

ENVIRONMENTAL ANALYSIS AND DECISION ON THE NEED FOR AN ENVIRONMENTAL IMPACT STATEMENT (EIS)

Form 1600-1

Rev. 6-2001

Wisconsin Department of Natural Resources  
(Department)

Region or Bureau: Southeast Region

Type List Designation: Type II

NOTE TO REVIEWERS: This document is a DNR environmental analysis that evaluates probable environmental effects and decides on the need for an EIS. The attached analysis includes a description of the proposal and the affected environment. The DNR has reviewed the attachments and, upon certification, accepts responsibility for their scope and content to fulfill requirements in s. NR 150.22, Wis. Adm. Code. Your comments should address completeness, accuracy or the EIS decision. For your comments to be considered, they must be received by the contact person before 4:30 p.m., December 10, 2008.

Contact Person: James Ritchie

Title: Public Waterway Access Coordinator

Address: 2300 N. Dr. Martin Luther King Jr. Drive,  
Milwaukee, WI 53212

Telephone Number: (414) 263-8670

Applicant: Wisconsin Department of Natural Resources

Address: 2300 N. Dr. Martin Luther King, Jr. Drive, Milwaukee, WI 53212

Title of Proposal: W.C. (Whitey) Kraus Public Access Site

Location: W323 N7453 Reddelien Road County: Waukesha City/Town/Village: Town of Merton

Township 8 North, Range 18 East, NE ¼, SE ¼, Section 17

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PROJECT SUMMARY

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1. Brief overview of the proposal including the DNR action (include cost and funding source if public funds involved)

The Wisconsin Department of Natural Resources (Department) has prepared development plans with roadway access on a Department easement for the W.C. (Whitey) Kraus Public Access Site (Department Site) to provide public recreational boating and fishing opportunities on North Lake, Waukesha County. See Attachment 1, *North Lake Boat Launch Project Location Map*.

North Lake is a 437 acre lake located in Waukesha County, Wisconsin. It is the ninth largest lake in Waukesha County and the largest without a public access site.

Department Site developments will include: an asphalt access road, retaining wall, asphalt parking lot, concrete boat ramp, floating boarding dock, stormwater management facilities, portable toilet, dumpster, underground electrical utilities, lighting, landscaping, screening, and signage. See Attachment 14, *Final Project Development Plans*.

Department Stewardship funding is estimated at \$475,000.00 for development costs. Construction is planned to begin in mid 2010. The Department Site is projected to be open to the public and operational in late 2010.

2. Purpose and Need (include history and background as appropriate)

The purpose of the Department's Public Access Site is to provide recreational boaters and anglers an opportunity to launch watercraft on and have winter access to North Lake. Development of a public access site on North Lake would enable the Department to provide fish stocking and population management, habitat development, and financial assistance for aquatic plant management, lake restoration grants and other natural resource enhancement services.

Demand for public access to waterways in southeast Wisconsin, particularly in Waukesha County, is very high. In 2008, Waukesha County had the highest number of registered boats of any county in Wisconsin. Waukesha County also has the second highest number of residents who have purchased fishing licenses. Conservation groups, anglers, and boaters in southeast Wisconsin have consistently shown strong support for public access, and are very supportive of public access to North Lake.

The Department has actively pursued public access to North Lake for more than 25 years. The lands surrounding North Lake are extensively developed. Hellman Point Road and River Road are two platted public road rights-of-way which terminate near the Lake and may provide limited carry-in access but do not provide motor boat access. There are currently no public motor boat access sites on North Lake. Access to North Lake was provided at a privately owned commercial property, located on the eastern shore of North Lake near the mouth of the Oconomowoc River in the Town of Merton, until the early 1980s when a portion of the property was sold and developed as the Evergreen Condominiums. The North Lake Yacht Club provides private access to North Lake Yacht Club members. The privately owned Corey Oil site just west of STH 83 and north of Lake Street, has undeveloped and limited shallow access to the Oconomowoc River upstream of North Lake.

Under the authority of NR 1.90, Wisconsin Administrative Code, it is the goal of the State of Wisconsin to provide, maintain, and improve access to navigable waters of the state. Through this administrative code, the Department works with local units of government, other state and federal agencies, and citizens, to acquire, develop, maintain and improve public access sites.

The Department's Southeast Region Access Team has designated North Lake as a high priority for establishing

adequate public access for recreational boating and fishing.

The Department and Waukesha County evaluated potential boat access sites in 2004 and 2005 using the standards of NR 1.91, Wisconsin Administrative Code, and design guidelines from the States Organization for Boating Access (SOBA). Public access standards for a 437 acre lake are a minimum of 16 and a maximum of 31 car-trailer parking spaces which includes Americans with Disabilities Act (ADA) spaces. The Department and Waukesha County determined that the Department Site could provide permanent and year-round public access to North Lake. NR 1.91(4)(a), Wisconsin Administrative Code, states that the Department may only provide natural resource enhancement services for a body of water when reasonable public boating access has been provided.

In October 2004, the Department signed an option with Tom and Elaine Kraus to purchase 6.59 acres of property with 233 feet of lake frontage on the west side of North Lake. The Department held a public information meeting on January 11, 2005, to solicit public comments on the proposed acquisition and subsequent development of the Department Site.

The Natural Resources Board approved the purchase on February 22, 2005. The Governor, and the Waukesha County Board and County Executive subsequently reviewed and approved the acquisition. The Waukesha County approval included a \$200,000.00 partnership grant for the acquisition. The Wisconsin Conservation Congress, The Wisconsin Wildlife Federation, The Wisconsin Council of Sportfishing Organizations and the Waukesha County Conservation Alliance, representing the interests of 19 different organizations, supported the acquisition of the Department Site. The Department acquired the site in 2005 and commenced with the design and development of the access site. Subsequent litigation involving public use and location of the existing roadway to access the lakeshore parcel delayed the development timeline. In 2008, the North Lake Management District proposed an alternative to the Department's site development that involved the development of an access site of a parcel on the northeast side of North Lake at the mouth of the Oconomowoc River. The Department agreed to review this proposal and assess the feasibility of this alternative. This alternative is described in Section 25 as Alternative 5, the STH 83 Site.

3. Authorities and Approvals (list local, state and federal permits or approvals required)

Wisconsin Department of Natural Resources:

Department staff will complete a NR 103, Wis. Adm. Code, Water quality standards for wetland alternatives analysis and obtain a Manual Code 3506.1, Department Projects Located in or Adjacent to Navigable Waters approval, in lieu of NR 216, Wis. Adm. Code, Ch. 30, Wis. Stats., and other regulatory approvals, to construct stormwater management facilities, conduct site grading, fill 0.16 acre of wetland, and remove approximately 78 cubic yards of material from the bed of North Lake to construct a boat ramp.

United States Army Corps of Engineers:

The United States Army Corps of Engineers (ACOE) regulates the discharge of fill material into federal waters and wetlands. An ACOE General Permit or Letter of Permission may be required under Sections 401 and 404 of the Clean Water Act.

Local Zoning Approvals:

The Department is neither required to obtain local zoning permits and approvals nor is subject to fees associated with any local authorization for projects that have a direct benefit to the general public for recreational purposes. This exemption is based on s.13.48 (13) Wis Stats. and an opinion of the Attorney General (81 Op. Atty. Gen. 56) issued on June 30, 1993.

4. Estimated Cost and Funding Source

The estimated Department Site development costs are \$ 475,000.

**Site Preparation ..... \$10,700**

Clearing and grubbing, Soil testing, 8 tests @ \$400 ea.

**Site Development Activities..... \$ 83,221**

Buried electrical extension for a dusk to dawn light at the boat ramp, Fence, Landscaping, Signage, Architectural and Engineering Design, and Department State Facilities Fee

**Site Construction ..... \$ 381,079**

Concrete launch and interface with boarding dock, Boarding dock, Parking lot for 16 cars with trailers and three cars, Disabled accessible toilet, Toilet enclosure, Entrance road, Retaining wall, Culverts, and Stormwater control devices

**Total ..... \$ 475,000**

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PROPOSED PHYSICAL CHANGES (more fully describe the proposal)

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5. Manipulation of Terrestrial Resources (include relevant quantities - sq. ft., cu. yard., etc.)

Site work will include clearing, grubbing, grading, filling, trenching, and landscaping. Access road construction will remove 1,441 cubic yards of soil and place 949 cubic yards of aggregate base at the site. Parking lot construction will remove 1,976 cubic yards of soil and place 5,680 cubic yards of granular fill at the site. Two hundred cubic yards of existing soils will be excavated for the parking lot stormwater biofilter.

6. Manipulation of Aquatic Resources (include relevant quantities – cfs., acre feet, MGD, etc.)

Access road and parking lot development will impact 0.16 acre of wetland.

Approximately 78 cubic yards of gravel and sand substrate will be removed from North Lake for launch ramp construction.

7. Buildings, Treatment Units, Roads and Other Structures (include size of facilities, road miles, etc.)

There are no buildings at the access site. The existing ramp structure will be removed. Developments are described below and in Attachment 14, *Final Project Development Plans*.

**Signage:** A sign identifying the W.C. (Whitey) Kraus Public Access Site will be installed at the entrance along Reddelien Road. Other traffic, directional, and informational signs will be installed at the site.

**Access road:** The existing 18 foot wide and approximately 1,400 foot long gravel access road will be reconstructed as a 24 foot wide asphalt access road, which is the minimum width to accommodate two-way traffic safely, including one foot wide gravel shoulders and three to one side slopes. Two existing culverts will be removed. Seven new culverts and a series of storm sewer in-line treatment devices will be constructed. A two to four foot high, 483 foot long retaining wall will be constructed along the west side of the access road.

**Parking lot:** A new 100 foot by 279 foot asphalt parking lot with capacity for 15 car-trailer parking spaces, one Americans with Disabilities Act (ADA) car-trailer parking space, one ADA car only, one car only, and one official car only parking spaces will be constructed. The parking lot will have a one percent slope and drain to a stormwater biofilter which drains to North Lake.

**Boat launch ramp and boarding dock interface:** A new 12 foot wide by 42 foot long concrete boat launch ramp and boarding dock interface will be constructed. The ramp will extend from the shoreline to a 3 to 4 foot water depth. Riprap scour protection will be installed at the end of the ramp. A six foot wide by 35 foot long floating boarding dock will be installed.

**Other facilities:** A vegetative shoreline buffer will be established. A 10 foot by 20 foot asphalt pad for a dumpster and ADA portable toilet with an enclosure will be constructed. Buried electrical utilities and a 10 to 12 foot high light fixture for the boat launch, portable toilet, and ADA parking will be installed. An eight foot tall wooden privacy fence will be constructed.

8. Emissions and Discharges (include relevant characteristics and quantities)

Construction activity will generate temporary construction traffic, noise, dust, construction equipment engine air emissions, and stormwater runoff.

Temporary stormwater erosion controls will be installed prior to construction to minimize sediment discharge from the construction area.

Seventy-two cubic yards of sand and gravel substrate removed for launch ramp installation will be transported and deposited in an approved location.

Stormwater facilities will maintain existing drainage patterns in the area and control suspended solids. See Attachment 15, *Stormwater Analysis Report*.

9. Other Changes

There will be vegetative clearing and trimming for access road and parking construction.

10. Identify the maps, plans and other descriptive material attached

Attachment 1 - North Lake Boat Launch Project Location Map

Attachment 2 - North Lake Parking Lot and Boat Launch

Attachment 3 - North Lake Boat Launch Site Features Display

Attachment 4 - North Lake Boat Launch and Access Road Alternatives

Attachment 5 - North Lake Boat Launch Stormwater Treatment Display

Attachment 6 - County map showing the general area of the project

Attachment 7 - Topographic map

Attachment 8 - Lake map

Attachment 9 - July 15, 2008, Wisconsin Rapid Assessment Methodology for Evaluating Wetland Functional Values

Attachment 10 - October 14, 2008, Southeastern Wisconsin Regional Planning Commission Wetland Delineation Report

Attachment 11 - Summary of October 23, 2008, Public Informational Meeting Comments

Attachment 12 - Southeastern Wisconsin Regional Planning Commission, Report No. 189, Proposed North Lake Boat Launch Site Wetland Delineation (link?)

Attachment 13 - Response to Public Comments

Attachment 14 - Final Project Development Plans

Attachment 15 - Stormwater Analysis Report

Attachment 16 - STH 83 Site Plans

Attachment 17 - Department Site Floodplain Map

Attachment 18 - STH 83 Site Floodplain Map

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AFFECTED ENVIRONMENT (describe existing features that may be affected by proposal)

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Information Based On (check all that apply):

Literature/correspondence (specify major sources)

Addressed in item 26

Personal Contacts (listed in item 26)

Field Analysis By:  Author  Other (listed in item 26)

Past Experience With Site By:  Other (listed in item 26)

11. Physical (topography - soils - water - air)

The Oconomowoc River flows south into North Lake at the northeast corner of the lake. Other lakes connected to the Oconomowoc River upstream of North Lake include Friess Lake, Little Friess Lake, Loew Lake, and the Monches Impoundment. The Little Oconomowoc River flows into the Oconomowoc River near the inlet to North Lake. Mason Creek drains into the northwest corner of the lake. The outlet stream from Cornell Lake drains into the south end of the lake. North Lake flows to the west and south, via the Oconomowoc River, into Okauchee Lake, then through Oconomowoc Lake, Fowler Lake, and Lac La Belle before flowing into the Rock River in eastern Jefferson County. See Attachment 8, *Lake Map*.

The 6.59 acre Department Site is predominantly mowed turf grass, upland woods, and forested wetlands. The topography varies from a steep slope west of the access road to almost level with a slight slope to the lake. A wooded wetland and drainage swale that discharge to North Lake are located along the northern edge of the proposed parking lot and launch ramp. See Attachment 7, *Topographic Map*.

A variety of soil types surround North Lake. Silt loam and muck sediments are predominant on the immediate shoreline and are present in soil borings collected at the Department Site. Fill was placed in some locations along the northwest shore of the lake during residential development. The lake bottom adjacent to the site is sand and gravel.

North Lake is classified as a drainage lake. The lake has a maximum depth of 78 feet, a mean depth of 37 feet, and a total shoreline of 5.1 miles. Fourteen percent of the lake is less than three feet deep, while 51 percent of the

lake is over 40 feet deep. The water surface elevation at North Lake on April 14, 1994, was 896.5 feet National Geodetic Vertical Datum 29. The Ordinary High Water Mark elevation at the Department Site is 897.76 feet mean sea level. The water is clear and the bottom is primarily sand and gravel with smaller scattered marl beds. Pockets of organic silt can be found near the Oconomowoc River inlet.

The Department Site is located in a primary environmental corridor designated by the Southeastern Wisconsin Regional Planning Commission (SEWRPC). Approximately 1.0 acre of the Department Site development will be within the 100-year floodplain. None of the Department Site is in the floodway.

A shallow rock and gravel bar exists between the east and west lobes of the lake. The shallow area is marked with a buoy and requires boater operational care when navigating between the two lobes.

Sand bars are present and extend into North Lake both north and south of the proposed launch ramp site.

12. Biological (dominant aquatic and terrestrial plant and animal species and habitats including threatened/endangered species; wetland amounts, types and hydraulic value)

North Lake is moderately productive with clear water, low dissolved oxygen in deep water during the summer, and moderate nutrient levels. Aquatic plants include: coontail, water celery, clasping leaf pondweed, chara (a macroscopic algae), sago pondweed, Eurasian water milfoil, water crowfoot, floating leaf pondweed, elodea, wigeon grass, flat stem pondweed, spatterdock, white water lily, and white stem pondweed. Blooms of blue green algae have occurred at the Oconomowoc River inlet area for the past four years. Eurasian water milfoil and zebra mussel invasive species are present in North Lake.

The Wisconsin Fish Distribution Survey indicates that the North Lake fish population is very diverse, with 27 fish species recorded. Gamefish species include walleye, muskellunge, northern pike, and largemouth and smallmouth bass. Forage fish include several species of darters, minnows and shiners. Of particular interest is the presence of lake chubsucker, a state Special Concern species. Special Concern species are those with some suspected but not proven problem of abundance or distribution. The main purpose of this category is to focus attention on certain species before they become threatened or endangered. Walleyes and northern pike use the Oconomowoc River, both upstream and downstream of North Lake and its adjacent wetlands, for spawning and rearing habitat. Lake chubsuckers prefer the weedy or marshy fringe of lakes and streams. Minnows and sunfish use shallow, weedy areas for feeding, rearing of young, and shelter. These habitat types are present in the Oconomowoc River inlet to North Lake.

North Lake and its surrounding uplands and wetlands support a variety of wildlife species. Common mammals using the lake include muskrats, mink, raccoons, white-tailed deer, little brown bats and occasionally river otters. Other mammals on the surrounding uplands include red, gray and fox squirrels, cottontail rabbits, red and gray fox,

coyotes, skunks, opossums, woodchucks, eastern chipmunks, thirteen-lined ground squirrels, and various species of shrews, moles, mice, voles and weasels.

Common birds on the lake are Canada geese, mallards, wood ducks, blue-winged teal, American coots, belted kingfishers, herring gulls, ring-bill gull, common egrets, great blue herons, and various species of swallows, shorebirds, and songbirds. Other waterfowl which use the lake as a spring or fall migratory stop-over include widgeon, green-winged teal, northern pintail, gadwall, northern shoveler, bufflehead, common goldeneye, ring-necked duck, hooded merganser, lesser scaup and other duck species. Birds found on the surrounding wetlands and uplands include American bitterns, sandhill cranes, woodcock, owls (great horned, screech and barred), hawks (red-tailed, Coopers, sharp-shinned and American kestrel), wild turkeys and a large variety of songbirds. Bird feeders are common at residences around the shoreline, attracting cardinals, gold finches, nuthatches, chickadees, blue jays, mourning doves, downy woodpeckers, and other species.

Common reptiles and amphibians around the lake include painted and snapping turtles, eastern garter snakes, fox snakes, milk snakes, common garter snakes, brown snakes, northern redbelly and northern water snakes, American toads, spring peepers, gray tree frogs, leopard frogs, wood frogs, green frogs, and chorus frogs. Other reptile and amphibian species are likely to be present.

No state or federal threatened or endangered species or state species of special concern have been observed at the Department Site. The Department reviewed the Natural Heritage Inventory (NHI) files for the project area. Species recorded within five miles of the project area, and with suitable habitat in some of the project area wetlands, include lake chubsucker (*Erimyzon sucetta*), least darter (*Etheostoma microperca*), pale green orchid (*Platanthera flava*), Hooker's orchid (*P. hookeri*), and forked aster (*Aster furcatus*). Butler's gartersnake (*Thamnophis butleri*), a state threatened species, was recorded within five miles; however, the Department Site is outside the currently established range for the species. No nearby records are listed for Blanding's turtle (*Emydoidea blandingii*), a state threatened species, but the wetland is within the range of and includes suitable habitat for this species.

The 2005 Wisconsin Wetland Inventory maps indicate that forested, emergent wet meadow, and scrub-shrub wetlands are present around the northern, southern, and western shoreline of North Lake.

Department and SEWRPC staff identified and delineated wetlands at the Department Site on July 8 and October 14, 2008. The wetland boundaries were surveyed to a geodetic reference marker. SEWRPC Report No. 189 *Proposed North Lake Boat Launch Site Wetland Delineation* is provided in Attachment 12.

