resources documented in concurrent study.
WH 7. This community and adjacent dunes providing habitat for SGCN/Priority Species.
WH 12. Interdunal wetland is rare within the surrounding region.
GW 1. Indicators of groundwater include vegetation, saturation at or near the surface, and shallow water table.
ST 2. Interdunal wetlands are not connected to any surface water inflows/outflows.

Wildlife Habitat and Species Observation (including amphibians and reptiles)
List: direct observation, tracks, scat, other sign; type of habitat: nesting, migratory, winter, etc.

Observed	Potential	Species/Habitat/Comments
N	Y	Spring peeper/hardwood swamp/vocalizations
N	Y	Pileated woodpecker/ pine plantation/visual
N	Y	Black-capped chickadee/ pine plantation/visual
N	Y	Wood frog/hardwood swamp, pine plantation/visual
N	Y	Common garter snake/ pine plantation/visual
N	Y	Blue jay/pine plantation/visual
N	Y	Northern long-eared bat/variety of habitats with mature tree canopy, nearby water
N	Y	Red-shouldered hawk/hardwood swamp
N	Y	White tailed deer/wetland and upland, various habitat types/visual, tracks, browse
N	Y	Bald eagle/near water/ previous onsite observations
N	Y	Blue-spotted Salamander/ vernal pools, hardwood swamp forested seep/visual, under logs
N	Y	Eastern Red-backed Salamander/ vernal pools, hardwood swamp forested seep/visual, under logs
N	Y	Beach dune tiger beetle/dune/visual
N	Y	Seaside grasshopper/dune/visual

Fish and Aquatic Life Habitat and Species Observations
List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc.

Observed	Potential	Species/Habitat

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

	Low	Medium	High	Exceptional
Invasive species cover	> 50%	20-50%	10-20%	<10%
Strata	Missing stratum(a) or bare due to invasive species	All strata present but reduced native species	All strata present and good assemblage of native species	All strata present, conservative species represented
NHI plant community ranking	S4	S3	S2	S1-S2 (S2 high quality)
Relative frequency of plant community in watershed	Abundant	Common	Uncommon	Rare
FQI (optional)	<13	13-23	23-32	>32
Mean C (optional)	<2.4	2.4-4.2	4.3-4.7	>4.7

***Note: separate plant communities are described independently**

Plant Species List (* dominant species) attach list of additional species

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
*Pinus resinosa**	Red pine	7		
*Juniperus communis**	Common juniper	3		
*Juncus balticus**	Baltic rush	5		
*Carex pennsylvanica**	Pennsylvania sedge	3		
*Calamagrostis canadensis**	Bluejoint grass	5		

SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities)

The Interdunal Wetland consists of intact vegetation occurring within depressions with seasonal wetland hydrology, and very sandy substrate. Vegetation includes a tree canopy that varies from open to closed, scattered shrubs, and a herbaceous groundlayer consisting of a mix of hydrophytic and non-hydrophytic vegetation.

Highly conservative plant species are represented, including the WI-SC White Camas, *Zigadenus elegans,* and WI-Thr Sand Reedgrass, *Calamovilfa longifolia* var. *magna*. Relatively few introduced or invasive species occur.

SECTION 3: Condition Assessment of Wetland Assessment Area (AA) and Buffer (100 m)

Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
N	N	N	n/a	n/a	Filling, berms (non-impounding)
N	N	N	n/a	n/a	Drainage – tiles, ditches
N	N	N	n/a	n/a	Hydrologic changes - high capacity wells, impounded water, increased runoff
N	N	N	n/a	n/a	Point source or stormwater discharge
N	N	N	n/a	n/a	Polluted runoff
N	N	N	n/a	n/a	Pond construction
N	N	N	n/a	n/a	Agriculture – row crops
N	N	N	n/a	n/a	Agriculture – hay
N	N	N	n/a	n/a	Agriculture – pasture
N	N	N	n/a	n/a	Roads or railroad
N	N	N	n/a	n/a	Utility corridor (above or subsurface)
N	N	N	n/a	n/a	Dams, dikes or levees
N	N	N	n/a	n/a	Soil subsidence, loss of soil structure
N	N	N	n/a	n/a	Sediment input
N	N	N	n/a	n/a	Removal of herbaceous stratum – mowing, grading, earthworms, etc.
N	N	N	n/a	n/a	Removal of tree or shrub strata – logging, unprescribed fire
Y	Y	Y	L	UC	Human trails – unpaved
N	N	N	n/a	n/a	Human trails – paved
N	N	N	n/a	n/a	Removal of large woody debris
Y	Y	Y	L	UC	Cover of non-native and/or invasive species
N	N	N	n/a	n/a	Residential land use
N	N	N	n/a	n/a	Urban, commercial or industrial use
N	N	N	n/a	n/a	Parking lot
N	N	N	n/a	n/a	Golf course
N	N	N	n/a	n/a	Gravel pit
N	N	N	n/a	n/a	Recreational use (boating, ATVs, etc.)
N	N	N	n/a	n/a	Excavation or soil grading
					Other (list below):

* L= Low, M = Medium, H = High
**Relative frequency of the impact in comparison to the general condition of wetlands and buffer areas in the region or watershed (C=Common, UC=Uncommon)

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

Plant community integrity is in high to exceptional condition, with the majority of stressors either absent or of low severity.
The stressors that are present include limited cover of invasive species, invasion of brush, and the presence of a few foot trails.
Historic use for pasture or tree planting may have occurred within the interdunal wetland, but effects are limited.
Public access and recreational usage are limited.
These wetlands provide habitat for rare, sand dune dwelling plants and animals.
Interdunal wetlands are limited to a small acreage within the watershed, and are rare within the region.

SUMMARY OF FUNCTIONAL VALUES

FUNCTION	SIGNIFICANCE				
	Low	Medium	High	Exceptional	NA
Floristic Integrity				Y	
Human Use Values		Y			
Wildlife Habitat				Y	
Fish and Aquatic Life Habitat					Y
Shoreline Protection					Y
Flood and Stormwater Storage					Y
Water Quality Protection		Y	Y		
Groundwater Processes			Y		

FUNCTION	RATIONALE
Floristic Integrity	There is a moderate level of species diversity, presence of heterogeneous, adjacent plant communities, and presence of from one to three vegetation strata. Highly conservative/rare plant species are present, and low levels of invasive species occur within the community. This is a rare plant community in Wisconsin.
Human Use Values	This area is not open to the public, limiting usage for recreation, hiking, and education. Archaeological resources onsite have historical significance. TES species occur onsite.
Wildlife Habitat	The Interdunal Wetland provides unique habitats that are likely important to dune-dwelling wildlife. A number of species of fauna were observed, are known to occur, or could potentially occur onsite, including some rare, protected, SGCN, and Priority Species.
Fish and Aquatic Life Habitat	Because of their isolated and seasonal nature, the interdunal wetlands probably do not provide significant habitat for fish and aquatic life, however they may serve as a breeding ground for amphibians.
Shoreline Protection	Because they are isolated from perennial bodies of water, the interdunal wetlands do not offer significant shoreline protection value.
Flood and Stormwater Storage	Because they are isolated from perennial bodies of water, and their direct watershed is small, the interdunal wetlands do not offer significant flood and stormwater storage value.
Water Quality Protection	Because they are isolated from other surface waters, the wetlands provide limited value to protecting water quality within the local watershed.
Groundwater Processes	The interdunal wetlands are dependent on watertable fluctuation, and retain intact groundwater processes, including groundwater recharge and discharge, which has important beneficial effects on local surface and groundwater quality for adjacent habitats.

Section 4: Project Impact Assessment

Brief Project Description

The proposed project consists of a golf course on a 247-acre parcel adjacent to Lake Michigan, with an access road to the west, crossing a DNR-owned 135-acre parcel, and the Black River.