Department Site wetlands are part of a 12 acre depressional wetland complex in the northwest corner of the North Lake basin. The entire complex is part of a primary environmental corridor. The wetland complex has also been identified in an Advanced Identification process which includes mapped wetlands that occur within the boundary of the primary environmental corridor.

The Department Site wetland complex is isolated from the lake by a strip of lake-ridge upland, except for a stream channel at the northeast side of the property. The wetland discharges to the lake through this channel during high water levels in spring and after heavy rains. The wetland complex covers about 12 percent of the land area that drains to it and provides high functional value for water quality, flood storage and stormwater attenuation.

Soil types in the wetland interior are deep organic mucks formed from herbaceous vegetation with some standing water until mid-summer in most years. Below the organic material is a relatively impermeable layer of marl. Soil at the wetland boundary on the east side of the wetland complex is fill material or depositional topsoil over the organic layer.

Past disturbance to the wetland includes excavation in the stream channel, addition of gravel fill for an access road and lakeside development, sediment deposits from runoff on adjacent land, dredging and discharge of spoil material.

The current wetland plant communities include shallow marsh, shrub-carr and lowland hardwoods and are surrounded by southern mesic hardwoods and residential development. Based on a preliminary vegetation survey, the wetland floristic quality is mid-range with a Floristic Quality Index of 20.5. The wetland complex is dominated by invasive plant species. See Attachment 12, *Southeastern Wisconsin Regional Planning Commission, Report No. 189, Proposed North Lake Boat Launch Site Wetland Delineation* for a list of plants.

Wildlife habitat quality is mid-range based on wetland size, structure, quality and level of disturbance using standard wildlife habitat criteria developed by the Department and SEWRPC.

13. Cultural

a. Land use (dominant features and uses including zoning if applicable)

The Department Site is zoned residential. The Town of Merton has established A-1 Agricultural, C-1 Conservancy, and R-3 Residential zoning categories for the area near the Department Site.

The 100-year floodplain at the Department Site and surrounding area is shown in Attachment 17.

Most land around North Lake is privately owned. There are 238 property owners on North Lake. The shoreline is predominantly developed with private residences served by private water supply wells and septic systems or holding tanks. Riparian property owners typically have one or more watercraft for recreational use. The private ownership and extent of development around the lake limits the availability of properties for a public access site.

Adjacent private residences are located north and south of the Department Site. The Sunset View Subdivision is

south of the Department Site. The Reddelien Road Property Owners Association represents residents within the subdivision.

There are three residences along Reddelien Road between West Shore Drive and the entrance to the Department Site boat launch. The access road off Reddelien Road that provides access to the proposed parking lot and boat ramp is approximately 1,400 feet long. The access road passes through mature woods which provide a substantial visual barrier to adjacent properties.

In 2004, the average daily traffic was 3,494 vehicles per day on CTH K near West Shore Road. The speed limit is 25 miles per hour on CTH K near West Shore Road.

The Town of Merton regulates speed limits and parking along Reddelien Road which accommodates two-way traffic.

The sandbars located adjacent to the proposed boat ramp and between the lake's two lobes have been used as staging areas for youth sailing classes and for other recreational activities.

The Department Site will provide access for winter recreation in an area conducive to ice fishing.

b. Social/Economic (include ethnic and cultural groups)

According to U.S. Census data for 2006, Waukesha County has a population of 380,985. The County's population increased 20,218 from 2000 to 2006 which represents a 5.6% growth rate. Waukesha County has the third highest county population in the state.

North Lake lies within the Town of Merton and the Village of Chenequa, which have a combined 2006 population of 8,964. The incorporated municipalities of the City of Oconomowoc, the City of Delafield, and the Village of Hartland are all within five miles of North Lake. These three municipalities have a combined 2006 population of 29,214. Waukesha, the largest city in Waukesha County, with a population of 67,750, is approximately eight miles from North Lake.

Public demand for access to waterways in southeast Wisconsin, particularly in Waukesha County, is very high. In 2008, Waukesha County had the highest number of registered boats of any county in Wisconsin. Waukesha County has the second highest number of resident fishing licenses. Conservation groups, anglers, and boaters in southeast Wisconsin have consistently shown strong support for public access and are very supportive of public access to North Lake.

The Waukesha County Board showed support for the proposed North Lake access site by approving a \$200,000

contribution towards the acquisition of the Department Site in May 2005. The Waukesha County Conservation Alliance showed significant support at County Board and committee meetings.

c. Archaeological/Historical

The State Historic Preservation Officer has determined that the Department Site does not have historic or archaeological significance.

The Department provided notice of the proposed development to the Prairie Band Potawatomi Nation and the Wyandotte Nation pursuant to Section 106 of the National Historic Preservation Act. The Wyandotte Nation replied that there are no known traditional cultural properties in the project area. The Prairie Band Potawatomi Nation did not respond.

14. Other Special Resources (e.g., prime agricultural lands)

None

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ENVIRONMENTAL CONSEQUENCES (probable adverse and beneficial impacts including indirect and secondary impacts)

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15. Physical

The Department Site will provide recreational boaters and anglers an opportunity to launch watercraft on and have winter access to North Lake.

The site's appearance will be modified by site clearing, grubbing, removal of some mature trees, and site development. The development will preserve the majority of the mature trees and shrubs along the access road.

Access road and parking lot construction will impact 0.16 acre of wetland.

The amount of impervious surface area will increase. The existing gravel access road would be replaced by an asphalt paved roadway which requires less maintenance. A portion of the grass vegetation at the lakeshore will be replaced by an asphalt parking area. Pervious pavement, such as articulated concrete, is generally unsuitable for

the access road or parking lot development because snow plowing would likely dislodge pavers and applying sand would clog infiltration pores.

The Department Site access road and parking lot development are designed to maintain existing stormwater surface flow patterns. See Attachment 14, *Final Project Development Plans*. The access road and parking lot will not change floodplain elevations or storage capacity.

The north-south segment of the access roadway will be reconstructed with four cross culverts to maintain existing west to east drainage. The east-west segment of the access roadway will be constructed at the same elevation as the existing access road allowing flood waters to overtop the road as currently occurs and three cross-culverts will be installed to maintain the hydraulic connection between the wetlands that are north and south of the roadway.

The parking lot will slope slightly to the north into a designed drainage swale that discharges to North Lake. In addition, a new drain tile system will be constructed along the south perimeter of the parking lot to maintain existing drainage patterns and convey the drainage east to North Lake.

A concrete launch ramp will be placed on 0.01 acre of the lakebed.

Temporary construction impacts will include: construction traffic, noise, stormwater runoff and erosion, dust emissions, and construction equipment air emissions. Stormwater management and construction erosion control plans will minimize these impacts.

16. Biological (include impacts to threatened/endangered species)

Department Site access road, parking lot, and boat launch ramp development will decrease locally available wildlife habitat including potential turtle nesting habitat near the boat launch ramp.

Wildlife and fish may disperse during construction activities and relocate into adjacent habitat areas.

Largemouth bass and bluegill are not likely to use the project area for feeding or cover because rooted aquatic plants are not present. They may continue to nest in the project area or relocate to other similar habitat that is widely available in the lake.

Invasive species are present in many inland lakes in Wisconsin. Eurasian Milfoil and zebra mussel invasive species are present in North Lake. Transient boaters represent minimal additional risk of introducing invasive species into North Lake.

17. Cultural

a. Land Use (include indirect and secondary impacts)

Department Site activity and secondary noise impacts will be limited to boat launching and retrieval, associated vehicle parking, and site maintenance during hours of operation. The site will provide access for winter recreation on North Lake, including ice fishing. Motorized vehicle access to the lake in winter will not be allowed from the site.

Picnicking, swimming, camping, and hunting will not be allowed at the site. The local municipality has the authority to pass local ordinances to regulate noise, parking on local streets, and boating activities.

The Department will determine the hours of operation, post operation information at the site and control site access. Department public access sites are typically open 24 hours a day. While some sites have limited hours, NR 1.91(4)(d)6., Wis. Adm. Code, states that any boat launched during operating hours must be allowed egress from the water at any time.

Department staff will inspect, manage, and maintain the Department Site. As a steward of public property the Department will address site-specific issues. A trash receptacle at the site will have weekly pickups through contract. A year-round, portable restroom facility in an enclosure will be provided and maintained by a contractor throughout the year.

The Department Site access road will safely accommodate two-way car-trailer traffic. An entrance sign will be placed along Reddelien Road at the site entrance. A 10 mile per hour speed limit sign and other traffic control and informational signs may be placed along the access road and parking lot. Boundary signs may be placed to mark the property limits. A stop sign will be placed at the site exit to Reddelien Road.

The Department will post signs stating that parking is allowed only in designated parking areas and that vehicles parked in undesignated areas may be subject to a citation or towed.

New car-trailer traffic will occur on area roads, including Reddelien Road near the Department Site. Secondary traffic impacts on Reddelein Road are not expected to be significant because of the limited, 16 car-trailer and three car only parking stalls available at the launch site. Launching activity and boat traffic will increase most on peak summer holidays and weekends.

Local boating ordinances and informational signs will be placed at the launch site.

A dusk to dawn lighting fixture will be installed near the restroom enclosure and boat ramp to support the launching and retrieval of boats. The downcast lampshade on the dusk to dawn light fixture will control lighting near the boat launch and limit visual impact to neighbors and lake users.

The Department will discuss the final project development plans with the Waukesha County Planning, Conservation and Parks Department, the Town of Merton, and the North Lake Management District.

b. Social and Economic (include ethnic and cultural groups, and zoning if applicable)

Public recreational boaters and anglers will directly benefit from access to North Lake.

Local businesses may directly and indirectly benefit from increased recreational activity and tourism. The Department Public Access Site is not expected to affect local property values.

Based on the Department's experience with other public access sites in Waukesha County, the types of boats using public boat ramps include: gasoline-powered speed boats, fishing boats, canoes, kayaks, sailboats, and personal watercraft such as jet skis. These watercraft types are currently operated on North Lake. There are 238 property owners on North Lake. Riparian property owners typically own one or more watercraft for recreational use. This is based on observations at other access sites and experience in operating water-based recreation facilities. The Department Site is being developed to meet minimum standards for public boating access as identified in NR 1.91 Wisconsin Administrative Code. The relatively modest number of 16 car-trailer parking spaces and three car only spaces proposed for the Department Site is a minimal increase in boat traffic on North Lake.

There should be no significant impact on watercraft operations and safety on the lake. Most impacts occur on summer weekends and holidays. All transient and riparian boaters are required know and comply with state and local boating regulations.

State regulations require personal watercraft to travel at slow-no-wake speed within 200 feet of the shoreline of any lake, and at slow-no-wake speed within 100 feet of another watercraft.

State boating law applies to all inland lakes in Wisconsin. Local municipalities have the authority to pass ordinances more restrictive than state law. Chapter 30.77, Wisconsin Statutes, allows local municipalities to enact local regulations relative to boating in the interest of public health, safety or welfare, including the public's interest in preserving the state's natural resources. Typical local regulations address water-skiing, shoreland zone protection, slow-no-wake hours and areas, and speed limits. Several municipalities in southeast Wisconsin have passed ordinances prohibiting the use of cars, trucks, all terrain vehicles, and snowmobiles on ice covered lakes. Local boating ordinances will be posted at the site.

Local restrictions currently in place on North Lake include:

- Require boats to travel at slow-no-wake speed within 100 feet of a dock, raft, pier or swimmer
- Set a maximum speed limit of 35 miles/hour for all boats

- Set slow-no-wake speed from one hour after sunset until one hour before sunrise the next day
- Require boats towing people skiing or tubing to operate in a counter clockwise direction
- The Village of Chenequa and Town of Merton require slow-no-wake during high water conditions

Department Conservation Wardens patrol North Lake. The Town of Merton and the Village of Chenequa operate Water Safety Patrols on North Lake. The majority of boating violations are lack of proper number or type of personal floatation devices in the watercraft, improper nighttime lighting, and waterskiing without an observer. The North Lake Management District indicates that speeding is not a current problem on North Lake.

Development of a public access site on North Lake would allow the Department to provide fish stocking and population management, habitat development, financial assistance for aquatic plant management, lake restoration grants and other natural resources enhancement services.

c. Archaeological/Historical

None

18. Other Special Resources (e.g., State Natural Areas, prime agricultural lands)

None

19. Summary of Adverse Impacts That Cannot Be Avoided (more fully discussed in 15 through 18)

- The number of mature trees and shrubs will be reduced.
- The site appearance will change.
- A dusk to dawn light fixture will be installed at the boat ramp.
- The access road and parking lot will impact 0.16 acre of wetland.
- The boat launch will impact 0.01 acre of lakebed.
- Wildlife and aquatic habitat will change.
- Access road, parking lot, and boat ramp development will decrease locally available wildlife habitat.
- Wildlife may temporarily relocate during construction.
- The asphalt access road and parking lot will increase impervious surface area in an environmental corridor.
- Temporary construction impacts include: noise, stormwater, site erosion, dust emissions, and construction equipment air emissions.
- Traffic on Reddelien Road between West Shore Drive and the Department Site access road will increase.
- There will be boat launching and retrieval, and vehicle parking noise and activities at the site.
- Boat traffic and angling activity will increase on North Lake

20. Environmental Effects and Their Significance

- a. Discuss which of the primary and secondary environmental effects listed in the environmental consequences section are long-term or short-term.

The Department Site is located in an area that is conducive for ice fishing and will provide permanent year-round public access for recreational boaters and anglers.

Clearing trees and shrubs; constructing new roadway, retaining wall, parking lot, boat ramp, lighting, and stormwater management facilities, and installing new landscaping will create a new permanent site appearance.

The roadway and parking lot developments will permanently fill 0.16 acre of wetland. The impacts are not expected to cause a measureable decrease in the wetland's flood storage capacity or water quality function due to the size of the remaining wetland relative to the size of its 12 acre drainage area.

Wildlife and fish may be temporarily displaced during construction. There will be a permanent decrease in locally available habitat.

Boat launching and retrieval, and associated vehicle traffic and parking activity will be permanent. The 16 car-trailer and three car only parking spaces, including ADA spaces, will result in minimal permanent increases in car-trailer traffic, watercraft traffic, boat wakes, and shoreline erosion. Secondary noise and traffic impacts may peak during summer weekends and holidays.

The access road and parking lot development are designed to control suspended solids to protect water quality and to maintain stormwater surface flow drainage patterns.

Temporary construction impacts include: construction traffic, noise, stormwater, site erosion, dust emissions, and construction equipment air emissions. Stormwater management and construction erosion control plans will minimize these impacts.

Transient boaters represent minimal additional risk of introducing invasive species into North Lake.

Development of a public access site on North Lake allows the Department to provide fish stocking and population management, habitat development, financial assistance for aquatic plant management, lake restoration grants and other natural resource enhancement services.

The Department Site may provide tourism and economic benefits to local businesses.

- b. Discuss which of the primary and secondary environmental effects listed in the environmental consequences section are effects on geographically scarce resources (e.g. historic or cultural resources, scenic and recreational resources, prime agricultural lands, threatened or endangered resources or ecologically sensitive areas).

The access road and parking lot will impact 0.16 acre of wetland within a 12 acre depression wetland complex.

The boat launch ramp will impact 0.01 acre of lakebed in a 437 acre lake.

The wetland and lakebed impacts are not expected to affect the presence or abundance of any wildlife species or fish communities because other suitable habitat is widely available.

Construction can be scheduled to postpone work during fish spawning and measures such as exclusion fencing, collection, and relocation can be implemented to minimize impacts to area wildlife including turtles and other native species.

The project will not impact floodplain elevation or flood storage capacity.

The installation and use of the boat ramp will have a minimal impact on the lakebed.

The project development will not reduce the area of the SEWRPC designated primary environmental corridor.

- c. Discuss the extent to which the primary and secondary environmental effects listed in the environmental consequences section are reversible.

The Department Site will provide permanent year-round public access for recreational boaters and anglers. Changes in the Access Site's appearance and the increases in human activity related to roadway traffic, boat launching and retrieval, and vehicle parking will be permanent.

Temporary construction impacts include: construction traffic, noise, construction site erosion control, dust emissions, and construction equipment air emissions. In-water construction can be scheduled to avoid work during fish spawning. Wildlife and fish that may be temporarily displaced during construction will return.

The minimal number of parking spaces at the site, use of slow-no-wake boundaries, and efforts of water safety patrol enforcement should result in minimal permanent changes in watercraft operations, fish habitat, and shoreline impacts to North Lake.

Fish spawning habitat will not be significantly affected. Largemouth bass and bluegill may continue to nest in the project area or relocate to similar habitat that is widely available in the 437 acre lake. Other fish species using the area are not limited by available habitat in North Lake.

21. Significance of Cumulative Effects.

Discuss the significance of reasonably anticipated cumulative effects on the environment. Consider cumulative effects from repeated projects of the same type. What is the likelihood that similar projects would be repeated? Would the cumulative effects be more severe or substantially change the quality of the environment? Include other activities planned or proposed in the area that would compound effects on the environment.

The Department Site will provide the first permanent public motor boat access to North Lake, the ninth largest lake in Waukesha County and the largest without a public access site.

The Department Site's appearance and level of activity related to roadway traffic, boat launching and retrieval, and vehicle parking are consistent with the Department's public boat launches on Moose, Okauchee, Genesee and other lakes. The 16 car-trailer and three car only parking spaces will result in minimal permanent increases in watercraft traffic, boat wakes, and shoreline erosion. Public access will allow the Department to provide fish population management and stocking, habitat development, financial assistance for aquatic plant management, lake restoration grants, and other services to North Lake.

Total roadway and parking lot direct wetland impacts are 0.16 acre. The wetland reduction is not expected to cause a measureable decrease in the wetland's flood storage capacity, water quality function, or other functional values due to the size of the remaining wetland relative to the size of the area that drains to it.

Development of the Department Site will have temporary construction impacts that will be minimized through construction staging and construction site erosion control management practices.

The access site development will not have a significant adverse impact on wildlife, fish, water quality, or North Lake habitat.

The acquisition and development of additional public access sites throughout southeast Wisconsin will address the growing public demand for greater recreational access to public waters. This may also help alleviate the intensive use of other public access sites in the area.

22. Significance of Risk

- a. Explain the significance of any unknowns that create substantial uncertainty in predicting the effects on the quality of the

environment. What additional studies or analysis would eliminate or reduce these unknowns?

None

- b. Explain the environmental significance of reasonably anticipated operating problems such as malfunctions, spills, fires, or other hazards (particularly those relating to health or safety). Consider reasonable detection and emergency response, and discuss the potential for these hazards.

Emergencies, fires, and spills at the Department Site can be reported by calling 911. Department Conservation Wardens, Waukesha County Sheriff's Department, and Stone Bank, North Lake, and Chenequa Fire Department-Emergency Medical Service can provide emergency response services.

Incidental petroleum spills at such sites are typically less than five gallons and are not expected to be a significant environmental threat.

23. Significance of Precedent

Would a decision on this proposal influence future decisions or foreclose options that may additionally affect the quality of the environment? Describe any conflicts the proposal has with plans or policy of local, state or federal agencies that provide for the protection of the environment. Explain the significance of each.

The development of the Department Site will provide recreational boaters and anglers with permanent year-round access to North Lake and allow the Department to provide resource enhancement services.

Development of the Department Site as a year round, public motor boat access facility may influence other proposals to establish additional public access facilities on North Lake.

Development of the Department Site will not set a precedent.

24. Discuss the effects on the quality of the environment, including socio-economic effects, that are (or are likely to be) highly controversial, and summarize the controversy.

Development of the Department's Public Access Site will satisfy a longstanding public need for public access to North Lake.

Some residents do not support the Department's goal of providing public access, selecting the Department Site, administering design guidelines for boat launch facilities, developing a project with wetland and lake bed impacts, and using public funding to develop the Department Site.

Local concerns include changes in site appearance, public activity, increased traffic and launch site use, project costs, public benefits, and the types of environmental consequences discussed in paragraphs 15 through 19. These are common local concerns when siting and developing boat launch facilities and are locally controversial at any proposed access site.

There is disagreement about the wetland boundary in the parking lot area. The Department responded to public comments and consulted with SEWRPC to re-evaluate and confirm the wetland delineation.

Some residents have expressed concern that changes in stormwater drainage could result in flood damage to residential properties and septic systems. Stormwater facilities have been designed to maintain existing stormwater surface flow patterns. Low lying areas that currently experience ponded water and poor functioning septic systems during prolonged precipitation events will likely continue to experience similar conditions in the future.

The North Lake Management District and some residents have proposed that public access be developed at the former Kuchler property now referred to as the STH 83 Site, on the eastern shore of North Lake near the mouth of the Oconomowoc River in the Town of Merton, or alternatively that the Department Site be developed as a carry-in only site for canoes and kayaks and winter access with the STH 83 site being developed for motor boat access (the Two-Site Alternative). Other residents disagree. Some opposition exists to each site: the Department Site, the STH 83 Site, and the Two Site Alternatives

Some public comments expressed concerns that the Department Site was acquired in 2005, is still not developed, and should be in operation and open to the public as early as possible.

Wherever the new access site is developed, the local North Lake and Waukesha County business communities may experience some economic benefit.

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## ALTERNATIVES

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25. Briefly describe the impacts of no action and of alternatives that would decrease or eliminate adverse environmental effects (refer to any appropriate alternatives from the applicant or anyone else.)

The Department and Waukesha County evaluated potential North Lake boat launch sites in 2004 and 2005 using the standards of Section NR 1.91, Wisconsin Administrative Code and design guidelines from the States Organization for Boating Access. The Department and Waukesha County determined that the Department Site

could provide permanent and year-round public access to North Lake. The Department acquired the Department Site in 2005.

Additional alternative analysis is provided in response to public comments.

#### **ALTERNATIVE 1 - DO NOTHING**

The Do Nothing alternative was removed from consideration because it does not accomplish the goals of NR 1.90, Wisconsin Administrative Code, Public access policy for waterways to provide boaters and anglers an opportunity to launch watercraft and access water bodies for recreational purposes. No action would perpetuate over 25 years of lack of public access to North Lake. Lack of public access also limits Department fish stocking, habitat restoration, and other management services to North Lake.

#### **ALTERNATIVE 2 – PLATTED ACCESS**

Hellman Point Road and River Road are two platted public road rights-of-way which terminate near the Lake. These alternatives were removed from consideration because they may provide only limited carry-in access, are too small for car-trailer access, parking availability is severely limited and could not be modified to provide motor boat access.

#### **ALTERNATIVE 3 – THE NORTH LAKE YACHT CLUB**

The North Lake Yacht Club (NLYC) currently provides private access to North Lake Yacht Club members. The Department originally explored the acquisition and use of this property for public access in 1989. After several initial negotiation meetings with the North Lake Yacht Club, the club decided not to pursue sale of the property to the Department. (See Attached) The Department again explored the use of this parcel for public access to North Lake in 2005 prior to the acquisition of the Department site from Tom and Elaine Kraus. After several meetings with the NLYC and a site investigation of the parcel, it was determined that the parcel had development limitations. The site could not support both a NLYC's planned facility development and an adequate public access facility layout. In addition, the parcel contains extensive wetlands which would further limit development of an adequate access facility. The Department then acquired the Kraus parcel for an access site. The NLYC has since developed support facilities for the yacht club utilizing most of the parcel leaving an inadequate area available for any access site development. This alternative was removed from consideration.

#### **ALTERNATIVE 4 – THE COREY OIL SITE**

The privately owned Corey Oil site just west of STH 83 and north of Lake Street, has undeveloped, and limited shallow access to the Oconomowoc River upstream of North Lake. This alternative was removed from consideration because of the limited water depth, less than 1 foot, at the site, floodway conditions, and the impracticability of dredging and maintaining a four foot deep and 700 foot long navigational channel to North Lake.

#### **ALTERNATIVE 5 – THE STH 83 SITE**

The STH 83 Site is a 2.83 acre parcel owned by the North Lake Development Group, LLP, on the eastern shore of North Lake near the mouth of the Oconomowoc River in the Town of Merton. See Attachment 16, *STH 83 Site Plans*. The STH 83 Site is a remnant of a larger privately owned commercial property that provided access to North Lake until the early 1980's when the property was sold and the Evergreen Condominiums were developed.

The STH 83 Site is within a SEWRPC designated environmental corridor and has more than 1,000 feet of Oconomowoc River and North Lake frontage. Approximately 2.20 acres of the site is located within the floodplain of which 2.10 acres is within the floodway. An estimated 0.63 acre of the site is upland. The 100-year floodplain at the STH 83 Site and surrounding area is shown in Attachment 18, *STH 83 Site Floodplain Map*. A floodplain is nearly flat land adjacent to a river that experiences occasional flooding. A floodplain includes the floodway, which consists of the river channel and adjacent areas carrying flood flows, and the flood fringe, which are flooded areas that do not experience a strong current. The STH 83 Site is close to STH 83, residential properties, mixed use development, and local businesses.

The Department and Waukesha County evaluated several sites, including the STH 83 Site, as public access sites in 2004 and 2005. The Department determined that Oconomowoc River currents inhibit ice formation near the STH 83 Site and prevent ice fishing access in winter, and floodway flows could damage facilities. Approximately 1,900 cubic yards or more of lakebed material would need to be dredged to create a navigation channel for the STH 83 launch. Periodic maintenance dredging would be required thereafter. Local wind patterns and river currents make boat launch and retrieval more difficult near the mouth of the Oconomowoc River compared to other parts of North Lake. Wetlands and springs present at the STH 83 Site limit development design options. The Department made an overall determination that the STH 83 Site would not provide adequate year round public access, would have high wetland and waterway impacts relative to the public benefits, and pursued other locations for establishing public access to North Lake. The Department ultimately purchased the Department Site in 2005.

On August 11, 2009, The North Lake Management District (NLMD) submitted an application to the USACOE to dredge and or fill materials in North Lake/Oconomowoc River and its adjacent wetlands to construct a boat launch facility at the STH 83 Site. The application proposes a 12 foot by 42 foot concrete landing ramp, a 24 foot wide access drive, two turn-arounds, 16 parking spaces including one handicapped space, 15 lineal feet of riprap, public restroom facilities, a 45 foot by 24 foot bridge over an existing spring head, native landscaping, landscape screening, a six foot by 40 foot pier, the hydraulic dredging of a navigation channel, and the discharge of carriage water from the upland dredged materials disposal site.

The application indicates that the STH 83 Site landing ramp will impact 0.01 acre of lakebed. The access road and parking lot will impact 0.24 acre of wetland. Total STH 83 Site wetland/waterway impact is 0.25 acre.

The Department estimates that the NLMD proposal will include dredging approximately 8,000 cubic yards or more of lakebed sediment to create a 50 foot wide by 466 foot long by minimum 4 foot deep navigation channel.

Construction of stormwater management facilities could increase total wetland impacts. An estimated 270 feet of the access road and bridge, approximately 0.8 acre, would be located in the floodway of the Oconomowoc River. Town of Merton access agreements or easement would be needed for establishing parking spaces on Lake Street. NLMD has identified real estate acquisition costs of \$340,000. Development costs range from \$665,782 to \$696,744 which includes dredging and dredge disposal (Cost figures were obtained from previous grant applications submitted to the Department). Environmental impacts, schedules, and costs are summarized in the comparison table below.

The estimated 16 car-trailers and three cars using the launch facilities on peak summer holidays and weekends would not be expected to impact STH 83 traffic operations significantly. Local fire and rescue services are available.

Local businesses near the STH 83 Site providing services to boaters and anglers may benefit from boat launch development and activity.

#### **ALTERNATIVE 6 - DEPARTMENT SITE**

The Department Site, described in Sections 1 through 24, is at W323 N7453 Reddelien Road on the western shore of North Lake in the Town of Merton. The Department and Waukesha County jointly evaluated several prospective public access sites in 2004 and 2005 and determined that the Department Site best met the standards of NR 1.91, Wisconsin Administrative Code, Public access policy for waterways and design guidelines from the States Organization for Boating Access (SOBA). The Natural Resources Board and the Governor approved the purchase of the Department Site and the Department bought the property in 2005.

The Department Site will provide year round access to North Lake. The access road on the Department's easement, including sideslopes, and parking lot will impact 0.16 acre of wetland. The Department Site has no development in a floodway. The Department Site boat launch ramp will impact 0.01 acre of lakebed. Total Department Site wetland/waterway impact is 0.17 acre. Stormwater management facilities are included in the project design.

Acquisition costs of \$1,125,000 and design costs of \$62,245 have already been expended. Stewardship bonding has been allocated for estimated development costs of \$475,000.

The Department has addressed real estate and legal questions, gathered design information, solicited public comments on Department Site Preliminary Development Plans, and evaluated six Department Site access road alternatives, 6A through 6F, from 2005 to present.

#### **ALTERNATIVE 6A – ACCESS ON THE EXISTING ROAD**

This alternative would reconstruct the existing 18 foot wide gravel access road, including approximately 100 feet located outside of the easement, on its existing alignment as a 24 foot wide asphalt roadway. Access road and parking lot construction would require 0.091 acre of wetland fill. This alternative, illustrated in pink on the *North Lake Boat Launch Access Road Alternatives attachment*, affects a small area owned by the adjacent private property owner. The Department does not have any rights to utilize this portion of the property. This alternative was removed from consideration.

#### **ALTERNATIVE 6B – ACCESS ON THE DEPARTMENT EASEMENT**

This alternative would reconstruct the existing 18 foot wide gravel access road as a 24 foot wide asphalt roadway entirely within the Department's easement and would fill 0.16 acre of wetland for road and parking area construction. This alternative, illustrated in green on the *North Lake Boat Launch Access Road Alternatives attachment*, minimized wetland impacts and was selected as the preferred alternative. Environmental impacts, schedules, and cost are summarized in the comparison table below.

#### **ALTERNATIVE 6C – ACCESS ON DEPARTMENT OWNED PROPERTY (FEE TITLE)**

This alternative would reconstruct the existing 18 foot wide gravel access road as a 24 foot wide asphalt roadway entirely on Department owned property and would fill 0.47 acre of wetland for road and parking area construction. This alternative, illustrated in blue on the *North Lake Boat Launch Access Road Alternatives attachment*, impacted the most wetland acreage and was removed from consideration.

Pending litigation may require a re-evaluation of this alternative.

#### **ALTERNATIVE 6D – ACCESS BY UTILIZING A ONE LANE ROAD WITH PULLOUTS**

This alternative would reconstruct the existing 18 foot wide gravel access road as a 16 foot wide single lane roadway with two 12 foot wide by 190 foot long pullouts to allow oncoming cars and trailers to pass. The access would be constructed on the Department's easement and would fill 0.16 acre of wetland for road and parking area construction. This alternative was removed from consideration because it provided lower emergency vehicle access, poor two-way car-trailer traffic flow, and no significant reduction in wetland impacts compared to Alternative 6B, Access on the Department Easement.

#### **ALTERNATIVE 6E – ACCESS BY EXTENDING LOWER REDDELIEN ROAD**

This alternative is illustrated on the *North Lake Boat Launch Access Road Alternatives attachment* and was removed from consideration because there is no right-of-way easement for the extension of Lower Reddelien Road.

#### **ALTERNATIVE 6F – ACCESS BY SILVER SPRING DRIVE OR SILVER SPRING LANE**

Access from the north is not a viable alternative because there are no right-of-way easements to extend Silver Spring Drive or Silver Spring Lane to the Department Site. This alternative was removed from consideration.

## ALTERNATIVE 7 – TWO SITE ALTERNATIVE

### ALTERNATIVE 7A - DEVELOPMENT OF DEPARTMENT CARRY-IN AND STH 83 MOTOR BOAT LAUNCH SITES

Under this proposal, which was advanced by the NLMD, the STH 83 Site would be purchased and developed, as described in Alternative 5, by the NLMD and that the Department's existing Site Development Plans would be modified to include a two-way access road on the Department's easement and the development of two, eight car parking lots to provide carry-in access only and winter access for ice fishing and other winter recreational activities.

Elimination of the boat ramp and a reduction in the size of the parking lot would be major changes to the Department Site development previously described in section two. The access road, a small boarding pier, screened dumpster, portable toilet, and lighting would still be included in the modified plans.

The STH 83 Site wetland impacts are 0.24 acre. There are currently no design plans for a Department Carry-in only site but preliminary wetland impacts are estimated at 0.15 acre. Total wetland impacts utilizing both sites are estimated to be 0.39 acre.

An estimated 8,000 cubic yards of sediment would be dredged to create a navigation channel for the STH 83 Site. Periodic maintenance dredging would be required thereafter to maintain a navigation channel.

NLMD costs are estimated at \$340,000 for acquisition, \$46,682 for design, and \$665,782 to \$696,744 for development of the STH 83 site.

The Department's costs are \$1,125,000 for acquisition, \$62,245 for current design with additional \$20,000 for design modification, and approximately \$350,000 to \$400,000 for development costs.

Operation and maintenance costs are higher for two sites.

NLMD would need to secure all permits and approvals and would compete, on a statewide basis, to secure applicable grants. Cost share agreements and site easements would be required. These tasks may affect project construction schedules.

Based on this analysis, summarized in the comparison table below, the Department has determined that the Department Site **Alternative 6B** provides better year round public access, has lower environmental impact, and a lower overall financial cost.

**ALTERNATIVE 7B– DEVELOPMENT OF MOTOR BOAT LAUNCHES AT BOTH THE DEPARTMENT AND STH 83 SITES**

Under this proposal, both Department Site Alternative 6B and STH 83 Site Alternative 5 would be fully developed as described above. This alternative is summarized in the comparison table below and was removed from consideration because it would have the greatest environmental impacts and the highest cost.

A Table Comparing the STH 83, Department, and Two Site Alternatives' Environmental Impacts, Schedules, and Costs								
ALTERNATIVE	Winter Access?	Wetland Impact (acre)	Development in Floodway (acre)	Dredging (cubic yards)	Stormwater Treatment Provided?	Schedule	Operation and Maintenance Costs	Estimated Acquisition and Construction Costs
Alternative 5 The STH 83 Site	No	0.24	0.8	8,000 ramp and navigation channel  16,000 extended dredging	No	Need to obtain local, state, and federal approvals	\$5,000/year plus undetermined dredging and floodway damage costs	Acquisition = \$340,000  Design = \$46,682 <sup>1</sup>  Construction = \$681,263  Total = \$1,067,945
Alternative 6B The Department Site	Yes	0.16	0	78 ramp	Yes	Final design complete  EA certified and Department Manual Code Approval complete  USACOE reviewing Department application	\$5,000/year	Acquisition = \$1,125,000 <sup>1</sup>  Design = \$62,245 <sup>1</sup>  Construction = \$475,000 <sup>2</sup>  Total = \$1,662,245
Two Site Alternative 7A: Department carry-in and STH 83 motor boat launch sites	Yes	0.39	0.8	8,000 ramp and navigation channel  16,000 extended dredging	Only at the Department Site	Need to obtain local, state, and federal approvals for STH 83 Site	\$7,500/year plus undetermined dredging and floodway damage costs	Acquisition = \$1,125,000 <sup>1</sup> Department Site + \$340,000 STH 83 Site  Design = \$62,245 <sup>1</sup> Department Site + \$20,000 (Department Site modifications) + \$46,682 <sup>1</sup> STH 83 Site  Development = \$375,000 Department Site + \$681,263 STH 83 Site  Total = \$2,650,190
Two Site Alternative 7B: Development of motor boat launches at both The Department and STH 83 sites	Yes	0.40	0.8	8,078 ramps and navigation channel  16,000 extended dredging	Only at the Department Site	Need to obtain local, state, and federal approvals for STH 83 Site	\$10,000/year plus undetermined dredging and floodway damage costs	Acquisition = \$1,125,000 <sup>1</sup> Department Site + \$340,000 STH 83 Site  Design = \$62,245 <sup>1</sup> Department Site + \$46,682 STH 83 Site  Development = \$475,000 Department Site + \$681,263 STH 83 Site  Total = \$2,730,190

<sup>1</sup> Costs expended

<sup>2</sup> Funding dedicated

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SUMMARY OF ISSUE IDENTIFICATION ACTIVITIES

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26. Summarize citizen and agency involvement activities (completed and proposed).

The Wisconsin DNR issued news releases, held public meetings, and made numerous presentations when considering the acquisition of the Department Site and during final design planning to share project information with and gain input and feedback from local residents, interested parties, the media, and elected officials.

Department communication efforts are summarized below:

- November 10, 2004 Department and Waukesha County Conservation Alliance meeting
- December 15, 2004 Department and Waukesha County Conservation Alliance meeting
- December 17, 2004 Department and North Lake Management District meeting
- January 4, 2005 Department News Release – Acquisition of the North Lake Access Site
- January 4, 2005 Department and Okauchee Fishing Club meeting
- January 6, 2005 Department and Lunkers Unlimited Fishing Club meeting
- January 9, 2006 Department and Southeast Wisconsin Bassmasters meeting
- January 10, 2005 Department and Wisconsin Fishing Club meeting
- January 11, 2005 Public Information Meeting – Waukesha Service Center
- January 12, 2005 Department and North Lake Management District meeting
- January 26, 2005 Natural Resources Board meeting
- February 10, 2005 Department and North Lake Yacht Club meeting
- February 21, 2005 Department and Badger Fisherman's League meeting
- February 22, 2005 Natural Resources Board meeting
- March 2, 2005 Department and North Lake Management District meeting
- May 6, 2005 Department, Waukesha County, and North Lake Management District meeting
- May 17, 2005 Waukesha County Land Use, Parks, and Environment committee
- May 18, 2005 Waukesha County Finance Committee
- May 24, 2005 Waukesha County Finance Committee
- May 24, 2005 Waukesha County Board of Supervisors
- October 14, 2008 Department News Release – Public access development for North Lake  
Informational meeting scheduled for October 23
- October 23, 2008 Public Information Meeting – Waukesha Service Center
- November 10 to December 10, 2008, Public Comments on the Environmental Assessment
- September 9, 2009 Waukesha County Conservation Alliance Board

- September 16, 2009 Waukesha County Conservation Alliance

List agencies, groups and individuals contacted regarding the project (include DNR personnel and title).