Expected Project Impacts

IMPACT: describe (+ or -)	Permanence/Reversibility	Significance (Low, Medium, High)
Direct Impacts Road fill and construction of buildings, parking lots and infrastructure is expected to directly impact wetlands resulting in a permanent wetland loss.	Loss of wetland is expected to be permanent.	High
Secondary Impacts (including impacts which are indirectly attributable to the project) Road construction is expected to alter wetland hydrology; increased runoff/nutrient loading are expected to result in degradation of wetland habitats and water quality; wells may result in drawdown of water table.	Alterations to wetland hydrology, habitat, water quality, and water table are likely to be permanent.	High
Cumulative Impacts Additional development beyond the current proposed plan has the potential to impact additional wetlands.	Additional wetland loss would be permanent.	
Spatial/Habitat Integrity Construction of roads, paths and fairways is expected to result in fragmentation of habitat blocks.	Habitat fragmentation is expected to be permanent.	High
Rare Plant/Animal Communities/ Natural Areas Construction of golf course infrastructure is expected to result in loss or degradation of rare plant communities including Great Lakes Ridge and Swale and interdunal wetland.	Loss of rare plant communities is expected to be permanent and irreversible.	High

Kohler Golf Course
Sheboygan County, Wisconsin

2014 Species List - Interdunal Wetland

Scientific Name	Common Name	Native	Physiognomy	Coefficient of Conservatism	Region 3 Wetland Coefficient
Asclepias syriaca	common milkweed	native	forb	1	5
Betula papyrifera	paper birch	native	tree	3	3
Botrypus virginianus	rattlesnake fern	native	fern	6	3
Calamagrostis canadensis	blue-joint grass	native	grass	5	-5
Calamovilfa longifolia var. magna	prairie sand-reed	native	grass	9	5
Carex pensylvanica	pennsylvania sedge	native	sedge	3	5
Cirsium arvense	canada thistle	non-native	forb	0	3
Coreopsis lanceolata var. lanceolata	sand coreopsis	native	forb	8	3
Cynoglossum officinale	common comfrey	non-native	forb	0	5
Dichanthelium acuminatum var. acuminatum	mat panic grass	native	grass	2	0
Elymus trachycaulus	slender wheat grass	native	grass	4	3
Epipactis helleborine	broad-leaved helleborine	non-native	forb	0	5
Equisetum arvense	common horsetail	native	fern ally	1	0
Equisetum hyemale	common scouring rush	native	fern ally	3	0
Euthamia graminifolia	common flat-topped goldenrod	native	forb	4	0
Fragaria virginiana	wild strawberry	native	forb	1	3
Juncus balticus	baltic rush	native	rush	5	-5
Juniperus communis	common juniper	native	shrub	3	3
Juniperus horizontalis	creeping juniper	native	shrub	9	3
Lactuca canadensis	canada lettuce	native	forb	2	3
Lobelia inflata	indian-tobacco	native	forb	2	3
Lonicera morrowii	morrows honeysuckle	non-native	shrub	0	3
Lycopus uniflorus	northern bugleweed	native	forb	4	-5
Maianthemum stellatum	starry false solomons-seal	native	forb	5	0
Melampyrum lineare	narrow-leaved cow-wheat	native	forb	7	3
Picea glauca	white spruce	native	tree	7	3
Pinus resinosa	red pine	native	tree	7	3
Pinus strobus	eastern white pine	native	tree	5	3
Poa compressa	canada bluegrass	non-native	grass	0	3
Quercus rubra	northern red oak	native	tree	5	3
Rubus idaeus var. strigosus	american red raspberry	native	shrub	3	3
Schizachne purpurascens	false melic grass	native	grass	7	3
Schizachyrium scoparium	little bluestem	native	grass	4	3
Solidago gigantea	giant goldenrod	native	forb	3	-3
Solidago nemoralis	gray goldenrod	native	forb	4	5
Solidago speciosa	showy goldenrod	native	forb	5	5
Symphyotrichum boreale	northern bog aster	native	forb	10	-5
Symphyotrichum ciliolatum	northern heart-leaved aster	native	forb	4	5
Taraxacum officinale	common dandelion	non-native	forb	0	3
Viola labradorica	alpine violet	native	forb	4	0
Zigadenus elegans subsp. glaucus	white camas	native	forb	9	-3

FQA Metrics	Species Richness	Mean C Value	FQI
Native	35	4.7	27.8
All Species	41	4.0	25.6

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WETLAND IDENTIFICATION	
Project name: Kohler Golf Course	Evaluator(s): M. Curran, J. Sulman, M. Knickelbine
File #: 193703078	Date of visit(s): 9/22, 9/24, 10/2/14
Location: PLSS: T14N, R23E S14 NW4; NE4; SE4 Lat:_____ Long: _____ County: Sheboygan Town/City/Village: Wilson	Ecological Landscape: Central Lake Michigan Coastal Watershed: Black River, SH02
SITE DESCRIPTION	
Soils: Mapped Type(s): Gb, OaB, OaC, Dn Field Verified: Some soils were consistent with Gb while others were organic, possibly Hu. Most of the smaller wetland pockets were not mapped as wetland soils.	WWI Class: T3/E2K; unmapped Wetland Type(s): **Swale Wetland Complex:** Wet Meadow/Alder Thicket/Hardwood Swamp (Eggers & Reed); Great Lakes Ridge and Swale (NHI) Wetland Size: 5.3 acres | Wetland Area Impacted: NA Vegetation/Plant Community Description(s): The Swale Wetland Complex occurs in swales and isolated depressions between forested ridges. These wetlands consist of a matrix of wet meadow vegetation, with components of forested wetland and alder thicket, thus providing a variety of conditions from exposed to shaded.
Hydrology: seasonal or permanent high water table and/or ponding, as evidenced by water table at 9" and saturation at 5", measured on 9/22/14. Geomorphic position is in swales and depressions in forested dune landscape.	

SITE MAP

See Attached Figure

SECTION 1: Functional Value Assessment

HU	Y/N	Potential	**Human Use Values: recreation, culture, education, science, natural scenic beauty**
1	N*	Y	Used for recreation (hunting, birding, hiking, etc.). List: hunting, birding, hiking
2	Y		Used for educational or scientific purposes
3	N		Visually or physically accessible to public
4	Y		Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	Y		In or adjacent to RED FLAG areas List: Lake Michigan
6	Y*		Supports or provides habitat for endangered, threatened or special concern species
7	Y*		In or adjacent to archaeological or cultural resource site
WH			**Wildlife Habitat**
1	Y		Wetland and contiguous habitat >10 acres
2	Y		3 or more strata present (>10% cover)
3	Y		Within or adjacent to habitat corridor or established wildlife habitat area
4	Y		100 m buffer – natural land cover ≥50%(south) 75% (north) intact
5	Y		Occurs in a Joint Venture priority township
6	Y		Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.)
7	Y*		Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans
8	Y		Part of a large habitat block that supports area sensitive species
9	Y		Ephemeral pond with water present ≥ 45 days
10	Y		Standing water provides habitat for amphibians and aquatic invertebrates
11	Y		Seasonally exposed mudflats present
12	Y*		Provides habitat scarce in the area (urban, agricultural, etc.)
FA			**Fish and Aquatic Life Habitat**
1	N		Wetland is connected or contiguous with perennial stream or lake
2	Y		Standing water provides habitat for amphibians and aquatic invertebrates
3	N	Y	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
4	Y		Vegetation is inundated in spring
SP			**Shoreline Protection**
1	N		Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable
2	N		Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows – if no, not applicable
3	Y		Densely rooted emergent or woody vegetation
ST			**Storm and Floodwater Storage**
1	Y		Basin wetland, constricted outlet, has through-flow or is adjacent to a stream
2	Y		Water flow through wetland is NOT channelized
3	Y		Dense, persistent vegetation
4	N		Evidence of flashy hydrology
5	N		Point or non-point source inflow
6	N		Impervious surfaces cover >10% of land surface within the watershed
7	Y		Within a watershed with ≤10% wetland
8	Y		Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event
WQ			**Water Quality Protection**
1	N		Provides substantial storage of storm and floodwater based on previous section
2	Y		Basin wetland or constricted outlet
3	Y		Water flow through wetland is NOT channelized
4	N		Vegetated wetland associated with a lake or stream
5	Y		Dense, persistent vegetation
6	N		Signs of excess nutrients, such as algae blooms, heavy macrophyte growth
7	N		Stormwater or surface water from agricultural land is major hydrology source
8	N		Discharge to surface water
9	N		Natural land cover in 100m buffer area < 50%
GW			**Groundwater Processes**
1	Y*		Springs, seeps or indicators of groundwater present
2	N		Location near a groundwater divide or a headwater wetland
3	Y		Wetland remains saturated for an extended time period with no additional water inputs
4	Y*		Wetland soils are organic
5	N		Wetland is within a wellhead protection area