Contact

Sue Beyler, Department, Fisheries Biologist  
 Tom Blotz, Department, Government Outreach Supervisor  
 Owen Boyle, Department, Regional Ecologist  
 Heidi Bunk, Department, Water Resources Specialist  
 Lynette Check, Department, Regional Engineer  
 Kyle Drake, Department, Conservation Warden  
 Joanne Kline, Department, Environmental Analysis Specialist  
  
 Tim Lizotte, Department, Wildlife Biologist  
 Jim Morrissey, Department, Land Services Team Leader  
 John Plenke, Department, Law Enforcement Safety Specialist  
 Geri Radermacher, Department, Water Management Specialist  
 Jim Ritchie, Department, Public Waterways Access Coordinator  
  
 Bob Wakeman, Department, Aquatic Habitat Coordinator  
 Nancy Wellman, Department, Access Technician  
 Pete Wood, Department, Water Resources Engineer

Comment Summary

Fisheries impacts  
 Public access issues  
 Endangered resources  
 Water quality issues  
 Facility design  
 Enforcement and boating safety  
 Wetland issues and  
 Endangered Resources  
 Wildlife impacts  
 Facility design  
 Boating safety issues  
 Chapter 30 issues  
 Lake District – Public Access  
 Committee  
 Wetland and Waterway Impacts  
 Access site management  
 Stormwater management

DECISION (This decision is not final until certified by the appropriate authority)

In accordance with s. 1.11, Stats., and Ch. NR 150, Adm. Code, the Department is authorized and required to determine whether it has complied with s.1.11, Stats., and Ch. NR 150, Wis. Adm. Code.

Complete either A or B below:

A. EIS Process Not Required

The attached analysis of the expected impacts of this proposal is of sufficient scope and detail to conclude that this is not a major action which would significantly affect the quality of the human environment. In my opinion, therefore, an environmental impact statement is not required prior to final action by the Department.

B. Major Action Requiring the Full EIS Process

The proposal is of such magnitude and complexity with such considerable and important impacts on the quality of the human environment that it constitutes a major action significantly affecting the quality of the human environment.

Signature of Evaluator	Date Signed

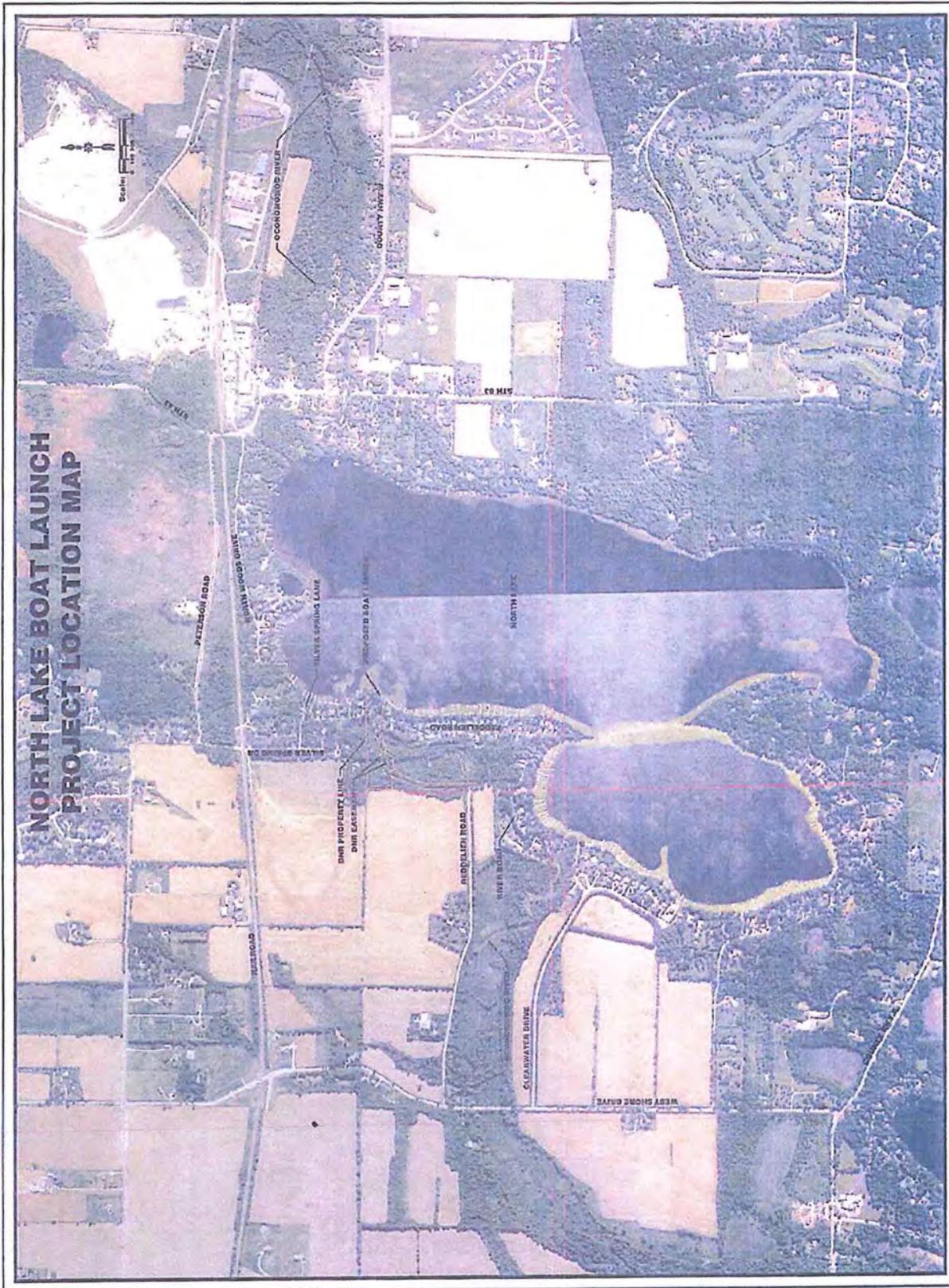
Number of responses to news release or other notice: 100

Certified to be in compliance with WEPA	Date Signed
Environmental Analysis and Liaison Program Staff	Draft

NOTICE OF APPEAL RIGHTS

If you believe you have a right to challenge this decision made by the Department, you should know that Wisconsin statutes, administrative codes and case law establish time periods and requirements for reviewing Department decisions.

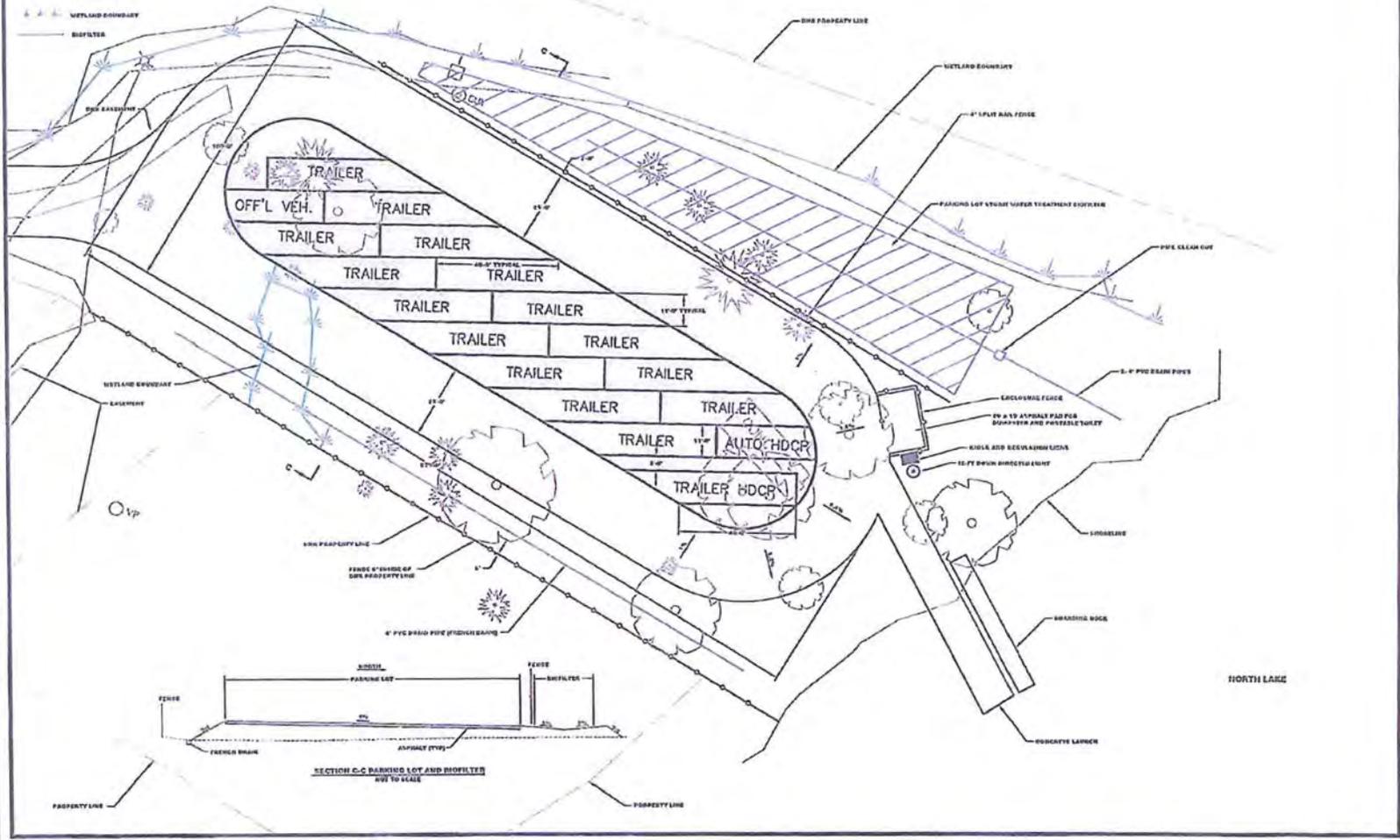
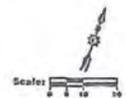
To seek judicial review of the Department's decision, ss. 227.52 and 227.53, Stats., establish criteria for filing a petition for judicial review. Such a petition shall be filed with the appropriate circuit court and shall be served on the Department. The petition shall name the Department of Natural Resources as the respondent.



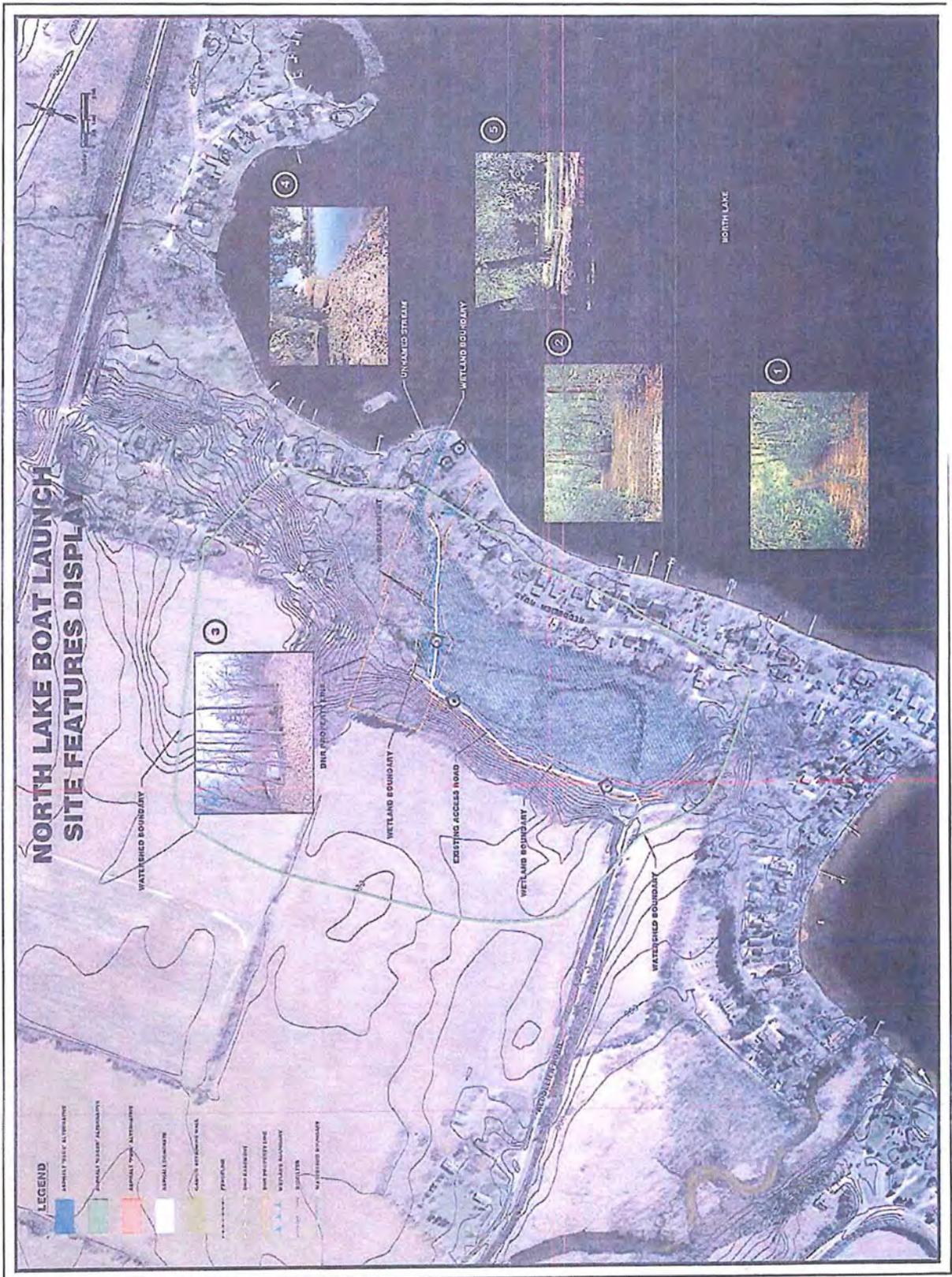
# NORTH LAKE PARKING LOT AND BOAT LAUNCH

## LEGEND

- ASPHALT/CONCRETE
- FENCING
- DWG BASEMENT
- DWG PROPERTY LINE
- EXISTING
- PROPERTY LINE
- WETLAND BOUNDARY
- BIOPILTS

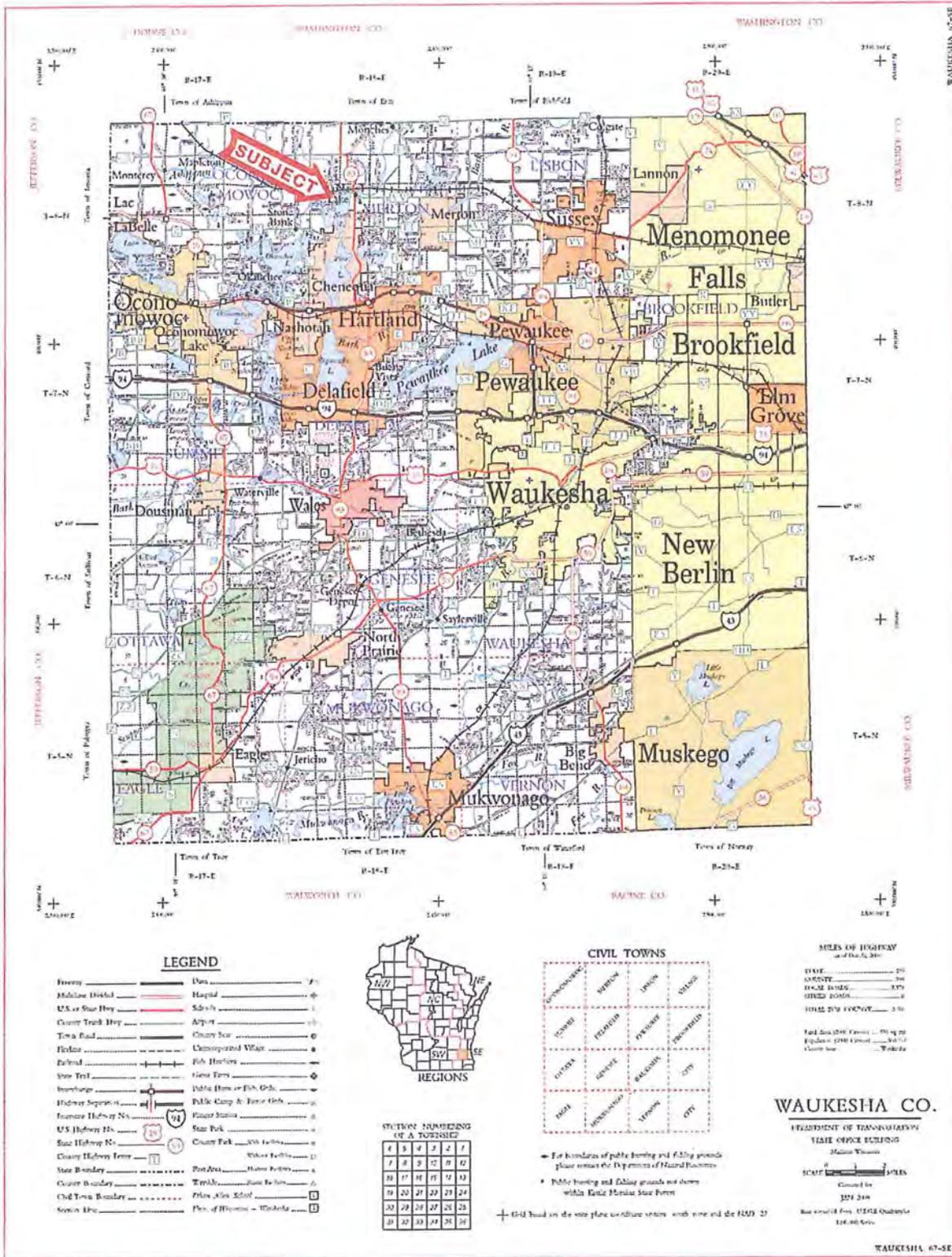


Attachment 2

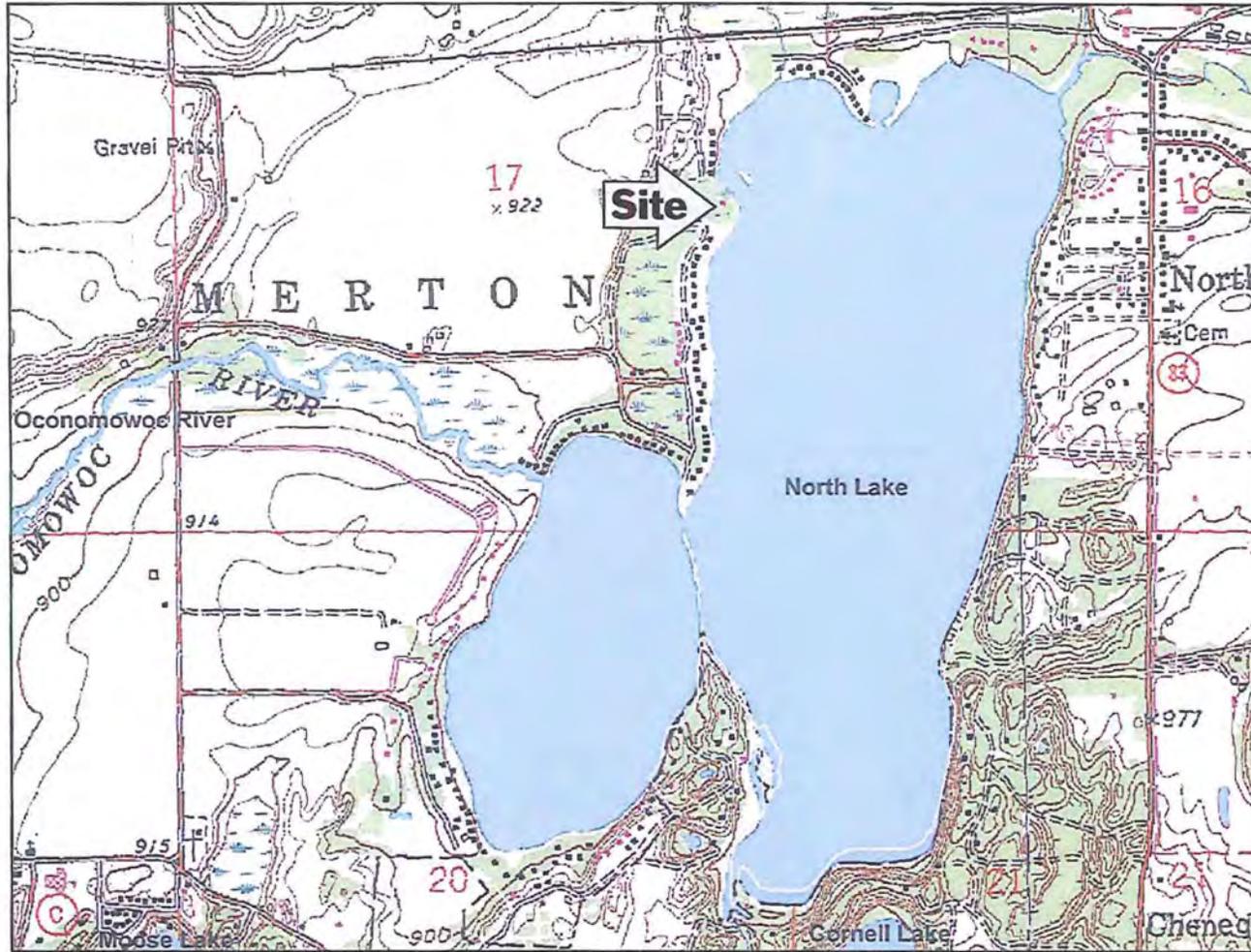








# North Lake - Topography Map



## Legend

- County Boundaries
- Civil Towns
- Civil Town
- 24K Open Water



Scale: 1:16,602

Attachment 7

This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.



North Lake Reddelein Road Access Property -- Wetland Assessment  
Joanne Kline, 15 July 2008

The project area centers on the former Thomas & Elaine Kraus property, now owned by DNR, along the northwest side of North Lake. The 6.5 acre property is located in the southeast one-quarter of Section 17, Township 8 North, Range 18 East, Town of Merton, Waukesha County.

The purpose of the wetland boundary delineation was to assist in planning for site development. The purpose of the wetland assessment was to evaluate alternative access routes through the property to the Lake.

Site visits for the purpose of wetland delineation on the property and for wetland functional assessment of the associated wetland complex occurred on the following dates: 6 March 2005, 28 March 2006, 23 January 2007, 24 September 2007 (with Owen Boyle), 23 October 2007, 1 April 2008 (with Kapur), 8 July 2008 (with SEWRPC), and 9 July 2008. Wetland boundary locations were recorded by survey.

The *WI Rapid Assessment Methodology for Evaluating Wetland Functional Values* for the property and the associated wetland complex is attached.

#### BRIEF SITE DESCRIPTION

Wetland on the property is part of a 12-acre depressional wetland complex in the North Lake basin. The entire complex is part of a Primary Environmental Corridor and in the 100-year floodplain.

The wetland complex is isolated from the Lake by a strip of lake-ridge upland, except for a stream channel at the northeast side of the property. The wetland discharges to the Lake through this channel when water levels are high in spring and after heavy rains. The wetland complex covers about 12 percent of the land area that drains to it, and consequently provides high functional value for water quality, flood storage and storm water attenuation.

Soil types in the wetland interior are deep organic mucks formed from historically herbaceous vegetation with some standing water at least until mid-summer in most years. Below the organic material is a relatively impermeable layer of marl. Soil at the wetland boundary on the east side of the wetland complex is fill material or depositional topsoil over the organic layer.

Past disturbance to the wetland include excavation in the stream channel, addition of gravel fill for an access road and lakeside development, sediment deposits from runoff on adjacent land, dredging and discharge of spoil material.

The current wetland plant communities include shallow marsh, shrub-carr and lowland hardwoods and are surrounded by southern mesic hardwoods and residential development. Based on a preliminary vegetation survey, the wetland floristic quality is mid-range with a Floristic Quality Index (FQI) of 20.5. The wetland complex is dominated by invasive plant species.

Wildlife habitat quality is mid-range (Class II) based on wetland size, structure, quality and level of disturbance using standard wildlife habitat criteria developed by SEWRPC and WDNR.

The Department reviewed the Natural Heritage Inventory (NHI) files for the project area in 2005 at the request of Hey & Associates (A. Galvin, WDNR, 23 November 2005). Species noted in that review,

which were recorded within 5 miles of the project area, and for which suitable habitat occurs in the project area wetlands, include Lake Chubsucker (*Erimyzon sucetta*), Least Darter (*Etheostoma microperca*), Pale Green Orchid (*Platanthera flava*), Hooker Orchis (*P. hookeri*), and Forked Aster (*Aster furcatus*).

Based on a recent NHI review, Butler's gartersnake (*Thamnophis butleri*) was also recorded nearby; however, the project area is outside the currently established range for the species. No nearby records are listed for Blanding's Turtle (*Emydoidea blandingii*), a State Threatened Species, but the wetland is within the range of and includes suitable habitat for this species.

No State or Federal Threatened or Endangered Species or State Species of Special Concern were observed in the project area.

Note: The significance of each of the wetland functions given in the Rapid Assessment is based on that function for the 12-acre wetland complex. The significance of some wetland functions, such as flood storage, water quality or wildlife habitat, are size dependent. For example, a small area of a larger wetland may not provide much flood storage, but cumulatively small areas may provide substantial storage. To account for cumulative effects, the functional significance of a small area of a larger wetland is assigned the same as that of the larger wetland. Wetland size is taken into account later by evaluating the significance of a specific project on wetland functions and also the likelihood of cumulative effects.

## Wisconsin Department of Natural Resources

RAPID ASSESSMENT METHODOLOGY FOR EVALUATING  
WETLAND FUNCTIONAL VALUES

## GENERAL INFORMATION

Name of Wetland/Owner: State of Wisconsin
Location: County Waukesha ; 1/4, SE 1/4, Section 17, Twp. 8N, Range 18E
Project Name: North Lake Public Access, Reddelein Road (former Kraus property & adjacent wetland complex)
Evaluator(s): Joanne Kline
Date(s) of Site Visit(s): 24 September, 23 October 2007

Description of seasonality limitations of this inspection due to time of year of the evaluation and/or current hydrologic and climatologic conditions (e.g. after heavy rains, snow or ice cover, during drought year, during spring flood, during bird migration):

Hydrologic and climatologic conditions were normal. Some plant species that are no longer readily observed in fall may occur at the site.

## WETLAND DESCRIPTION

Wisconsin Wetlands Inventory classification: T3K/S3K				
Wetland Type:	shallow open water	deep marsh	shallow marsh	low prairie
seasonally flooded basin	floodplain forest	alder thicket	shrub-car	Bog
wet meadow	sedge meadow	coniferous swamp	hardwood swamp	Fen
Estimated size of wetland in acres: 2 acre assessment area within a 12 acre wetland complex				

## SUMMARY OF FUNCTIONAL VALUES

Based on the results of the attached functional assessment, rate the significance of each of the functional values for the subject wetland and check the appropriate box. Complete the table as a summary.

FUNCTION	SIGNIFICANCE				
	Low	Medium	High	Exceptional	N/A
Floral Diversity		X			
Wildlife Habitat		X			
Fishery Habitat		X			
Flood/Stormwater Attenuation			X		
Water Quality Protection			X		
Shoreline Protection					X
Groundwater	X				
Aesthetics/Recreation/Education		X			

List any Special Features/"Red Flags":

- Site is within a SEWRPC adopted Primary Environmental Corridor and an ADID (Advanced Identification) wetland
- Forked Aster (*Aster furcatus*), a State Threatened plant species is recorded near the site in similar habitat, and so may occur at this site. None has been observed.
- Butler's gartersnake (*Thamnophis butleri*), a State Threatened species is recorded within 5 miles of the site; however the assessment area is outside the current established range for the species. The area is not generally suitable for this species due to the presence of tree and shrub cover in adjacent uplands.
- Several listed fish species occur near the site in the Oconomowoc River (see cover memo). Adverse effects to these species may be avoided by limiting construction to August 1 through April 15 of any year.
- Blanding's turtle (*Emydoidea blandingii*), a State Threatened species is not recorded in the area, but the site is within the range of this species and suitable habitat occurs in the emergent wetland.

• SITE DESCRIPTION

I. HYDROLOGIC SETTING

A. Describe the geomorphology of the wetland:

- Depressional (includes slopes, potholes, small lakes, kettles, etc.)  
 Riverine  
 Lake Fringe  
 Extensive Peatland

B.  N Has the wetland hydrology been altered by ditching, tiles, dams, culverts, well pumping, diversion of surface flow, or changes to runoff within the watershed (circle those that apply)?  
 Hydrology altered by a gravel road and a channel connecting the wetland to North Lake.

C.  N Does the wetland have an inlet, outlet, or both (circle those that apply)?  
 Wetland basin may have been formed behind an ice-push ridge of the glacial lake and was an isolated depression. There is now an outlet channel that connects the wetland to North Lake.

D.  N Is there any field evidence of wetland hydrology such as buttressed tree trunks, adventitious roots, drift lines, water marks, water stained leaves, soil mottling/gleying, organic soils layer, or oxidized rhizospheres (circle those that apply)?  
 Also standing water in spring through late-summer and after heavy rain.

E.  N Does the wetland have standing water, and if so what is the average depth in inches? 6  
 Approximately how much of the wetland is inundated? 75%

F. How is the hydroperiod (seasonal water level pattern) of the wetland classified?

- Permanently Flooded  
 Seasonally Flooded (water absent at end of growing season) – only dry in late summer of dry years  
 Saturated (surface water seldom present)  
 Artificially Flooded  
 Artificially Drained

G.  N Is the wetland a navigable body of water or is a portion of the wetland below the ordinary highwater mark of a navigable water body? List any surface waters associated with the wetland or in proximity to the wetland (note approximate distance from the wetland and navigability determination). Note if there is a surface water connection to other wetlands.

The wetland is not navigable but it is connected by a channel (~200ft) to North Lake. Surface water from the wetland discharges to North Lake at high-water in spring and after heavy rain. A small portion of the wetland may be below the OHWM of North Lake. The relative elevations were not determined.

## II. VEGETATION

A. Identify the vegetation communities present and the dominant species.

	floating leaved community dominated by:
	submerged aquatic community dominated by:
X	emergent community dominated by: cattail, reed canary grass
X	shrub community dominated by: silky dogwood
X	deciduous broad-leaved tree community dominated by: green ash
	coniferous tree community dominated by:
	open sphagnum mat or bog
	sedge meadow/wet prairie community dominated by:
	other (explain)

B. Other plant species identified during site visit:

See Preliminary Vegetation Survey, North Lake Reddelein Road Access Property, North Wetland Site

## III. SOILS

A. SCS Soil Map Classification:

Rollin & Houghton Series – wetland interior; silt loam, possible colluvium from adjacent slopes, buries organic soil along the west wetland edge.

B. Field description:

  X   Organic (histosol)? If so, is it muck or peat? Muck, formed from herbaceous vegetation

     Mineral soil?

- Mottling, gleying, sulfidic materials, iron or manganese concretions, organic streaking (circle those that apply)?
- Soil Description: deep muck underlain by marl based on soil map unit
- Depth of mottling/gleying: \_\_\_\_\_
- Depth of A Horizon > 3 ft
- Munsell Color of matrix and mottles
  - Matrix below the A horizon(10" depth[no longer applies]): 10YR 2/1 to 2/2
  - Mottles: N/A

## V. SURROUNDING LAND USES

A. What is the estimated area of the wetland watershed in acres? ~54 acres, wetland area is ~ 22%

B. What are the surrounding land uses?

LAND-USE	ESTIMATED % OF WETLAND WATERSHED
Developed (Industrial/Commercial/Residential)	50, single family homes
Agricultural/cropland	
Agricultural/grazing	
Forested	50, southern mesic hardwoods
Grassed recreation areas/parks	
Old field	
Highways or roads	
Other (specify)	

## VI. SITE SKETCH

See Map

## FUNCTIONAL ASSESSMENT

The following assessment requires the evaluator to examine site conditions that provide evidence that a given functional value is present and to assess the significance of the wetland to perform those functions. Positive answers to questions indicate the presence of factors important for the function. The questions are not definitive and are only provided to guide the evaluation. After completing each section, the evaluator should consider the factors observed and use best professional judgment to rate the significance. The ratings should be recorded on page 1 of the assessment.

### Special Features/ RED FLAGS

1.  N Is the wetland in or adjacent to an area of special natural resource interest (NR 103.04, Wis. Adm. Code)? If so, check those that apply:

- a. Cold water community as defined in s. NR 102.04(3)(b), Wis. Adm. Code, (including trout streams, their tributaries, and trout lakes);
- b. Lakes Michigan and Superior and the Mississippi River;
- c. State or federal designated wild and scenic river;
- d. Designated state riverway;
- e. Designated state scenic urban waterway;
- f. Environmentally sensitive area or environmental corridor identified in an area-wide water quality management plan, special area management plan, special wetland inventory study, or an advanced delineation and identification study;
- g. Calcareous fen;
- h. State park, forest, trail or recreation area;
- i. State and federal fish and wildlife refuges and fish and wildlife management areas;
- j. State or federal designated wilderness area;
- k. Designated or dedicated state natural area;
- l. Wild rice water listed in ch. NR 19.09, Wis. Adm. Code;
- m. Surface water identified as an outstanding or exceptional resource water in ch. NR 102, Wis. Adm. Code.

2.  N According to the Natural Heritage Inventory (Bureau of Endangered Resources) or direct observations, are there any rare, endangered, or threatened plant or animal species in, near, or using the wetland or adjacent lands? If so, list the species of concern:

See cover memo.

Forked Aster recorded nearby; not observed at the site; 24 September visit corresponds with the peak bloom period

Butler's gartersnake recorded within 5 miles, but outside current range; not likely to occur at the site due the presence of dense shrub and tree cover.

Lake Chubsucker & Least Darter recorded in Oconomowoc River

Blanding's Turtle, no nearby records or observations, but suitable habitat

3.  N Is the project located in an area that requires a State Coastal Zone Management Plan consistency determination?

### Floral Diversity

1.  N Does the wetland support a variety of native plant species (i.e. not a monotypic stand of cattail or giant reed grass and/or not dominated by exotic species such as reed canary grass, brome grass, buckthorn, purple loosestrife, etc.)?

See attached Preliminary Vegetation Survey

2.  N Is the wetland plant community regionally scarce or rare?  
Wooded wetlands are relatively uncommon compared to open canopy wetlands such as marshes and wet meadows.

### Wildlife and Fishery Habitat

1. List any species observed, evidenced (e.g. tracks, scat, nest/burrow, calls), or expected to utilize the wetland:

Deer and small mammals such as beaver, mink, muskrat

Birds such as herons, wood duck, owls, woodpeckers and songbirds including neotropical migrant land birds such as warblers

Fish such as mud minnow and small cyprinids

Amphibians and reptiles such as wood frog, eastern gray tree frog, brown snake

2.  N Does the wetland contain a number of diverse vegetative cover types and a high degree of interspersed of those vegetation types?

Mix of emergent plants, shrubs and trees.

3.  N Is the estimated ratio of open water to cover between 30 and 70 percent? What is the estimated ratio? 5 %

4.  N Does the surrounding upland habitat likely support a variety of animal species?  
See Map, Class II Wildlife Habitat

5.  N Is the wetland part of or associated with a wildlife corridor or designated environmental corridor?  
See Map, Primary Environmental Corridor

6.  N Is the surrounding habitat and/or the wetland itself a large tract of undeveloped land important for wildlife that require large home ranges (e.g. bear, woodland passerines)?

7.  N Is the surrounding habitat and/or the wetland itself a relatively large tract of undeveloped land within an urbanized environment that is important for wildlife?

8.  N Are there other wetland areas near the subject wetland that may be important to wildlife?

9.  N Is the wetland contiguous with a permanent waterbody or periodically inundated for sufficient periods of time to provide spawning/nursery habitat for fish?  
Possibly. Fish passage is restricted at low water levels.

10.  N Can the wetland provide significant food base for fish and wildlife (e.g. insects, crustaceans, voles, forage fish, amphibians, reptiles, shrews, wild rice, wild celery, duckweed, pondweeds, watermeal, bulrushes, bur reeds, arrowhead, smartweeds, millets...)?

11.  N Is the wetland located in a priority watershed/township as identified in the Upper Mississippi and Great Lakes Joint Venture of the North American Waterfowl Management Plan?  
Per Brian Glenzinski

12.  N Is the wetland providing habitat that is scarce to the region?  
Wooded wetlands are relatively uncommon compared to open canopy wetlands such as marshes and wet meadows.

### Flood and Stormwater Storage/Attenuation

1.  N Are there steep slopes, large impervious areas, moderate slopes with row cropping, or areas with severe overgrazing within the watershed (circle those that apply)?

2.  N Does the wetland significantly reduce run-off velocity due to its size, configuration, braided flow patterns, or vegetation type and density?

3.  N Does the wetland show evidence of flashy water level responses to storm events (debris marks, erosion lines, stormwater inputs, channelized inflow)?

4.  N Is there a natural feature or human-made structure impeding drainage from the wetland that causes backwater conditions?

5.  N Considering the size of the wetland area in relation to the size of its watershed, at any time during the year is water likely to reach the wetland's storage capacity (i.e. the level of easily observable wetland vegetation)? [For some cases where greater documentation is required, one should determine if the wetland has capacity to hold 25% of the run-off from a 2 year-24 hour storm event.]

Drainage channel to the Lake controls wetland water level.

6.  N Considering the location of the wetland in relation to the associated surface water watershed, is the wetland important for attenuating or storing flood or stormwater peaks (i.e. is the wetland located in the mid or lower reaches of the watershed)?

Wetland is within the 100-year floodplain of North Lake and at the bottom of the local drainage basin.

### Water Quality Protection

1.  N Does the wetland receive overland flow or direct discharge of stormwater as a primary source of water (circle that which applies)?

2.  N Do the surrounding land uses have the potential to deliver significant nutrient and/or sediment loads to the wetland?

3.  N Based on your answers to the flood/stormwater section above, does the wetland perform significant flood/stormwater attenuation (residence time to allow settling)?

4.   N Does the wetland have significant vegetative density to decrease water energy and allow settling of suspended materials?
5.   N Is the position of the wetland in the landscape such that run-off is held or filtered before entering a surface water?
6.   N Are algal blooms, heavy macrophyte growth, or other signs of excess nutrient loading to the wetland apparent (or historically reported)?