Section 1 Comments (Refer to Section 1 numbers)

*see comment below
HU 1. Area is on private land, off limits to public.
HU 6. TES species occur elsewhere onsite; wetlands within site assumed to provide or support TES species habitat functions.
HU 7. Archaeological resources documented in concurrent study.
WH 7. SGCN/Priority Species with suitable habitat onsite include blue-winged teal
WH 12. Swale wetlands are a rare feature regionally.
GW 1. Indicators of groundwater include vegetation, saturation at or near the surface, and shallow water table.
GW 4. Wetland soils include organic and mineral components.

Wildlife Habitat and Species Observation (including amphibians and reptiles)
List: direct observation, tracks, scat, other sign; type of habitat: nesting, migratory, winter, etc.

Observed	Potential	Species/Habitat/Comments
Y		Spring peeper/hardwood swamp/vocalizations
N	Y	Pileated woodpecker/observed in adjacent pine plantation/visual
N	Y	Black-capped chickadee/observed in adjacent pine plantation/visual
Y		Wood frog/hardwood swamp, pine plantation/visual
N	Y	Common garter snake/observed in adjacent pine plantation/visual
N	Y	Blue jay/pine plantation/visual
N	Y	Northern long-eared bat/variety of habitats including hardwood swamp with nearby water
N	Y	Red-shouldered hawk/hardwood swamp
N	Y	Blue-winged teal/Black River channel/visual
N	Y	Snapping turtle/Black River channel/visual
Y		White tailed deer/wetland and upland, various habitat types/visual, tracks, browse
N	Y	Bald eagle/hardwood swamp, upland forest; previous onsite observations
Y		Blue-spotted Salamander/ swale wetland, hardwood swamp forested seep/visual, under logs
Y		Eastern Red-backed Salamander/ swale wetland, hardwood swamp forested seep/visual, under logs

Fish and Aquatic Life Habitat and Species Observations
List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc.

Observed	Potential	Species/Habitat

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

	Low	Medium	High	Exceptional
Invasive species cover	> 50%	20-50%	10-20%	<10%
Strata	Missing stratum(a) or bare due to invasive species	All strata present but reduced native species	All strata present and good assemblage of native species	All strata present, conservative species represented
NHI plant community ranking	S4	S3	S2	S1-S2 (S2 high quality)
Relative frequency of plant community in watershed	Abundant	Common	Uncommon	Rare
FQI (optional)	<13	13-23	23-32	>32
Mean C (optional)	<2.4	2.4-4.2	4.3-4.7	>4.7

***Note: separate plant communities are described independently**

Plant Species List (* dominant species) see attached list for complete species inventory

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
*Calamagrostis canadensis**	Bluejoint grass	5		
*Phalaris arundinacea**	Reed canary grass	0		
*Carex stricta**	Tussock sedge	7		
*Urtica dioica**	Stinging nettle	1		
*Alnus incana**	Speckled alder	4		

SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities)

The Swale Wetland complex consists of relatively intact vegetation composed primarily of wet meadow, with components of alder and hardwood swamp. One, two or three strata occur: tree canopy of ash, an occasional shrub layer of alder; and a herbaceous groundlayer. Portions of the community occur in long, linear units, in the eastern two swales, and in isolated depressions in the western swales, though species composition was relatively similar. While overhanging canopy is prominent, few trees are actually rooted in the swales.

SECTION 3: Condition Assessment of Wetland Assessment Area (AA) and Buffer (100 m)

Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
N	N	Y	L	UC	Filling, berms (non-impounding)
N	N	N	n/a	n/a	Drainage – tiles, ditches
N	N	N	n/a	n/a	Hydrologic changes - high capacity wells, impounded water, increased runoff
N	N	N	n/a	n/a	Point source or stormwater discharge
N	N	N	n/a	n/a	Polluted runoff
N	N	N	n/a	n/a	Pond construction
N	N	N	n/a	n/a	Agriculture – row crops
N	N	N	n/a	n/a	Agriculture – hay
N	N	Y	L	UC	Agriculture – pasture
N	N	Y	L	UC	Roads or railroad
N	N	N	n/a	n/a	Utility corridor (above or subsurface)
N	N	N	n/a	n/a	Dams, dikes or levees
N	N	N	n/a	n/a	Soil subsidence, loss of soil structure
N	N	N	n/a	n/a	Sediment input
N	N	N	n/a	n/a	Removal of herbaceous stratum – mowing, grading, earthworms, etc.
N	N	Y	L	UC	Removal of tree or shrub strata – logging, unprescribed fire
Y	Y	Y	L	UC	Human trails – unpaved
N	N	N	n/a	n/a	Human trails – paved
N	N	Y	L	UC	Removal of large woody debris
Y	Y	Y	L/M	UC/C	Cover of non-native and/or invasive species
N	N	N	n/a	n/a	Residential land use
N	N	N	n/a	n/a	Urban, commercial or industrial use
N	N	N	n/a	n/a	Parking lot
N	N	N	n/a	n/a	Golf course
N	N	N	n/a	n/a	Gravel pit
N	N	N	n/a	n/a	Recreational use (boating, ATVs, etc.)
N	N	N	n/a	n/a	Excavation or soil grading
					Other (list below):

* L= Low, M = Medium, H = High
**Relative frequency of the impact in comparison to the general condition of wetlands and buffer areas in the region or watershed (C=Common, UC=Uncommon)

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The Swale Wetland complex is generally in moderate to intact condition, with the majority of stressors either absent or historic.
The most significant stressors appear to be the presence of invasive reed canary grass, and possibly deer herbivory.
Historic agricultural was limited, probably including pasturing.
Recreational usage is limited to the unpaved trails through the area, and the area is not open to the public
These wetlands likely provide important habitat for a variety of amphibians that rely on seasonal ponding and proximity to
adjacent upland forest.