#### Shoreline Protection

1.   N Is the wetland in a lake fringe or riverine setting? If NO, STOP and enter "not applicable" for this function. If YES, then answer the applicable questions.
2.   N Is the shoreline exposed to constant wave action caused by a long wind fetch or boat traffic?
3.   N Is the shoreline and shallow littoral zone vegetated with submerged or emergent vegetation in the swash zone that decrease wave energy or perennial wetland species that form dense root mats and/or species that have strong stems that are resistant to erosive forces?
4.   N Is the stream bank prone to erosion due to unstable soils, land uses, or ice floes?
5.   N Is the stream bank vegetated with densely rooted shrubs that provide upper bank stability?

#### Groundwater Recharge and Discharge

1.   N Related to discharge, are there observable (or reported) springs located in the wetland, physical indicators of springs such as marl soil, or vegetation indicators such as watercress or marsh marigold present that tend to indicate the presence of groundwater springs?
2.   N Related to discharge, may the wetland contribute to the maintenance of base flow in a stream?
3.   N Related to recharge, is the wetland located on or near a groundwater divide (e.g. a topographic high)?

Wetland basin formed over fine marl deposits assumed to inhibit groundwater flow.

#### Aesthetics/Recreation/Education and Science

1.   N Is the wetland visible from any of the following kinds of vantage points: roads, public lands, houses, and/or businesses? (Circle all that apply.)
2.   N Is the wetland in or near any population centers?
3.   N Is any part of the wetland in public or conservation ownership?

4.   N Does the public have direct access to the wetland from public roads or waterways? (Circle those that apply.)

Yes, once the site is open for use.

#### Aesthetics/Recreation/Education and Science (continued)

5. Is the wetland itself relatively free of obvious human influences, such as:

- |   |  |
|---|--|
| a. <input checked="" type="checkbox"/> <input type="checkbox"/> N Buildings?        | e. <input checked="" type="checkbox"/> <input type="checkbox"/> N Pollution?                           |
| b. <input type="checkbox"/> <input checked="" type="checkbox"/> N Roads?            | f. <input type="checkbox"/> <input checked="" type="checkbox"/> N Filling?                             |
| c. <input checked="" type="checkbox"/> <input type="checkbox"/> N Other structures? | g. <input type="checkbox"/> <input checked="" type="checkbox"/> N Dredging/drainage?                   |
| d. <input checked="" type="checkbox"/> <input type="checkbox"/> N Trash?            | h. <input type="checkbox"/> <input checked="" type="checkbox"/> N Domination by non-native vegetation? |

6. Is the surrounding viewshed relatively free of obvious human influences, such as:

- a.   N Buildings?  
 b.   N Roads?  
 c.   N Other structures?

7.   N Is the wetland organized into a variety of visibly separate areas of similar vegetation, color, and/or texture (including areas of open water)? Cattail marsh, wet meadow, lowland hardwoods

8.   N Does the wetland add to the variety of visibly separate areas of similar vegetation, color, and/or texture (including areas of open water) within the landscape as a whole? Adjacent to upland forest and near agricultural lands.

9. Does the wetland encourage exploration because any of the following factors are present:

- a.   N Long views within the wetland?  
 b.   N Long views in the viewshed adjacent to the wetland?  
 c.   N Convoluted edges within and/or around the wetland border?  
 d.   N The wetland provides a different (and perhaps more natural/complex) kind of environment from the surrounding land covers?

10.   N Is the wetland currently being used for (or does it have the potential to be used for) the following recreational activities? (Check all that apply.)

ACTIVITY	CURRENT USE	POTENTIAL USE
Nature study/photography		X
Hiking/biking/skiing		X
Hunting/fishing/trapping	X	X
Boating/canoeing		
Food harvesting		
Others (list)		

11.   N Is the wetland currently being used, and/or does it have the potential for use for educational or scientific study purposes (circle that which applies)?

Preliminary Vegetation Survey  
North Lake Reddellen Road Access Property  
North Wetland Site

Scientific Name	Common Name	C	Rare Species E/T/SC/U	USFWS Region 3 Indicator Status	Growth Form
<i>Acer negundo</i> L.	box elder	0		FACW-	Tree
<i>Acer saccharinum</i> L.	silver maple	2		FACW	Tree
<i>Alnus incana</i> (L.) Moench subsp. <i>rugosa</i> (Du Roi) R.T.Clausen	swamp alder	4		OBL	Tree/Shrub
<i>Asclepias incarnata</i> L. subsp. <i>incarnata</i>	swamp milkweed	5		OBL	Forb
<i>Aster puniceus</i> L.	swamp aster	5		OBL	Forb
<i>Carex bebbii</i> (L.H.Bailey) Olney ex Fernald	Bebb's sedge	4		OBL	Sedge
<i>Carex lacustris</i> Willd.	common lake sedge	6		OBL	Sedge
<i>Carex stipata</i> Muhl. ex Willd. var. <i>stipata</i>	common fox sedge	2			Sedge
<i>Cicula maculata</i> L.	common water-hemlock	6		OBL	Forb
<i>Cinna arundinacea</i> L.	common wood-reed	5		FACW	Grass
<i>Cornus amomum</i> Mill. var. <i>schuelzeana</i> (C.A.May.) Rickelt*	silky dogwood	4		FACW+	Shrub
<i>Cornus stolonifera</i> Michx.	red osier dogwood	3		FACW	Shrub
<i>Echinocystia lobata</i> (Michx.) Torr. & A.Gray	wild-cucumber	2		FACW-	Herb, Vine
<i>Epilobium coloratum</i> Blehler	cinnamon willow-herb	3		OBL	Forb
<i>Eupatorium maculatum</i> L.	spotted Joe-Pye-weed	4			Forb
<i>Eupatorium perfoliatum</i> L. var. <i>perfoliatum</i>	boneset	6		FACW+	Forb
<i>Fraxinus pennsylvanica</i> Marshall*	green ash	2		FACW	Tree
<i>Glyceria striata</i> (Lam.) Hitchc.	owl meadow grass	4		OBL	Grass
<i>Ilex verticillata</i> (L.) A.Gray	common winterberry	7		FACW+	Shrub
<i>Impatiens capensis</i> Meerb.	orange jewelweed	2		FACW	Forb
<i>Iris virginica</i> L. var. <i>shrevei</i> (Small) E.S.Anderson	Virginia Iris	5		OBL	Forb
<i>Lysimachia thyrsiflora</i> L.	tufted loosestrife	7		OBL	Forb
LYTHRUM SALICARIA L.	purple loosestrife			OBL	Forb
PHALARIS ARUNDINACEA L.*	reed canary grass			FACW+	Grass
<i>Pilea pumila</i> (L.) A.Gray	Canadian clearweed	3		FACW	Forb
<i>Populus deltoides</i> Bartram ex Marshall subsp. <i>monilifera</i> (Aiton) Eckenw.	plains cottonwood	2		FAC+	Tree
RHAMNUS FRANGULA L.	glossy buckthorn			FAC+	Shrub
<i>Ribes americanum</i> Mill.	wild black currant	4		FACW	Shrub
SALIX BABYLONICA L.	weeping willow			FACW	Tree
<i>Salix discolor</i> Muhl.	pussy willow	2		FACW	Tree
<i>Salix exigua</i> Nutt. subsp. <i>interior</i> (Rowlee) Cronquist	sandbar willow	2		OBL	Shrub
<i>Salix nigra</i> Marshall	black willow	4		OBL	Tree
<i>Scirpus atrovirens</i> Willd.	black bulrush	3		OBL	Sedge
SOLANUM DULCAMARA L.	bittersweet nightshade			FAC	Woody Vine
<i>Thalictrum dasycarpum</i> Fisch. & Avé-Lall.	tall meadow-rue	4		FACW-	Forb
TYPHA X GLAUCA GODR.*	hybrid cat-tail			OBL	Aquatic
<i>Ulmus americana</i> L.	American elm	3		FACW-	Tree
<i>Urtica dioica</i> L. subsp. <i>gracilis</i> (Aiton) Selander	stinging nettle	1		FAC+	Forb
<i>Vitis riparia</i> Michx.	river bank grape	2		FACW-	Woody Vine

**Summary**

This 2 acre wetland assessment area is part of a 12 acre wetland complex adjacent to North Lake. The plant community is shallow marsh and shrub carr surrounded by Southern wet to wet-mesic lowland hardwoods. The wetland drains to the east to North Lake.

Total number of plant species	39
Number of native plant species	33
Number of non-native plant species (In upper case)	6
Number of Endangered plant species (E)	0
Number of Threatened plant species (T)	0
Number of Special Concern or Watch plant species (C)	0
Number of Uncommon plant species (U)	0

Dominant plant species (\*)

**Floristic Quality Assessment**

Sum C = 118  
Mean C = 3.58  
Floristic Quality Index (FQI) = 20.5

Mean Ca = 3.03  
FQIa = 22.3

Preliminary Vegetation Survey  
North Lake Reddellen Road Access Property  
North Wetland Site

Survey dates: 24 September, 23 October 2007

Observers: Joanne Kline, WDNR, EA  
Owen Boyle, WDNR LF  
Lynette Check, WDNR LF

Scientific and Common Names follow those used by the Wisconsin State Herbarium. Coefficients of Conservatism, "C" values, are taken from Wisconsin's Floristic Quality Assessment Method (Bernthal, 2003).

WI DNR's Bureau of Endangered Resources Natural Heritage Inventory Working List identifies Endangered, Threatened and Special Concern or Watch species. The SEWRPC Natural Areas Plan lists Uncommon species.

Mean C and FQI include only native species. Mean Ca and FQIa include all species and assigns C = 0 for non-natives as described in Bernthal et al. (2007)

References

Southeastern Wisconsin Regional Planning Commission (SEWRPC), 1997. A Regional Natural Areas and Critical Species Habitat Protection and Management Plan for Southeastern Wisconsin. Planning Report No. 42. SEWRPC, Waukesha, WI.

Bernthal, T. W., 2003. Development of a Floristic Quality Assessment Methodology for Wisconsin. Final Report to the U.S. Environmental Protection Agency Region V. Pub-SS-986 2003 Wisconsin Department of Natural Resources, Madison, WI.

Bernthal, T. W., J. Kline, A. Reis, 2007. Floristic Quality Assessment Benchmarks for Wetlands in Southeast Wisconsin. Draft Report to the U.S. Environmental Protection Agency Region V. Wetland Grant #CD96511801, Wisconsin Department of Natural Resources, Madison, WI.

SVY2800a  
CA718-49

EXHIBIT A

PRELIMINARY VEGETATION SURVEY  
PROPOSED NORTH LAKE ACCESS - WDNR PROPERTY  
(FORMER THOMAS AND ELAINE KRAUS PROPERTY) WETLANDS

Dates: October 14, 2008  
July 8, 2008  
July 24, 2003

Observers: Donald M. Reed, Ph.D., Chief Biologist  
Lawrence A. Leitner, Ph.D., Principal Biologist  
Christopher J. Jors, Biologist  
Southeastern Wisconsin Regional Planning Commission

Joanne Kline, Regional Wetland Biologist  
Wisconsin Department of Natural Resources

Location: Town of Merton in parts of the Southeast one-quarter of U.S. Public  
Land Survey Section 17, Township 8 North, Range 18 East,  
Waukesha County, Wisconsin.

Species List: Plant Community Area No. 1

GRAMINEAE

Phalaris arundinacea<sup>1</sup>--Reed canary grass  
Miscanthus sp.<sup>1,2</sup>--Japanese plume grass

CYPERACEAE

Scirpus atrovirens--Green bulrush  
Carex stipata--Sedge  
Carex bebbii--Sedge  
Carex lacustris--Lake sedge

ARACEAE

Symplocarpus foetidus--Skunk cabbage

LILIACEAE

Hemerocallis fulva<sup>1</sup>--Day-lily

IRIDACEAE

Iris virginica--Virginia blueflag

SALICACEAE

Populus deltoides--Cottonwood  
Salix babylonica<sup>1</sup>--Weeping willow  
Salix nigra--Black willow  
Salix exigua--Sand-bar willow

BETULACEAE

Alnus rugosa--Tag alder

ULMACEAE

Ulmus americana--American elm

URTICACEAE

Pilea pumila--Clearweed

POLYGONACEAE

Polygonum persicaria<sup>1</sup>--Lady's thumb

## SAXIFRAGACEAE

Ribes americanum--Wild black currant

## ROSACEAE

Geum canadense--White avens

Rubus occidentalis--Black raspberry

## ACERACEAE

Acer saccharinum--Silver maple

Acer negundo--Boxelder

## BALSAMINACEAE

Impatiens capensis--Jewelweed

## RHAMNACEAE

Rhamnus cathartica<sup>1</sup>--Common buckthorn

Rhamnus frangula<sup>1</sup>--Glossy buckthorn

## VITACEAE

Vitis riparia--River-bank grape

Parthenocissus quinquefolia--Virginia creeper

## LYTHRACEAE

Lythrum salicaria<sup>1</sup>--Purple loosestrife

## ONAGRACEAE

Circaea lutetiana--Enchanter's nightshade

## UMBELLIFERAE

Cicuta bulbifera--Water-hemlock

Cicuta maculata--Spotted water-hemlock

## CORNACEAE

Cornus amomum--Silky dogwood

Cornus stolonifera--Red-osier dogwood

## PRIMULACEAE

Lysimachia thyrsiflora--Tufted loosestrife

## OLEACEAE

Fraxinus pennsylvanica--Green ash

## CONVOLVULACEAE

Convolvulus sepium--Hedge bindweed

## VERBENACEAE

Verbena urticifolia--White vervain

## LABIATAE

Glechoma hederacea<sup>1</sup>--Creeping Charlie

Stachys palustris--Hedge-nettle

## SOLANACEAE

Solanum dulcamara<sup>1</sup>--Deadly nightshade

## CAPRIFOLIACEAE

Sambucus canadensis--Elderberry

## COMPOSITAE

Ambrosia artemisiifolia--Common ragweed

Xanthium strumarium--Cocklebur

Eupatorium rugosum--White snakeroot

Total number of plant species: 44

Number of alien, or non-native, plant species: 10 (23 percent)

This approximately 0.2-acre plant community area is part of a larger wetland complex adjacent to North Lake and consists of second growth, Southern wet to wet-mesic lowland hardwoods and fresh (wet) meadow/shallow marsh along the shoreline. Disturbances to the plant community area include dumping, past filling, mowing, siltation and sedimentation due to stormwater runoff from adjacent lands, and water level changes due to past ditching. No Federal- or State-designated Special Concern, Threatened, or Endangered species were observed during the field inspection.

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<sup>1</sup> Alien or non-native plant species

<sup>2</sup> Planted species

## Plant Community Area No. 2

## GRAMINEAE

Agrostis stolonifera<sup>1,2</sup>--Redtop grass

## CYPERACEAE

Eleocharis acicularis<sup>1</sup>--Needle spike-rush  
Carex stipata--Sedge

## POLYGONACEAE

Polygonum persicaria<sup>2</sup>--Lady's thumb

## PORTULACACEAE

Portulaca oleracea<sup>2</sup>--Purslane

## LABIATAE

Glechoma hederacea<sup>2</sup>--Creeping Charlie  
Prunella vulgaris--Selfheal

Total number of plant species: 7

Number of alien, or non-native, plant species: 4 (57 percent)

This approximately 0.05-acre plant community area consists of an ephemeral fresh (wet) meadow. Disturbances to the plant community area include past filling and frequent mowing. No Federal- or State-designated Special Concern, Threatened, or Endangered species were observed during the field inspection.

<sup>1</sup> Co-dominant plant species<sup>2</sup> Alien or non-native plant species

## Plant Community Area No. 3

## PINACEAE

Picea glauca<sup>1</sup>--White spruce  
Picea abies<sup>1,2,3</sup>--Norway spruce  
Larix decidua<sup>1,2</sup>--European larch  
Pinus strobus<sup>1</sup>--White pine

## CUPRESSACEAE

Thuja occidentalis<sup>1</sup>--White cedar

## GRAMINEAE

Poa pratensis<sup>2,3</sup>--Kentucky bluegrass  
Agropyron repens<sup>2</sup>--Quack grass  
Agrostis stolonifera<sup>2</sup>--Redtop grass  
Muhlenbergia schreberi--Muhly grass  
Phalaris arundinacea<sup>2</sup>--Reed canary grass  
Miscanthus sacchariflorus<sup>2</sup>--Silver grass

## CYPERACEAE

Carex blanda--Wood sedge

## LILIACEAE

Hemerocallis fulva<sup>2</sup>--Day-lily  
Smilacina stellata--Starry Solomons plume  
Convallaria majalis<sup>2</sup>--Lily-of-the-valley

## SALICACEAE

Populus deltoides--Cottonwood

## JUGLANDACEAE

Juglans nigra--Black walnut

## FAGACEAE

Quercus macrocarpa--Bur oak  
Quercus rubra--Northern red oak

## ULMACEAE

Ulmus americana--American elm

## MORACEAE

Morus alba<sup>2</sup>--White mulberry

## URTICACEAE

Parietaria pensylvanica--Pellitory

## POLYGONACEAE

Polygonum persicaria<sup>2</sup>--Lady's thumb

## ROSACEAE

Geum canadense--White avens  
Rubus occidentalis--Black raspberry  
Rubus strigosus--Red raspberry  
Prunus serotina--Black cherry

## FABACEAE

Melilotus alba<sup>2</sup>--White sweet clover

## OXALIDACEAE

Oxalis stricta--Common wood sorrel

## ANACARDIACEAE

Rhus glabra--Smooth sumac

## ACERACEAE

Acer saccharinum--Silver maple  
Acer negundo--Boxelder

## RHAMNACEAE

Rhamnus cathartica<sup>2,3</sup>--Common buckthorn  
Rhamnus frangula<sup>2,3</sup>--Glossy buckthorn

## VITACEAE

Vitis riparia--Riverbank grape  
Parthenocissus sp.--Virginia creeper

## TILIACEAE

Tilia americana--Basswood

## VIOLACEAE

Viola sororia--Woolly blue violet

## ELAEAGNACEAE

Elaeagnus angustifolia<sup>2</sup>--Russian-olive

## UMBELLIFERAE

Daucus carota<sup>2</sup>--Queen Anne's lace

## OLEACEAE

Fraxinus americana--White ash  
Fraxinus pennsylvanica--Green ash

## VERBENACEAE

Verbena urticifolia--White vervain

## LABIATAE

Glechoma hederacea<sup>2,3</sup>--Creeping Charlie  
Prunella vulgaris--Selfheal  
Leonurus cardiaca<sup>2</sup>--Motherwort

## SOLANACEAE

Solanum dulcamara<sup>2</sup>--Deadly nightshade

## BIGNONIACEAE

Catalpa speciosa<sup>2</sup>--Catalpa

## PLANTAGINACEAE

Plantago major<sup>2</sup>--Common plantain  
Plantago lanceolata<sup>2</sup>--English plantain

## CAPRIFOLIACEAE

Viburnum opulus<sup>2</sup>--European highbush-cranberry  
Viburnum rafinesquianum--Downy arrowwood  
Lonicera X bella<sup>2</sup>--Hybrid honeysuckle

## COMPOSITAE

Ambrosia artemisiifolia--Common ragweed  
Xanthium strumarium--Cocklebur  
Solidago gigantea--Giant goldenrod  
Solidago altissima--Tall goldenrod  
Aster lateriflorus--Calico aster  
Eupatorium rugosum--White snakeroot  
Cirsium arvense<sup>2</sup>--Canada thistle  
Taraxacum officinale<sup>2</sup>--Common dandelion  
Sonchus arvensis<sup>2</sup>--Sow thistle

Total number of plant species: 62

Number of alien, or non-native, plant species: 27 (44 percent)

This approximately 1.2-acre upland plant community area is part of a larger primary environmental corridor complex and consists of lawn, planted ornamentals, and upland woodland. Disturbances to the plant community area include mowing and selective cutting of trees. No Federal- or State-designated Special Concern, Threatened, or Endangered species were observed during the field inspection.