SUMMARY OF FUNCTIONAL VALUES

FUNCTION	SIGNIFICANCE				
	Low	Medium	High	Exceptional	NA
Floristic Integrity			Y		
Human Use Values		Y			
Wildlife Habitat				Y	
Fish and Aquatic Life Habitat					Y
Shoreline Protection					Y
Flood and Stormwater Storage					Y
Water Quality Protection		Y			
Groundwater Processes			Y		

FUNCTION	RATIONALE
Floristic Integrity	The swale wetland has a moderate level of species diversity, presence of heterogeneous, adjacent plant communities, and presence of from one to three vegetation strata. Highly conservative/rare plant species were lacking, and low to moderate levels of invasive species occur onsite.
Human Use Values	Public access to the Kohler portion of the site is limited, limiting usage for recreation, hiking, and education. Archaeological resources on the site have historical significance.
Wildlife Habitat	The combination of contiguous upland and wetland plant communities in a large, unfragmented block of habitat adds significance to the site's value for wildlife. A number of species of fauna were observed, are known to occur, or could potentially occur onsite, including some rare, protected, SGCN, and Priority Species.
Fish and Aquatic Life Habitat	Because of their isolated and seasonal nature, the swale wetlands probably do not have significant habitat for fish and aquatic life; however they are an important breeding ground for amphibians.
Shoreline Protection	Because they are isolated from perennial bodies of water, the swale wetlands do not offer significant shoreline protection value.
Flood and Stormwater Storage	Because they are isolated from other surface waters, and their direct watershed is small, the swale wetlands do not offer significant flood and stormwater storage value.
Water Quality Protection	Because they are isolated from other surface waters, the swale wetlands provide limited value to protecting water quality within the local watershed.
Groundwater Processes	The swale wetlands retain intact groundwater processes, including groundwater recharge and discharge, which has beneficial effects on local surface and groundwater quality within adjacent habitats.

Section 4: Project Impact Assessment

Brief Project Description

The proposed project consists of a golf course on a 247-acre parcel adjacent to Lake Michigan, with an access road to the west, crossing a DNR-owned 135-acre parcel, and the Black River.

Expected Project Impacts

IMPACT: describe (+ or -)	Permanence/Reversibility	Significance (Low, Medium, High)
Direct Impacts Road fill and construction of buildings, parking lots and infrastructure is expected to directly impact wetland resulting in a permanent wetland loss.	Loss of wetland is expected to be permanent.	High
Secondary Impacts (including impacts which are indirectly attributable to the project) Road construction is expected to alter wetland hydrology; increased runoff/nutrient loading are expected to result in degradation of wetland habitats and water quality; wells may result in drawdown of water table.	Alterations to wetland hydrology, habitat, water quality, and water table are likely to be permanent.	High
Cumulative Impacts Additional development beyond the current proposed plan has the potential to impact additional wetlands.	Additional wetland loss would be permanent.	
Spatial/Habitat Integrity Construction of roads, paths and fairways is expected to result in fragmentation of habitat blocks.	Habitat fragmentation is expected to be permanent.	High
Rare Plant/Animal Communities/ Natural Areas Construction of golf course infrastructure is expected to result in loss or degradation of rare plant communities including Great Lakes Ridge and Swale and interdunal wetland.	Loss of rare plant communities is expected to be permanent and irreversible.	High

Kohler Golf Course
Sheboygan County, Wisconsin

2014 Species List - Interdunal Wetland

Scientific Name	Common Name	Native	Physiognomy	Coefficient of Conservatism	Region 3 Wetland Coefficient
Asclepias syriaca	common milkweed	native	forb	1	5
Betula papyrifera	paper birch	native	tree	3	3
Botrypus virginianus	rattlesnake fern	native	fern	6	3
Calamagrostis canadensis	blue-joint grass	native	grass	5	-5
Calamovilfa longifolia var. magna	prairie sand-reed	native	grass	9	5
Carex pensylvanica	pennsylvania sedge	native	sedge	3	5
Cirsium arvense	canada thistle	non-native	forb	0	3
Coreopsis lanceolata var. lanceolata	sand coreopsis	native	forb	8	3
Cynoglossum officinale	common comfrey	non-native	forb	0	5
Dichanthelium acuminatum var. acuminatum	mat panic grass	native	grass	2	0
Elymus trachycaulus	slender wheat grass	native	grass	4	3
Epipactis helleborine	broad-leaved helleborine	non-native	forb	0	5
Equisetum arvense	common horsetail	native	fern ally	1	0
Equisetum hyemale	common scouring rush	native	fern ally	3	0
Euthamia graminifolia	common flat-topped goldenrod	native	forb	4	0
Fragaria virginiana	wild strawberry	native	forb	1	3
Juncus balticus	baltic rush	native	rush	5	-5
Juniperus communis	common juniper	native	shrub	3	3
Juniperus horizontalis	creeping juniper	native	shrub	9	3
Lactuca canadensis	canada lettuce	native	forb	2	3
Lobelia inflata	indian-tobacco	native	forb	2	3
Lonicera morrowii	morrows honeysuckle	non-native	shrub	0	3
Lycopus uniflorus	northern bugleweed	native	forb	4	-5
Maianthemum stellatum	starry false solomons-seal	native	forb	5	0
Melampyrum lineare	narrow-leaved cow-wheat	native	forb	7	3
Picea glauca	white spruce	native	tree	7	3
Pinus resinosa	red pine	native	tree	7	3
Pinus strobus	eastern white pine	native	tree	5	3
Poa compressa	canada bluegrass	non-native	grass	0	3
Quercus rubra	northern red oak	native	tree	5	3
Rubus idaeus var. strigosus	american red raspberry	native	shrub	3	3
Schizachne purpurascens	false melic grass	native	grass	7	3
Schizachyrium scoparium	little bluestem	native	grass	4	3
Solidago gigantea	giant goldenrod	native	forb	3	-3
Solidago nemoralis	gray goldenrod	native	forb	4	5
Solidago speciosa	showy goldenrod	native	forb	5	5
Symphyotrichum boreale	northern bog aster	native	forb	10	-5
Symphyotrichum ciliolatum	northern heart-leaved aster	native	forb	4	5
Taraxacum officinale	common dandelion	non-native	forb	0	3
Viola labradorica	alpine violet	native	forb	4	0
Zigadenus elegans subsp. glaucus	white camas	native	forb	9	-3

FQA Metrics	Species Richness	Mean C Value	FQI
Native	35	4.7	27.8
All Species	41	4.0	25.6

Wisconsin Department of Natural Resources
Wetland Rapid Assessment Methodology – version 2.0

WETLAND IDENTIFICATION	
Project name: Kohler Golf Course	Evaluator(s): M. Curran, J. Sulman, M. Knickelbine
File #: 193703078	Date of visit(s): 9/22, 9/24, 10/2/14
Location: PLSS: T14N, R23E S14 NW4; SW4 Lat:_____ Long: _____ County: Sheboygan Town/City/Village: Wilson	Ecological Landscape: Central Lake Michigan Coastal Watershed: Black River, SH02
SITE DESCRIPTION	
Soils: Mapped Type(s): Gb, Ag, Hu Field Verified: Y	WWI Class: T3/E1K, E2K Wetland Type(s): Wet Meadow Wetland Size: 5.7 acres | Wetland Area Impacted: NA Vegetation:
Hydrology: seasonal or permanent high water table and/or saturation, as evidenced by water table at depth of 12", and saturation at 8", measured on 8/14/14.	Plant Community Description(s): Wet Meadow is an intact community characterized by dominance of native graminoids and forbs, with occasional shrubs not exceeding 30% coverage. Substrate is seasonally or permanently saturated. Majority of community occurs within the floodplain of Black R.