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<sup>1</sup> Planted tree species

<sup>2</sup> Alien or non-native plant species

<sup>3</sup> Co-dominant plant species

EXHIBIT B

SEWRPC FIELD DATA FORM  
 ROUTINE WETLAND DETERMINATION

PROJECT NAME: Proposed North Lake Boat Launch Site

FILE NO.: CA 718-49

LOCATION: Town of Merton, Waukesha COUNTY, SE ¼ SECTION 17, T 8 N, R 18 E

DATES: July 8 and October 14, 2008

OBSERVERS: Donald M. Reed, Ph.D. - SEWRPC  
 Joanne Kline - DNR

PLANT COMMUNITY AREA NO.: 1 TRANSECT NO.: 1 SAMPLE SITE NO.: 1

VEGETATION

Dominant Plant Species (%)	Stratum	Indicator	Other NON-Dominant Plant Species (%)	Stratum	Indicator
Carex lacustris (50)	Herb	OBL	Tragopogon dubious (8)	Herb	NI
Eupatorium rugosum (20)	Herb	FACU	Poa pratensis (5)	Herb	FAC-
Vitis riparia (20)	Herb	FACW-	Aster lateriflorus (2)	Herb	FACW-
Cornus amomum (8)	Shrub	FACW+	Stachys palustris (2)	Herb	OBL
Rhamnus cathartica (8)	Shrub	FAC-	Impatiens capensis (3)	Herb	FACW
Fraxinus pennsylvanica (10)	Tree	FACW	Salix exigua (5)	Shrub	OBL
Acer negundo (10)	Tree	FACW-	Fraxinus pennsylvanica (2)	Shrub	FACW
			Juglans nigra (2)	Shrub	NI
			Vitis riparia (2)	Shrub	FACW-
Percent of Dominant Species that are OBL, FACW, OR FAC: 71%					
Plant Community Type: Shrub-carr with scattered lowland hardwoods					
Remarks:					

HYDROLOGY

WETLAND HYDROLOGY INDICATORS

<p><input checked="" type="checkbox"/> Recorded Data (Describe in Remarks):</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Stream, Lake or Tide Gauge</li> <li><input checked="" type="checkbox"/> Aerial Photographs</li> <li><input checked="" type="checkbox"/> Other</li> <li><input type="checkbox"/> FSA Slide Review</li> </ul> <p><input type="checkbox"/> No Recorded Data Available</p>	<p>Primary Indicators:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Inundated</li> <li><input checked="" type="checkbox"/> Saturated in Root Zone (Upper 12")</li> <li><input type="checkbox"/> Water Marks</li> <li><input type="checkbox"/> Drift Lines</li> <li><input type="checkbox"/> Sediment Deposits</li> <li><input type="checkbox"/> Drainage Patterns in Wetlands</li> <li><input type="checkbox"/> Floodway</li> </ul>
<p>Field Observations:</p> <p>Depth of Surface Water:    --(in.)</p> <p>Depth of Soil Pit:           18(in.)</p> <p>Depth to Free Water in Pit:  --(in.)</p> <p>Depth to Saturated Soil:    6(in.)</p>	<p>Secondary Indicators (2 or more required):</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Oxidized Root Channels in Root Zone(Upper 12")</li> <li><input checked="" type="checkbox"/> Water-Stained Leaves</li> <li><input type="checkbox"/> Local Soil Survey Data</li> <li><input checked="" type="checkbox"/> FAC-Neutral Test</li> <li><input type="checkbox"/> Plant morphological adaptatfions</li> <li><input type="checkbox"/> Other (Explain in Remarks)</li> </ul>
<p>Remarks: SEWRPC 2007 aerial photography; Sample point is located within the 2003 SEWRPC wetland delineation area.</p>	

**SOILS**

<b>Map Unit Name</b> (Series and Phase): Matherton silt loam (MmA)		<b>Drainage Class:</b> Somewhat poorly drained			
Taxonomy (Subgroup): Udollic Endoaqualfs					
Field Observations Confirm Mapped Type? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Other hydric soil within County*					
<b>Profile Description</b>					
Depth (Inches)	Horizon	Matrix Color (Munsell Moist)	Redox Concentrations Color (Munsell Moist)	Redox Concentrations (Abundance/ Contrast)	Texture, Concretions, Structure, etc.
0-6		10YR 2/1			Loam
6-14		10YR 3/1			Clay loam
14-18		10YR 3/1			Gravelly loam
<b>Wetland Soil Indicators:</b>					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Bright Mottling			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> Concentrations			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> High Organic Content in Surface Layer			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Gleyed		<input type="checkbox"/> Listed on National Hydric Soils List			
<input checked="" type="checkbox"/> Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
NRCS Mapped Type: NI - Not Inventoried					
USDA Hydric Soils Field Indicator:					
WWI Classification: --					
Remarks (*If field observations do not confirm mapped type but represent another hydric soil found in the county, check "other hydric soil" and describe here):					

**SITE CONDITIONS**

Do normal environmental conditions exist at the plant community? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, explain)	Is the site a problem area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If yes, explain)
Has the vegetation, soils, and/or hydrology been significantly disturbed? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If yes, explain)	
Remarks:	

**WETLAND DETERMINATION**

Based on the foregoing, are:	
Hydrophytic Plants Dominant? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	This Sampling Point is within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Wetland Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Remarks: S3k wetland	

PLANT COMMUNITY AREA NO.: -- TRANSECT NO.: 1 and 2 SAMPLE SITE NO.: 2

**VEGETATION**

Dominant Plant Species (%)	Stratum	Indicator	Other <u>NON-Dominant</u> Plant Species (%)	Stratum	Indicator
Poa pratensis (80)	Herb	FAC-	Viola sororia (15)	Herb	FACU
Quercus macrocarpa (33)	Tree	FAC-	Plantago lanceolata (10)	Herb	FAC
Populus deltoides (25)	Tree	FAC+	Glechoma hederacea (10)	Herb	FACU
Fraxinus pennsylvanica (25)	Tree	FACW	Larix laricina (15)	Tree	FACW
Percent of Dominant Species that are OBL, FACW, OR FAC: 50%					
Plant Community Type: Former lawn, currently not maintained.					
Remarks:					

**HYDROLOGY**

**WETLAND HYDROLOGY INDICATORS**

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> FSA Slide Review <input checked="" type="checkbox"/> No Recorded Data Available	<b>Primary Indicators:</b> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Root Zone (Upper 12") <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands <input type="checkbox"/> Floodway
<b>Field Observatons:</b> Depth of Surface Water: --(in.) Depth of Soil Pit: 23(in.) Depth to Free Water in Pit: 21.5(in.) Depth to Saturated Soil: 21.5(in.)	<b>Secondary Indicators (2 or more required):</b> <input type="checkbox"/> Oxidized Root Channels in Root Zone(Upper 12") <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Plant morphological adaptations <input type="checkbox"/> Other (Explain in Remarks)
Remarks:	

**SOILS**

<b>Map Unit Name</b> (Series and Phase): Matherton silt loam (Mm1A)		<b>Drainage Class:</b> Somewhat poorly drained			
<b>Taxonomy (Subgroup):</b> Udollic Endoaqualfs					
<b>Field Observations Confirm Mapped Type?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Other hydric soil within County*					
<b>Profile Description</b>					
Depth (Inches)	Horizon	Matrix Color (Munsell Moist)	Redox Concentrations Color (Munsell Moist)	Redox Concentrations (Abundance/ Contrast)	Texture, Concretions, Structure, etc.
0-6		7.5YR 2.5/1			Silty clay loam
6-8		7.5YR 2.5/1	7.5YR 5/4	Common/Distinct	Silty clay loam
8-15		10YR 4/2 (67%)			Clay loam
		10YR 3/1 (33%)			
15-22		10YR 3/1			Loam
22-23		10YR 7/2			Sandy marl
<b>Wetland Soil Indicators:</b>					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Bright Mottling			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> Concentrations			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> High Organic Content in Surface Layer			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Gleyed		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
<b>NRCS Mapped Type:</b> NI - Not Inventoried					
<b>USDA Hydric Soils Field Indicator:</b>					
<b>WWI Classification:</b> --					
<b>Remarks</b> (*If field observations do not confirm mapped type but represent another hydric soil found in the county, check "other hydric soil" and describe here): 0 to 15" of old fill material associated with past land use activities; Buried horizon at 15"					

**SITE CONDITIONS**

<b>Do normal environmental conditions exist at the plant community?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, explain)		<b>Is the site a problem area?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If yes, explain)	
<b>Has the vegetation, soils, and/or hydrology been significantly disturbed?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If yes, explain)			
<b>Remarks:</b> Past filling			

**WETLAND DETERMINATION**

<b>Based on the foregoing, are:</b>		<b>This Sampling Point is within a Wetland?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>Hydrophytic Plants Dominant?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
<b>Wetland Hydrology Present?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
<b>Wetland Soils Present?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
<b>Remarks:</b> Upland, formerly maintained yard.		

PLANT COMMUNITY AREA NO.: -- TRANSECT NO.: 2 SAMPLE SITE NO.: 3

**VEGETATION**

Dominant Plant Species (%)	Stratum	Indicator	Other <u>NON-Dominant</u> Plant Species (%)	Stratum	Indicator
Populus deltoides (8)	Herb	FAC+			
Acer saccharinum (5)	Herb	FACW			
Populus deltoides (45)	Tree	FAC+			
Percent of Dominant Species that are OBL, FACW, OR FAC: 100%					
Plant Community Type: Exposed sandy beach with scattered lowland hardwoods					
Remarks:					

**HYDROLOGY**

**WETLAND HYDROLOGY INDICATORS**

<input checked="" type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> FSA Slide Review  <input type="checkbox"/> No Recorded Data Available	<b>Primary Indicators:</b> <input type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Root Zone (Upper 12") <input type="checkbox"/> Water Marks <input checked="" type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands <input type="checkbox"/> Floodway
<b>Field Observations:</b>  Depth of Surface Water:     --(in.) Depth of Soil Pit:            22(in.) Depth to Free Water in Pit:   2(in.) Depth to Saturated Soil:      0(in.)	<b>Secondary Indicators (2 or more required):</b> <input type="checkbox"/> Oxidized Root Channels in Root Zone(Upper 12") <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test <input checked="" type="checkbox"/> Plant morphological adaptations <input type="checkbox"/> Other (Explain in Remarks)
Remarks: SEWRPC 2007 aerial photography; Soils saturated to the surface; Shallow roots	

**SOILS**

<b>Map Unit Name</b> (Series and Phase): Fox silt loam (FsA)		<b>Drainage Class:</b> Well-drained			
<b>Taxonomy (Subgroup):</b> Typic Hapludalfs					
<b>Field Observations Confirm Mapped Type?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Other hydric soil within County*					
<b>Profile Description</b>					
Depth (Inches)	Horizon	Matrix Color (Munsell Moist)	Redox Concentrations Color (Munsell Moist)	Redox Concentrations (Abundance/ Contrast)	Texture, Concretions, Structure, etc.
0-22		7.5YR 4/1			Sand
<b>Wetland Soil Indicators:</b>					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Bright Mottling Concentrations			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed		<input type="checkbox"/> Other (Explain in Remarks)			
<input checked="" type="checkbox"/> Low-Chroma Colors					
<b>NRCS Mapped Type:</b> NI - Not Inventoried					
<b>USDA Hydric Soils Field Indicator:</b>					
<b>WVI Classification:</b> --					
<b>Remarks (*If field observations do not confirm mapped type but represent another hydric soil found in the county, check "other hydric soil" and describe here):</b> Sample site is better represented by the mapped Sandy Lake Beaches (Sfb) soils unit.					

**SITE CONDITIONS**

<b>Do normal environmental conditions exist at the plant community?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, explain)	<b>Is the site a problem area?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (if yes, explain)
<b>Has the vegetation, soils, and/or hydrology been significantly disturbed?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If yes, explain)	
<b>Remarks:</b> Problem Soils: Sandy soil	

**WETLAND DETERMINATION**

<b>Based on the foregoing, are:</b>	
Hydrophytic Plants Dominant? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<b>This Sampling Point is within a Wetland?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Wetland Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Remarks:</b> Wetland on sandy soils	

PLANT COMMUNITY AREA NO.: 2 TRANSECT NO.: 3 SAMPLE SITE NO.: 4

**VEGETATION**

Dominant Plant Species (%)	Stratum	Indicator	Other <u>NON-Dominant</u> Plant Species (%)	Stratum	Indicator
Poa pratensis (33)	Herb	FAC-	Polygonum persicaria (8)	Herb	FACW
Eleocharis acicularis (20)	Herb	OBL	Agrostis stolonifera (3)	Herb	FACW
Acer saccharinum (20)	Herb	FACW			
Percent of Dominant Species that are OBL, FACW, OR FAC: 67%					
Plant Community Type: Mowed lawn when dry					
Remarks:					

**HYDROLOGY**

**WETLAND HYDROLOGY INDICATORS**

<input checked="" type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input checked="" type="checkbox"/> Other <input type="checkbox"/> FSA Slide Review  <input type="checkbox"/> No Recorded Data Available.	<b>Primary Indicators:</b> <input checked="" type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Root Zone (Upper 12") <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands <input type="checkbox"/> Floodway
<b>Field Observations:</b>  Depth of Surface Water: 7.5(in.) Depth of Soil Pit: 4(in.) Depth to Free Water in Pit: --(in.) Depth to Saturated Soil: --(in.)	<b>Secondary Indicators (2 or more required):</b> <input type="checkbox"/> Oxidized Root Channels in Root Zone(Upper 12") <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Plant morphological adaptations <input checked="" type="checkbox"/> Other (Explain in Remarks)
Remarks: SEWRPC 2007 aerial photography; Sample point is located within the 2003 SEWRPC wetland delineation area; Depressional area	

**SOILS**

<b>Map Unit Name</b> (Series and Phase): Fox silt loam (FsA)		<b>Drainage Class:</b> Well-drained			
<b>Taxonomy (Subgroup):</b> Typic Hapludalfs					
<b>Field Observations Confirm Mapped Type?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Other hydric soil within County*					
<b>Profile Description</b>					
Depth (Inches)	Horizon	Matrix Color (Munsell Moist)	Redox Concentrations Color (Munsell Moist)	Redox Concentrations (Abundance/ Contrast)	Texture, Concretions, Structure, etc.
0-1.5		7.5YR 2.5/1			Muck
1.5-4		10YR 4/1	7.5YR 4/6	Common/Distinct	Loam
4					Refusal - Gravel
<b>Wetland Soil Indicators:</b>					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Bright Mottling			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> Concentrations			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> High Organic Content in Surface Layer			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Gleyed		<input type="checkbox"/> Listed on National Hydric Soils List			
<input checked="" type="checkbox"/> Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
<b>NRCS Mapped Type:</b> NI - Not Inventoried					
<b>USDA Hydric Soils Field Indicator:</b> A2. 2cm Muck (Test indicator in this region)					
<b>WWI Classification:</b> --					
<b>Remarks</b> (*If field observations do not confirm mapped type but represent another hydric soil found in the county, check "other hydric soil" and describe here): Old fill, refusal at 3 to 4" in 5 attempts. Soils are inundated; hydric by definition (criteria 3)					

**SITE CONDITIONS**

<b>Do normal environmental conditions exist at the plant community?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, explain)	<b>Is the site a problem area?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (if yes, explain)
<b>Has the vegetation, soils, and/or hydrology been significantly disturbed?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If yes, explain)	
<b>Remarks:</b> Problem area - Seasonal wetland. Past filling and regular mowing when dry.	

**WETLAND DETERMINATION**

<b>Based on the foregoing, are:</b>	
Hydrophytic Plants Dominant? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<b>This Sampling Point is within a Wetland?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Wetland Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Remarks:</b> Seasonal/Atypical wetland	

PLANT COMMUNITY AREA NO.: 3 TRANSECT NO.: 3 SAMPLE SITE NO.: 5

VEGETATION

Dominant Plant Species (%)	Stratum	Indicator	Other NON-Dominant Plant Species (%)	Stratum	Indicator
Poa pratensis (99)	Herb	FAC-	Glechoma hederacea (3)	Herb	FACU
Thuja occidentalis (3)	Tree	FACW	Acer saccharinum (1)	Herb	FACW
			Ulmus americana (1)	Herb	FACW-
			Taraxacum officinale (1)	Herb	FACU
Percent of Dominant Species that are OBL, FACW, OR FAC: 50%					
Plant Community Type: Formerly maintained lawn area					
Remarks: Thuja occidentalis was planted					

HYDROLOGY

WETLAND HYDROLOGY INDICATORS

<input type="checkbox"/> Recorded Data (Describe in Remarks): <ul style="list-style-type: none"> <li><input type="checkbox"/> Stream, Lake or Tide Gauge</li> <li><input type="checkbox"/> Aerial Photographs</li> <li><input type="checkbox"/> Other</li> <li><input type="checkbox"/> FSA Slide Review</li> </ul> <input checked="" type="checkbox"/> No Recorded Data Available	<b>Primary Indicators:</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> Inundated</li> <li><input type="checkbox"/> Saturated in Root Zone (Upper 12")</li> <li><input type="checkbox"/> Water Marks</li> <li><input type="checkbox"/> Drift Lines</li> <li><input type="checkbox"/> Sediment Deposits</li> <li><input type="checkbox"/> Drainage Patterns in Wetlands</li> </ul>
<b>Field Observations:</b> <ul style="list-style-type: none"> <li>Depth of Surface Water: --(in.)</li> <li>Depth of Soil Pit: 2(in.)</li> <li>Depth to Free Water in Pit: --(in.)</li> <li>Depth to Saturated Soil: --(in.)</li> </ul>	<b>Secondary Indicators (2 or more required):</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> Oxidized Root Channels in Root Zone(Upper 12")</li> <li><input type="checkbox"/> Water-Stained Leaves</li> <li><input type="checkbox"/> Local Soil Survey Data</li> <li><input type="checkbox"/> FAC-Neutral Test</li> <li><input type="checkbox"/> Plant morphological adaptations</li> <li><input type="checkbox"/> Floodway</li> <li><input type="checkbox"/> Other (Explain in Remarks)</li> </ul>
Remarks: No hydrology indicators observed.	