SITE MAP

See Attached Figure

SECTION 1: Functional Value Assessment

HU	Y/N	Potential	**Human Use Values: recreation, culture, education, science, natural scenic beauty**
1	Y		Used for recreation (hunting, birding, hiking, etc.). List: hunting, birding, hiking; state park uses
2	Y		Used for educational or scientific purposes
3	Y		Visually or physically accessible to public
4	Y		Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	Y		In or adjacent to RED FLAG areas List: State park; Lake Michigan
6	Y*		Supports or provides habitat for endangered, threatened or special concern species
7	Y*		In or adjacent to archaeological or cultural resource site
WH			**Wildlife Habitat**
1	Y		Wetland and contiguous habitat >10 acres
2	Y		3 or more strata present (>10% cover)
3	Y		Within or adjacent to habitat corridor or established wildlife habitat area
4	Y		100 m buffer – natural land cover ≥50%(south) 75% (north) intact
5	Y		Occurs in a Joint Venture priority township
6	Y		Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.)
7	Y*		Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans
8	Y		Part of a large habitat block that supports area sensitive species
9	Y		Ephemeral pond with water present ≥ 45 days
10	Y		Standing water provides habitat for amphibians and aquatic invertebrates
11	N		Seasonally exposed mudflats present
12	Y*		Provides habitat scarce in the area (urban, agricultural, etc.)
FA			**Fish and Aquatic Life Habitat**
1	Y		Wetland is connected or contiguous with perennial stream or lake
2	Y		Standing water provides habitat for amphibians and aquatic invertebrates
3	N	Y	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
4	Y		Vegetation is inundated in spring
SP			**Shoreline Protection**
1	Y		Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable
2	N		Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows – if no, not applicable
3	Y		Densely rooted emergent or woody vegetation
ST			**Storm and Floodwater Storage**
1	Y		Basin wetland, constricted outlet, has through-flow or is adjacent to a stream
2	Y		Water flow through wetland is NOT channelized
3	Y		Dense, persistent vegetation
4	N		Evidence of flashy hydrology
5	Y		Point or non-point source inflow
6	Y		Impervious surfaces cover >10% of land surface within the watershed
7	Y		Within a watershed with ≤10% wetland
8	Y		Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event
WQ			**Water Quality Protection**
1	Y		Provides substantial storage of storm and floodwater based on previous section
2	Y		Basin wetland or constricted outlet
3	Y		Water flow through wetland is NOT channelized
4	Y		Vegetated wetland associated with a lake or stream
5	Y		Dense, persistent vegetation
6	N		Signs of excess nutrients, such as algae blooms, heavy macrophyte growth
7	N		Stormwater or surface water from agricultural land is major hydrology source
8	Y		Discharge to surface water
9	Y		Natural land cover in 100m buffer area < 50%
GW			**Groundwater Processes**
1	Y*		Springs, seeps or indicators of groundwater present
2	N		Location near a groundwater divide or a headwater wetland
3	Y		Wetland remains saturated for an extended time period with no additional water inputs
4	Y*		Wetland soils are organic
5	N		Wetland is within a wellhead protection area

Section 1 Comments (Refer to Section 1 numbers)

*see comment below
HU 6. TES species observed onsite include blue-winged teal; wet meadow provides or supports TES species habitat.
HU 7. Archaeological resources documented in concurrent study.
WH 7. SGCN/Priority Species: blue-winged teal
WH 12. Wet Meadow is uncommon within surrounding agricultural and urban context.
GW 1. Indicators of groundwater discharge include vegetation, saturation at or near the surface, and shallow water table.
GW 4. Wetland soils include organic and mineral components.

Wildlife Habitat and Species Observation (including amphibians and reptiles)
List: direct observation, tracks, scat, other sign; type of habitat: nesting, migratory, winter, etc.

Observed	Potential	Species/Habitat/Comments
Y		Spring peeper/hardwood swamp/vocalizations
N	Y	Pileated woodpecker/ pine plantation/visual
N	Y	Black-capped chickadee/ pine plantation/visual
N	Y	Wood frog/hardwood swamp, pine plantation/visual
N	Y	Common garter snake/ pine plantation/visual
N	Y	Common yellowthroat/wet meadow
N	Y	Bald eagle/hardwood swamp, upland forest; previous onsite observations
N	Y	Red-shouldered hawk/hardwood swamp
Y		Blue-winged teal/Black River channel/visual
Y		Snapping turtle/Black River channel/visual
Y		White tailed deer/wetland and upland, various habitat types/visual, tracks, browse

Fish and Aquatic Life Habitat and Species Observations
List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc.

Observed	Potential	Species/Habitat

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

	Low	Medium	High	Exceptional
Invasive species cover	> 50%	20-50%	10-20%	10%
Strata	Missing stratum(a) or bare due to invasive species	All strata present but reduced native species	All strata present and good assemblage of native species	All strata present, conservative species represented
NHI plant community ranking	S4	S3	S2	S1-S2 (S2 high quality)
Relative frequency of plant community in watershed	Abundant	Common	Uncommon	Rare
FQI (optional)	<13	13-23	23-32	>32
Mean C (optional)	<2.4	2.4-4.2	4.3-4.7	>4.7

***Note: separate plant communities are described independently**
Plant Species List (* dominant species) see attached list for complete inventory

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
*Calamagrostis canadensis**	Bluejoint grass	5		
*Carex lacustris**	Lake sedge	6		
*Carex stricta**	Tussock sedge	7		

SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities)

Wet Meadow occurs primarily within the floodplain of the Black River, within areas that have avoided invasion by
reed canary grass. This community has high diversity of native grasses, sedges, and forbs, and may have scattered shrub or tree
cover. The community likely occurs on microsites that receive more groundwater input and less nutrient-enriched surface
Water and sediment compared to areas dominated by reed canary grass.

SECTION 3: Condition Assessment of Wetland Assessment Area (AA) and Buffer (100 m)

Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
N	Y	N	L	UC	Filling, berms (non-impounding)
N	N	N	n/a	n/a	Drainage – tiles, ditches
N	Y	Y	L	UC	Hydrologic changes - high capacity wells, impounded water, increased runoff
N	Y	N	L	UC	Point source or stormwater discharge
N	Y	N	L	UC	Polluted runoff
N	N	N	n/a	n/a	Pond construction
N	N	N	n/a	n/a	Agriculture – row crops
N	N	N	n/a	n/a	Agriculture – hay
N	N	Y	L	UC	Agriculture – pasture
N	Y	N	L	UC	Roads or railroad
N	Y	N	L	UC	Utility corridor (above or subsurface)
N	N	N	n/a	n/a	Dams, dikes or levees
N	N	N	n/a	n/a	Soil subsidence, loss of soil structure
N	N	N	n/a	n/a	Sediment input
N	Y	N	L	UC	Removal of herbaceous stratum – mowing, grading, earthworms, etc.
N	Y	Y	L	UC	Removal of tree or shrub strata – logging, unprescribed fire
Y	Y	Y	L	UC	Human trails – unpaved
N	N	N	n/a	n/a	Human trails – paved
N	N	N	n/a	n/a	Removal of large woody debris
Y	Y	Y	L	UC	Cover of non-native and/or invasive species
N	Y	N	L	UC	Residential land use
N	Y	N	L	UC	Urban, commercial or industrial use
N	Y	N	L	UC	Parking lot
N	N	N	n/a	n/a	Golf course
N	N	N	n/a	n/a	Gravel pit
Y	Y	Y	M	C	Recreational use (boating, ATVs, etc.)
N	N	N	n/a	n/a	Excavation or soil grading
					Other (list below):

* L= Low, M = Medium, H = High
**Relative frequency of the impact in comparison to the general condition of wetlands and buffer areas in the region or watershed (C=Common, UC=Uncommon)

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The wet meadow is generally in undisturbed condition, with the majority of stressors either absent or limited to the
buffer. This community is restricted to the least disturbed microsites within the Black River floodplain.
Historic agricultural use probably consisted of limited grazing.
Recreational usage is limited, and there is little or no easy foot access to these areas.

SUMMARY OF FUNCTIONAL VALUES

FUNCTION	SIGNIFICANCE				
	Low	Medium	High	Exceptional	NA
Floristic Integrity			Y		
Human Use Values		Y			
Wildlife Habitat			Y		
Fish and Aquatic Life Habitat			Y		
Shoreline Protection			Y		
Flood and Stormwater Storage			Y		
Water Quality Protection			Y		
Groundwater Processes			Y		

FUNCTION	RATIONALE
Floristic Integrity	The intact wet meadow has a high level of species diversity, and a general lack of invasive species coverage. Conservative species are present, indicating an undisturbed, intact plant community. No rare plant species were identified.
Human Use Values	Public access to the wet meadow on State Park land is limited to off trail access by foot. Values for recreation, hiking, and education are limited due to the difficulty of access. Archaeological resources elsewhere on the site have historical significance.
Wildlife Habitat	The combination of a diversity of contiguous upland and wetland plant communities in a large, unfragmented block of habitat adds significance to the site's value for wildlife. A number of species of fauna were observed, are known to occur, or could potentially occur onsite, including some rare, protected, SGCN, and Priority Species, e.g., blue-winged teal.
Fish and Aquatic Life Habitat	The Black River and surrounding wetland and upland plant communities provide significant habitat for fish and aquatic life. The river and its tributaries have been somewhat impacted by agricultural and stormwater runoff, but retain a healthy aquatic plant community and provides habitat for fish, waterfowl, and amphibians.
Shoreline Protection	The wet/sedge meadow provides vegetative cover along the banks of the Black River, offering shoreline protection, which has a positive effect for the river and downstream communities.
Flood and Stormwater Storage	The wetlands within the Black River floodplain and surrounding areas upslope provide significant value in storing and attenuating peak flows in the river, which may have a positive impact on reducing flooding downstream.
Water Quality Protection	The wetlands surrounding the Black River provide significant value to protecting water quality within the Black River and Lake Michigan. Water quality in the Black River and its tributaries has been negatively impacted by runoff from residential and agricultural areas upstream.
Groundwater Processes	The wet/sedge meadow occurs on microsites with essentially intact groundwater processes, including active groundwater discharge areas, which has beneficial effects on surface and groundwater quality, and is important to maintaining the integrity of the native plant community.

Section 4: Project Impact Assessment

Brief Project Description

The proposed project consists of a golf course on a 247-acre parcel adjacent to Lake Michigan, with an access road to the west, crossing a DNR-owned 135-acre parcel, and the Black River.

Expected Project Impacts

IMPACT: describe (+ or -)	Permanence/Reversibility	Significance (Low, Medium, High)
Direct Impacts Road fill and construction of buildings, parking lots and infrastructure is expected to directly impact wetland resulting in a permanent wetland loss.	Loss of wetland is expected to be permanent.	High
Secondary Impacts (including impacts which are indirectly attributable to the project) Road construction is expected to alter wetland hydrology; increased runoff/nutrient loading are expected to result in degradation of wetland habitats and water quality; wells may result in drawdown of water table.	Alterations to wetland hydrology, habitat, water quality, and water table are likely to be permanent.	High
Cumulative Impacts Additional development beyond the current proposed plan has the potential to impact additional wetlands.	Additional wetland loss would be permanent.	
Spatial/Habitat Integrity Construction of roads is expected to result in fragmentation of habitat blocks.	Habitat fragmentation is expected to be permanent.	High
Rare Plant/Animal Communities/ Natural Areas Construction of golf course infrastructure is expected to result in loss or degradation of plant communities and rare species habitats.	Loss of rare plants/animals and communities is expected to be permanent and irreversible. Impacted species within the wet meadow include blue-winged teal.	Medium

Kohler Golf Course
Sheboygan County, Wisconsin

2014 Species List - Wet Meadow

Scientific Name	Common Name	Native	Physiognomy	Coefficient of Conservatism	Region 3 Wetland Coefficient
Boehmeria cylindrica	small-sp ke false nettle	native	forb	6	-5
Calamagrostis canadensis	blue-joint grass	native	grass	5	-5
Carex lacustris	common lake sedge	native	sedge	6	-5
Carex stricta	hummock sedge	native	sedge	7	-5
Dryopteris cristata	crested shield fern	native	fern	7	-5
Epilobium coloratum	cinnamon willow-herb	native	forb	3	-5
Eutrochium maculatum	spotted joe-pye-weed	native	forb	4	-5
Galium asprellum	rough bedstraw	native	forb	7	-5
Helenium autumnale	common sneezeweed	native	forb	4	-3
Ilex verticillata	common winterberry	native	shrub	7	-3
Impatiens capensis	orange jewelweed	native	forb	2	-3
Mentha arvensis	wild mint	native	forb	3	-3
Onoclea sensibilis	sensitive fern	native	fern	5	-3
Persicaria amphibia	water smartweed	native	forb	5	-5
Persicaria sagittata	arrow-leaved tear-thumb	native	forb	6	-5
Phalaris arundinacea	reed canary grass	non-native	grass	0	-3
Rosa blanda	early wild rose	native	shrub	4	3
Rumex britannica	great water dock	native	forb	8	-5
Salix interior	sandbar willow	native	shrub	2	-3
Scirpus cyperinus	wool-grass	native	sedge	4	-5
Spiraea alba	white meadowsweet	native	shrub	4	-3
Stachys palustris	marsh hedge-nettle	native	forb	5	-5
Symphyotrichum puniceum	purple-stem aster	native	forb	5	-5
Symplocarpus foetidus	skunk-cabbage	native	forb	8	-5
Thelypteris palustris	eastern marsh fern	native	fern	7	-3
Typha latifolia	broad-leaved cat-tail	native	forb	1	-5
Urtica dioica	stinging nettle	native	forb	1	0

FQA Metrics	Species Richness	Mean C Value	FQI
Native	26	4.8	24.5
All Species	27	4.7	24.4

Wisconsin Department of Natural Resources
Wetland Rapid Assessment Methodology – version 2.0

WETLAND IDENTIFICATION	
Project name: Kohler Golf Course	Evaluator(s): M. Curran, J. Sulman, M. Knickelbine
File #: 193703078	Date of visit(s): 9/22, 9/24, 10/2/14
Location: PLSS: T14N, R23E S14 NW4; SW4 Lat:_____ Long: _____ County: Sheboygan Town/City/Village: Wilson	Ecological Landscape: Central Lake Michigan Coastal Watershed: Black River, SH02
SITE DESCRIPTION	
Soils: Mapped Type(s): Gb, Ag, Hu Field Verified: Y	WWI Class: T3/E1K Wetland Type(s): Wet Meadow—Degraded Wetland Size: 8.1 acres | Wetland Area Impacted: NA Vegetation: Plant Community Description(s): Degraded Wet Meadow is dominated by invasive reed canary grass, with a low diversity of native forbs, and occasional shrubs not exceeding 30% coverage. Majority of community occurs within the floodplain of Black R.
Hydrology: seasonal or permanent high water table and/or saturation, as evidenced by water table at depth of 12", and saturation at 8", measured on 8/14/14. Much of this community is adjacent to the Black River and may be seasonally inundated.	

SITE MAP

See Attached Figure

SECTION 1: Functional Value Assessment

HU	Y/N	Potential	**Human Use Values: recreation, culture, education, science, natural scenic beauty**
1	Y		Used for recreation (hunting, birding, hiking, etc.). List: hunting, birding, hiking; state park uses
2	Y		Used for educational or scientific purposes
3	Y		Visually or physically accessible to public
4	Y		Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	Y		In or adjacent to RED FLAG areas List: State park; Lake Michigan
6	Y*		Supports or provides habitat for endangered, threatened or special concern species
7	Y*		In or adjacent to archaeological or cultural resource site
WH			**Wildlife Habitat**
1	Y		Wetland and contiguous habitat >10 acres
2	Y		3 or more strata present (>10% cover)
3	Y		Within or adjacent to habitat corridor or established wildlife habitat area
4	Y		100 m buffer – natural land cover ≥50%(south) 75% (north) intact
5	Y		Occurs in a Joint Venture priority township
6	Y		Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.)
7	Y*		Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans
8	Y		Part of a large habitat block that supports area sensitive species
9	Y		Ephemeral pond with water present ≥ 45 days
10	Y		Standing water provides habitat for amphibians and aquatic invertebrates
11	N		Seasonally exposed mudflats present
12	Y*		Provides habitat scarce in the area (urban, agricultural, etc.)
FA			**Fish and Aquatic Life Habitat**
1	Y		Wetland is connected or contiguous with perennial stream or lake
2	Y		Standing water provides habitat for amphibians and aquatic invertebrates
3	N	Y	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
4	Y		Vegetation is inundated in spring
SP			**Shoreline Protection**
1	Y		Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable
2	N		Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows – if no, not applicable
3	Y		Densely rooted emergent or woody vegetation
ST			**Storm and Floodwater Storage**
1	Y		Basin wetland, constricted outlet, has through-flow or is adjacent to a stream
2	Y		Water flow through wetland is NOT channelized
3	Y		Dense, persistent vegetation
4	N		Evidence of flashy hydrology
5	Y		Point or non-point source inflow
6	Y		Impervious surfaces cover >10% of land surface within the watershed
7	Y		Within a watershed with ≤10% wetland
8	Y		Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event
WQ			**Water Quality Protection**
1	Y		Provides substantial storage of storm and floodwater based on previous section
2	Y		Basin wetland or constricted outlet
3	Y		Water flow through wetland is NOT channelized
4	Y		Vegetated wetland associated with a lake or stream
5	Y		Dense, persistent vegetation
6	Y*		Signs of excess nutrients, such as algae blooms, heavy macrophyte growth
7	Y*		Stormwater or surface water from agricultural land is major hydrology source
8	Y		Discharge to surface water
9	N		Natural land cover in 100m buffer area < 50%
GW			**Groundwater Processes**
1	Y*		Springs, seeps or indicators of groundwater present
2	N		Location near a groundwater divide or a headwater wetland
3	Y		Wetland remains saturated for an extended time period with no additional water inputs
4	Y*		Wetland soils are organic
5	N*		Wetland is within a wellhead protection area

Section 1 Comments (Refer to Section 1 numbers)

*see comment below
HU 6. TES species observed onsite include blue-winged teal; wet meadow provides or supports TES species habitat.
HU 7. Archaeological resources documented in concurrent study.
WH 7. SGCN/Priority Species: blue-winged teal
WH 12. Wet meadow-degraded is relatively infrequent within surrounding agricultural and urban context.
WQ 6. Dense reed canary grass may indicate excess nutrient inputs from upstream sources; but no excess algae/macrophytes.
WQ 7. Upstream inputs into Black River include surface runoff from agricultural and residential areas.
GW 1. Indicators of groundwater discharge include vegetation, saturation at or near the surface, and shallow water table.
GW 4. Wetland soils include organic and mineral components.
GW 5. Sheboygan Water Utilities use Lake Michigan as source.

Wildlife Habitat and Species Observation (including amphibians and reptiles)
List: direct observation, tracks, scat, other sign; type of habitat: nesting, migratory, winter, etc.

Observed	Potential	Species/Habitat/Comments
Y		Spring peeper/hardwood swamp/vocalizations
N	Y	other amphibians
N	Y	Common garter snake/ pine plantation/visual
N	Y	Common yellowthroat/wet meadow
N	Y	Red-shouldered hawk/hardwood swamp
Y		Blue-winged teal/Black River channel/visual
Y		Snapping turtle/Black River channel/visual
Y		White tailed deer/wetland and upland, various habitats/visual, tracks, browse
N	Y	Bald eagle/near water/ previous onsite observations

Fish and Aquatic Life Habitat and Species Observations
List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc.

Observed	Potential	Species/Habitat

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

	Low	Medium	High	Exceptional
Invasive species cover	> 50%	20-50%	10-20%	<10%
Strata	Missing stratum(a) or bare due to invasive species	All strata present but reduced native species	All strata present and good assemblage of native species	All strata present, conservative species represented
NHI plant community ranking	S4	S3	S2	S1-S2 (S2 high quality)
Relative frequency of plant community in watershed	Abundant	Common	Uncommon	Rare
FQI (optional)	<13	13-23	23-32	>32
Mean C (optional)	<2.4	2.4-4.2	4.3-4.7	>4.7

***Note: separate plant communities are described independently**

Plant Species List (* dominant); see attached list for complete inventory

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
*Phalaris arundincaea**	Reed canary grass	0	WM-degraded	80%

SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities)

Wet Meadow-degraded occurs primarily within the floodplain of the Black River, within areas that are subject to flooding. This community has a high level of dominance by invasive reed canary grass. Additional species of native sedges and forbs are present at low levels of cover. The community occurs in areas that receive excess nutrient inputs from upstream agricultural and residential areas, and in areas that may have been altered by past agricultural land uses. The overall floristic integrity of this community is low to moderate.

SECTION 3: Condition Assessment of Wetland Assessment Area (AA) and Buffer (100 m)

Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
N	Y	N	L	UC	Filling, berms (non-impounding)
N	N	N	n/a	n/a	Drainage – tiles, ditches
N	Y	Y	M	C	Hydrologic changes - high capacity wells, impounded water, increased runoff
Y	Y	Y	M	C	Point source or stormwater discharge
Y	Y	Y	L	UC	Polluted runoff
N	N	N	n/a	n/a	Pond construction
N	N	N	n/a	n/a	Agriculture – row crops
N	N	N	n/a	n/a	Agriculture – hay
N	N	Y	L	UC	Agriculture – pasture
N	Y	N	M	C	Roads or railroad
N	Y	Y	L	UC	Utility corridor (above or subsurface)
N	N	N	n/a	n/a	Dams, dikes or levees
N	N	N	n/a	n/a	Soil subsidence, loss of soil structure
N	Y	Y	M	C	Sediment input
N	Y	N	L	UC	Removal of herbaceous stratum – mowing, grading, earthworms, etc.
N	Y	Y	L	UC	Removal of tree or shrub strata – logging, unprescribed fire
N	Y	N	L	C	Human trails – unpaved
N	N	N	n/a	n/a	Human trails – paved
N	N	N	n/a	n/a	Removal of large woody debris
Y	Y	Y	H	C	Cover of non-native and/or invasive species
N	Y	N	M	C	Residential land use
N	Y	N	L	UC	Urban, commercial or industrial use
N	Y	N	L	UC	Parking lot
N	N	N	n/a	n/a	Golf course
N	N	N	n/a	n/a	Gravel pit
Y	Y	Y	M	C	Recreational use (boating, ATVs, etc.)
N	N	N	n/a	n/a	Excavation or soil grading
					Other (list below):

* L= Low, M = Medium, H = High
**Relative frequency of the impact in comparison to the general condition of wetlands and buffer areas in the region or watershed (C=Common, UC=Uncommon)

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The degraded wet meadow has been impacted by invasion of reed canary grass, which is the result of other stressors Including increased runoff, sedimentation, and nutrient inputs from agricultural and residential land uses upstream. Floristic diversity remains moderate, however reed canary grass is dominant over much of the community. Historic agricultural use probably consisted of limited grazing. Recreational usage is limited, and there is a lack of easy foot access to these areas.

SUMMARY OF FUNCTIONAL VALUES

FUNCTION	SIGNIFICANCE				
	Low	Medium	High	Exceptional	NA
Floristic Integrity	Y				
Human Use Values		Y			
Wildlife Habitat		Y			
Fish and Aquatic Life Habitat			Y		
Shoreline Protection			Y		
Flood and Stormwater Storage			Y		
Water Quality Protection		Y			
Groundwater Processes		Y			

FUNCTION	RATIONALE
Floristic Integrity	The degraded wet meadow has moderate species diversity, but high dominance by invasive reed canary grass. Conservative species are absent, and no rare plant species were identified.
Human Use Values	Public access to the disturbed wet meadow on State Park land is limited, and its value for recreation, hiking, and education are low. Archaeological resources elsewhere on the site have historical significance.
Wildlife Habitat	The combination of a diversity of contiguous upland and wetland plant communities in a large, unfragmented block of habitat adds significance to the site's value for wildlife. A number of species of fauna were observed, are known to occur, or could potentially occur onsite, including some rare, protected, SGCN, and Priority Species, e.g., blue-winged teal.
Fish and Aquatic Life Habitat	The Black River and adjacent wet meadow and upland plant communities provide significant habitat for fish and aquatic life. The river and its tributaries have been somewhat impacted by agricultural and stormwater runoff, but retain a healthy aquatic plant community and provide breeding habitat for amphibians.
Shoreline Protection	The disturbed wet meadow forms a large extent directly adjacent to the Black River, where it provides dense and unbroken vegetative cover along the banks, offering shoreline protection, which has a positive effect for the river and downstream communities.
Flood and Stormwater Storage	The disturbed wet meadow within the Black River floodplain and surrounding areas provides significant capacity to store floodwater and attenuate peak flows in the river, because it occurs on a flat surface only slightly elevated above the river channel. The meadow's storage capacity may have a positive impact on reducing flooding downstream.
Water Quality Protection	The wetlands surrounding the Black River provide significant value to protecting water quality within the Black River and Lake Michigan. Water quality in the Black River and its tributaries has been negatively impacted by runoff from residential and agricultural areas upstream.
Groundwater Processes	The degraded wet meadow occurs on areas where surface water inputs may have a greater magnitude than groundwater inputs, though a seasonally high water table is apparent. Groundwater quality may benefit from recharge and filtering of excess nutrients in these areas.

Section 4: Project Impact Assessment

Brief Project Description

The proposed project consists of a golf course on a 247-acre parcel adjacent to Lake Michigan, with an access road to the west, crossing a DNR-owned 135-acre parcel, and the Black River.

Expected Project Impacts

IMPACT: describe (+ or -)	Permanence/Reversibility	Significance (Low, Medium, High)
Direct Impacts Road fill and construction of buildings, parking lots and infrastructure is expected to directly impact wetlands, resulting in a permanent wetland loss.	Loss of wetland is expected to be permanent.	High
Secondary Impacts (including impacts which are indirectly attributable to the project) Road construction is expected to alter wetland hydrology; increased runoff/nutrient loading are expected to result in degradation of wetland habitats and water quality; wells may result in drawdown of water table.	Alterations to wetland hydrology, habitat, water quality, and water table are likely to be permanent, however, these areas are already in a degraded state and changes may not be severe.	Medium
Cumulative Impacts Additional development beyond the current proposed plan has the potential to impact additional wetlands.	Additional wetland loss would be permanent.	
Spatial/Habitat Integrity Construction of access roads is expected to result in fragmentation of habitat blocks.	Habitat fragmentation is expected to be permanent.	High
Rare Plant/Animal Communities/ Natural Areas Construction of golf course infrastructure is expected to result in loss or degradation of plant communities and rare species habitats.	Loss of rare plants/animals and communities is expected to be permanent and irreversible. Impacted species within the degraded wet meadow include blue-winged teal.	Medium

Kohler Golf Course
Sheboygan County, Wisconsin

2014 Species List - Wet Meadow (degraded)

Scientific Name	Common Name	Native	Physiognomy	Coefficient of Conservatism	Region 3 Wetland Coefficient
Alisma triviale	northern water-plantain	native	forb	4	-5
Alnus incana	speckled alder	native	tree	4	-3
Asclepias incarnata	marsh milkweed	native	forb	5	-5
Asclepias syriaca	common milkweed	native	forb	1	5
Athyrium angustum	common lady fern	native	fern	5	0
Bidens cernua	nodding beggar-ticks	native	forb	4	-5
Boehmeria cylindrica	small-spike false nettle	native	forb	6	-5
Calamagrostis canadensis	blue-joint grass	native	grass	5	-5
Callitriche palustris	common water-starwort	native	forb	8	-5
Cardamine pensylvanica	pennsylvania bitter-cress	native	forb	3	-3
Carex lacustris	common lake sedge	native	sedge	6	-5
Cinna arundinacea	common wood-reed	native	grass	5	-3
Cirsium arvense	canada thistle	non-native	forb	0	3
Eleocharis obtusa	blunt spike-rush	native	sedge	3	-5
Elymus virginicus	virginia wild-rye	native	grass	6	-3
Eutrochium maculatum	spotted joe-pye-weed	native	forb	4	-5
Fraxinus pennsylvanica	green ash	native	tree	2	-3
Helenium autumnale	common sneezeweed	native	forb	4	-3
Iris virginica	southern blue flag	native	forb	5	-5
Laportea canadensis	canadian wood-nettle	native	forb	4	-3
Lemna minor	common duckweed	native	forb	4	-5
Ludwigia palustris	marsh seed-box	native	forb	4	-5
Lycopus uniflorus	northern bugleweed	native	forb	4	-5
Lythrum salicaria	invasive purple loosestrife	non-native	forb	0	-5
Matteuccia struthiopteris	ostrich fern	native	fern	5	0
Mentha arvensis	wild mint	native	forb	3	-3
Mimulus ringens	allegheny monkey-flower	native	forb	6	-5
Onoclea sensibilis	sensitive fern	native	fern	5	-3
Osmunda claytoniana	interrupted fern	native	fern	6	0
Persicaria amphibia	water smartweed	native	forb	5	-5
Persicaria hydropiperoides	false water-pepper	native	forb	6	-5
Persicaria punctata	dotted smartweed	native	forb	5	-5
Phalaris arundinacea	reed canary grass	non-native	grass	0	-3
Pilea fontana	bog clearweed	native	forb	7	-3
Pilea pumila	canadian clearweed	native	forb	3	-3
Ranunculus hispidus	hispid buttercup	native	forb	6	0
Rorippa palustris	common yellow-cress	native	forb	3	-5
Rosa palustris	swamp rose	native	shrub	7	-5
Rumex britannica	great water dock	native	forb	8	-5
Sagittaria latifolia	broad-leaved arrowhead	native	forb	3	-5
Salix discolor	pussy willow	native	tree	2	-3
Salix petiolaris	meadow willow	native	shrub	6	-3
Schoenoplectus tabernaemontani	soft-stem bulrush	native	sedge	4	-5
Scirpus cyperinus	wool-grass	native	sedge	4	-5
Scutellaria lateriflora	mad-dog skullcap	native	forb	5	-5
Sium suave	hemlock water-parsnip	native	forb	5	-5
Sparganium americanum	american bur-reed	native	forb	8	-5
Sparganium eurycarpum	common bur-reed	native	forb	5	-5
Symphyotrichum oolentangiense	azure aster	native	forb	5	5
Symplocarpus foetidus	skunk-cabbage	native	forb	8	-5
Thalictrum dasycarpum	tall meadow-rue	native	forb	4	-3

Kohler Golf Course
Sheboygan County, Wisconsin

2014 Species List - Wet Meadow (degraded)

Scientific Name	Common Name	Native	Physiognomy	Coefficient of Conservatism	Region 3 Wetland Coefficient
Typha latifolia	broad-leaved cat-tail	native	forb	1	-5
Urtica dioica	stinging nettle	native	forb	1	0

FQA Metrics	Species Richness	Mean C Value	FQI
Native	50	4.6	32.5
All Species	53	4.4	32.0