**SOILS**

Map Unit Name (Series and Phase): Fox silt loam (FsA)		Drainage Class: Well-drained			
Taxonomy (Subgroup): Typic Hapludalfs					
Field Observations Confirm Mapped Type? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Other hydric soil within County*					
<b>Profile Description</b>					
Depth (Inches)	Horizon	Matrix Color (Munsell Moist)	Redox Concentrations Color (Munsell Moist)	Redox Concentrations (Abundance/ Contrast)	Texture, Concretions, Structure, etc.
0-1.5		10YR 2/2			Loam
1.5-9		10YR 5/2			Sand and gravel
9					Refusal
<b>Wetland Soil Indicators:</b> <input type="checkbox"/> Histosol <input type="checkbox"/> Bright Mottling <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Concentrations <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> High Organic Content in Surface Layer <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Reducing Conditions <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Gleyed <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Low-Chroma Colors <input type="checkbox"/> Other (Explain in Remarks)					
NRCS Mapped Type: NI - Not Inventoried					
USDA Hydric Soils Field Indicator:					
WVI Classification: --					
Remarks: *If field observations do not confirm mapped type but represent another hydric soil found in the county, check "other hydric soil" and describe here:					

**SITE CONDITIONS**

Do normal environmental conditions exist at the plant community? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, explain)	Is the site a problem area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (if yes, explain)
Has the vegetation, soils, and/or hydrology been significantly disturbed? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If yes, explain)	
Remarks: Past mowing and filling	

**WETLAND DETERMINATION**

Based on the foregoing, are:	This Sampling Point is within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Hydrophytic Plants Dominant? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Wetland Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Remarks:	

PLANT COMMUNITY AREA NO.: 3 TRANSECT NO.: 4 SAMPLE SITE NO.: 6

**VEGETATION**

Dominant Plant Species (%)	Stratum	Indicator	Other <u>NON-Dominant</u> Plant Species (%)	Stratum	Indicator
Poa pratensis (98)	Herb	FAC-	Plantago lanceolata (4)	Herb	FAC
Tilia americana (3)	Shrub	FACU	Glechoma hederacea (4)	Herb	FACU
Rhamnus cathartica (2)	Shrub	FAC-	Rhamnus cathartica (2)	Herb	FAC-
Tilia americana (33)	Tree	FACU	Taraxacum officinale (1)	Herb	FACU
Quercus macrocarpa (25)	Tree	FAC-	Ulmus americana (1)	Herb	FACW-
Fraxinus pennsylvanica (25)	Tree	FACW	Vitis riparia (1)	Shrub	FACW-
			Lonicera X bella (1)	Shrub	NI
Percent of Dominant Species that are OBL, FACW, OR FAC: 17%					
Plant Community Type: Former maintained lawn area with scattered hardwoods					
Remarks:					

**HYDROLOGY**

**WETLAND HYDROLOGY INDICATORS**

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> FSA Slide Review  <input checked="" type="checkbox"/> No Recorded Data Available	<b>Primary Indicators:</b> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Root Zone (Upper 12") <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands
<b>Field Observations:</b>  Depth of Surface Water:    --(in.) Depth of Soil Pit: <u>8.5</u> (in.) Depth to Free Water in Pit:  --(in.) Depth to Saturated Soil:    --(in.)	<b>Secondary Indicators (2 or more required):</b> <input type="checkbox"/> Oxidized Root Channels in Root Zone(Upper 12") <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Plant morphological adaptations <input type="checkbox"/> Floodway <input type="checkbox"/> Other (Explain in Remarks)
Remarks: No hydrology indicators observed.	

**SOILS**

<b>Map Unit Name</b> (Series and Phase): Fox silt loam (FsA)		<b>Drainage Class:</b> Well-drained			
<b>Taxonomy (Subgroup):</b> Typic Hapludalfs					
<b>Field Observations Confirm Mapped Type?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Other hydric soil within County*					
<b>Profile Description</b>					
Depth (Inches)	Horizon	Matrix Color (Munsell Moist)	Redox Concentrations Color (Munsell Moist)	Redox Concentrations (Abundance/ Contrast)	Texture, Concretions, Structure, etc.
0-8.5		10YR 2/2			Loam
8.5					Refusal 1-3" cobbles and glacial till material
<b>Wetland Soil Indicators:</b>					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Bright Mottling			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> Concentrations			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> High Organic Content in Surface Layer			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Gleyed		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
<b>NRCS Mapped Type:</b> NI - Not Inventoried					
<b>USDA Hydric Soils Field Indicator:</b>					
<b>WWI Classification:</b> --					
<b>Remarks:</b> *If field observations do not confirm mapped type but represent another hydric soil found in the county, check "other hydric soil" and describe here:					

**SITE CONDITIONS**

<b>Do normal environmental conditions exist at the plant community?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, explain)	<b>Is the site a problem area?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (if yes, explain)
<b>Has the vegetation, soils, and/or hydrology been significantly disturbed?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If yes, explain)	
<b>Remarks:</b> Mowing of vegetation and past filling.	

**WETLAND DETERMINATION**

<b>Based on the foregoing, are:</b>	<b>This Sampling Point is within a Wetland?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Hydrophytic Plants Dominant? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Wetland Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
<b>Remarks:</b>	

PLANT COMMUNITY AREA NO.: 1 TRANSECT NO.: 4 SAMPLE SITE NO.: 7

**VEGETATION**

Dominant Plant Species (%)	Stratum	Indicator	Other <u>NON-Dominant</u> Plant Species (%)	Stratum	Indicator
Salix exigua (33)	Herb	OBL	Ulmus americana (2)	Herb	FACW-
Phalaris arundinacea (25)	Herb	FACW+	Polygonum persicaria (2)	Herb	FACW
Salix exigua (15)	Shrub	OBL	Acer saccharinum (1)	Herb	FACW
			Cirsium arvense (1)	Herb	FACU
			Boehmeria cylindrica (1)	Herb	OBL
			Ambrosia artemisiifolia (1)	Herb	FACU
			Vitis riparia (1)	Shrub	FACW-
Percent of Dominant Species that are OBL, FACW, OR FAC: 100%					
Plant Community Type: Fresh (wet) meadow with shrubs					
Remarks:					

**HYDROLOGY**

**WETLAND HYDROLOGY INDICATORS**

<input checked="" type="checkbox"/> Recorded Data (Describe in Remarks):  <input type="checkbox"/> Stream, Lake or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> FSA Slide Review  <input type="checkbox"/> No Recorded Data Available	<b>Primary Indicators:</b> <input type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Root Zone (Upper 12") <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands
<b>Field Observations:</b>  Depth of Surface Water:    --(in.) Depth of Soil Pit:           17(in.) Depth to Free Water in Pit:  5.5(in.) Depth to Saturated Soil:    4.5(in.)	<b>Secondary Indicators (2 or more required):</b> <input checked="" type="checkbox"/> Oxidized Root Channels in Root Zone(Upper 12") <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Plant morphological adaptations <input type="checkbox"/> Floodway <input type="checkbox"/> Other (Explain in Remarks)
Remarks: Oxidized root channels from 0-3"	

**SOILS**

Map Unit Name (Series and Phase): Fox silt loam (FsA)		Drainage Class: Well-drained			
Taxonomy (Subgroup): Typic Hapludalfs					
Field Observations Confirm Mapped Type? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Other hydric soil within County*					
<b>Profile Description</b>					
Depth (Inches)	Horizon	Matrix Color (Munsell Moist)	Redox Concentrations Color (Munsell Moist)	Redox Concentrations (Abundance/ Contrast)	Texture, Concretions, Structure, etc.
0-3		10YR 3/1			Sand and gravel
3-8		10YR 4/2	7.5YR 5/6	Common/Prominent	Sand and gravel
8-17		10YR 3/2	7.5YR 5/6	Common/Prominent	Course sand
Wetland Soil Indicators:					
<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input type="checkbox"/> Gleyed <input checked="" type="checkbox"/> Low-Chroma Colors		<input checked="" type="checkbox"/> Bright Mottling <input type="checkbox"/> Concentrations <input type="checkbox"/> High Organic Content in Surface Layer <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)			
NRCS Mapped Type: NI - Not Inventoried					
USDA Hydric Soils Field Indicator: Meets the A16. Coast Prairie Redox test indicator					
WWI Classification: A1L					
Remarks: *If field observations do not confirm mapped type but represent another hydric soil found in the county, check "other hydric soil" and describe here:					

**SITE CONDITIONS**

Do normal environmental conditions exist at the plant community? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, explain)	Is the site a problem area? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If yes, explain)
Has the vegetation, soils, and/or hydrology been significantly disturbed? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If yes, explain)	
Remarks: Problem area due to Sandy soils	

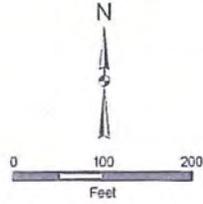
**WETLAND DETERMINATION**

Based on the foregoing, are:	
Hydrophytic Plants Dominant? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	This Sampling Point is within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Wetland Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Remarks:	

WDNR Property - former Kraus Property  
SE Quarter, Section 17, T08N-R18E  
Town of Merton, Waukesha County

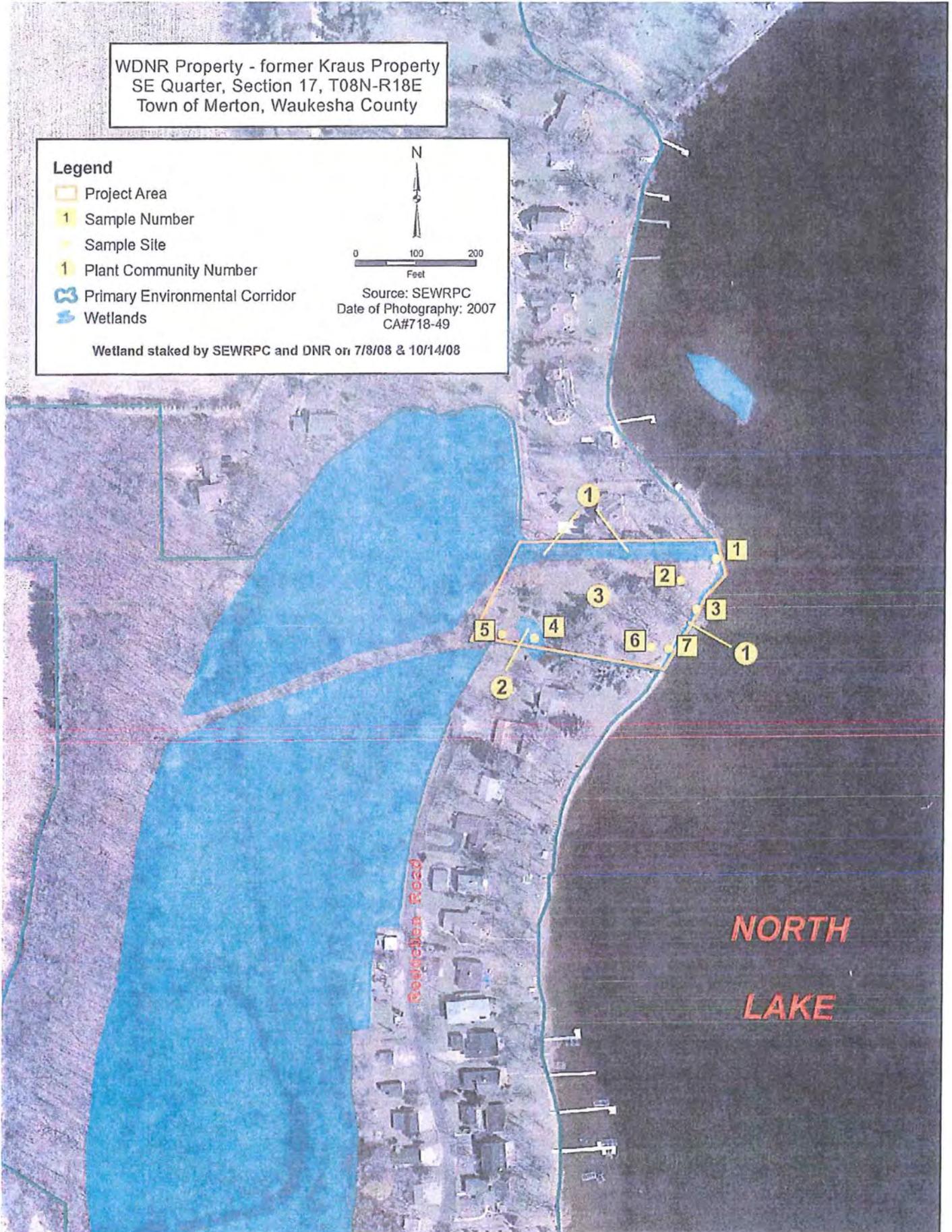
**Legend**

-  Project Area
-  Sample Number
-  Sample Site
-  Plant Community Number
-  Primary Environmental Corridor
-  Wetlands



Source: SEWRPC  
Date of Photography: 2007  
CA#718-49

Wetland staked by SEWRPC and DNR on 7/8/08 & 10/14/08



North Lake – Kraus Access Site  
Summary of Public Comments on Preliminary Development Plans  
(October 14 - 31, 2008)

The Department of Natural Resources (Department) held a public informational meeting on Thursday, October 23, 2008, to take input on preliminary development plans for the Kraus Access Site on North Lake. The Department issued a news release on October 14, 2008, which announced the informational meeting and indicated public comments would be accepted through October 31, 2008. Several news organizations published the information about the meeting.

The informational meeting was attended by approximately 70 people. Meeting attendees included residents of the North Lake area, lake management district officials, municipal officials, representatives of conservation groups, and State Rep. Don Pridemore. In addition to receiving comment sheets at the informational meeting, other comments were emailed and mailed to the Department. Preliminary plans and comment sheets were also available at the Department's Waukesha Service Center for public review. A total of 77 email messages, letters, and comment sheets were received. A listing of the comments received is summarized below.

General Comments

- In favor of developing the access facility at the Kraus property. (8 comments)
- Prefer to develop the access facility at the Kuchler property. (20 comments)
- Prefer the North Lake Management District's "Compromise Plan" of developing a boat launch at the Kuchler property, and a carry-in and winter access facility at the Kraus property. (36 comments)
- The North Lake Management District would accept management of the two access facilities proposed in their "Compromise Plan." (1 comment)
- Prefer to have developed boat launches at Kraus and Kuchler sites. (1 comment)
- Kuchler site would only accommodate small boats and require regular dredging. (1 comment)

Specific Comments on the Department's Preliminary Development Plans for the Kraus Property

- In favor of plans as presented, including comments that little or no dredging will be needed and winter access to North Lake will be good. (6 comments)
- The plans should include additional car-only parking stalls. (2 comments)
- The plans should include a boat washing station. (1 comment)
- Prefers the "blue" road alternative (entirely on Department property). (1 comment)
- Prefers the "pink" road alternative (utilizing the existing gravel road). (3 comments)
- Parking lot should be moved further away from the shoreline. (1 comment)
- Dumpster and portable toilet should be moved further away from the shoreline. (1 comment)
- Requests a six to eight foot tall privacy fence along the north side of the parking lot to provide visual screening for the neighbor. (1 comment)
- Requests the proposed light be considerate of neighbors. (2 comments)
- The landscaping plan should save as many existing trees as possible and include plantings along the shoreline to provide visual screening for boaters and lake residents. (2 comments)
- The plan will allow too many boats on North Lake, or too many parking stalls are proposed. (4 comments)
- Concerns about the cost of the plan. (11 comments)
- Concerns about drainage or flooding impacts from the development on neighboring properties, and request to keep the access road gravel. (15 comments)
- In favor of the proposed storm water plan. (1 comment)

- Concerns about impacts to fishing habitat near the Kraus property. (5 comments)
- Concerns about impacts to wetlands. (21 comments)
- Concerns about impacts to wildlife or wildlife habitat. (2 comments)
- Concerns about environmental impacts such as fuel spills or runoff pollution. (9 comments)
- Concerns about increased vehicle traffic on Town roads leading to the Kraus property, and concern the access road is too narrow. (17 comments)
- Concerns about emergency vehicle response to the Kraus property. (16 comments)
- Concerns about 24-hour access to the site. (2 comments)
- Concerned that the Department has not allowed a representative of the Reddelien Road Neighborhood Association (RRNA) to access the Kraus property to evaluate potential impacts to wetlands and threatened or endangered species, and request to meet with the RRNA to discuss their concerns. (20 comments)
- Prefers the Department operate the facility once constructed rather than lease it to the Town or Lake District, and offer from the Waukesha County Conservation Alliance to assist the Department with the facility operation. (3 comments)
- Requests speed bumps on the access road to keep traffic slower. (1 comment)
- Requests that no additional parking stalls get added in the future. (1 comment)
- Requests measures to reduce noise along the access road, such as an earthen berm or fence. (1 comment)
- Requests a bike trail be added to the plans. (1 comment)
- Request morning and evening slow-no-wake restrictions on North Lake. (2 comments)
- Requests to allow ATV and snowmobile access to North Lake from the facility during the winter. (1 comment)
- Requests the Department consider an arrangement to make the North Lake Yacht Club boat launch available to the public. (1 comment)
- Concerns about impacts to nearby home values. (2 comments)
- Requests the Department conduct additional review of the extent of wetland impacts from the development, including a delineation of ephemeral wetlands by conducting soil profile test pits and/or ground water level monitoring. (1 comment)
- Requests the Department provide soil boring information. (1 comment)
- Requests the Department's plans include topographic elevations of the development. (1 comment)
- The North Lake Management District requests dredging of the North Bay area of North Lake and reuse of the dredged silt to restore the North Lake Sand and Gravel property. (1 comment)

Insert Attachment 12. SEWRPC Report No. 189, Proposed North Lake Boat Launch Site  
Wetland Delineation

## **Responses to W.C. (Whitey) Kraus Public Access Site Comments**

The Department considered 100 public comments received at a Preliminary Development Plan public information meeting on October 23, 2008, during the Preliminary Development Plan public comment period, October 14 to 31, 2008, and during an Environmental Assessment public comment period, November 10 to December 10, 2008, as the Department prepared this Environmental Assessment (EA).

Department staff compiled questions or statements from the written and verbal comments and summarized them below. These comments are not reproduced, but are available for review<sup>1</sup>. Public comments that expressed a personal opinion without addressing the Development Plan or draft EA, were read and acknowledged, but are not included in the summary. Department staff responded to each of the questions or statements. It is our opinion that the questions and statements covered in the following summary section are representative of the major concerns and issues that the public believed needed to be addressed in the EA.

We appreciate the time, effort, and careful thought on the part of the commenters who provided input that was so valuable in producing the EA. A news release will inform people how to get a copy of the revised EA.

### **Summary of Public Comments**

***Comment 1: The EA does not adequately describe nor analyze environmental impacts and does not properly evaluate alternatives.***

Response: The EA provides revised site development plans, additional information about stormwater analysis, wetland identification, environmental and economic impact analysis, and responses to public comments. The EA identifies topics, including proposed Department Site design modifications, where limited information was available and estimates were used for analysis. Section 25 of the EA analyzed seven alternatives to provide public access to North Lake:

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<sup>1</sup> Contact: Mike Thompson, Southeast Region Environmental Analysis Team Supervisor (414) 263-8648 or at [MichaelC.Thompson@Wisconsin.gov](mailto:MichaelC.Thompson@Wisconsin.gov).

- Alternative 1 – Do Nothing
- Alternative 2 – Platted Access
- Alternative 3 – The North Lake Yacht Club
- Alternative 4 – The Corey Oil Site
- Alternative 5 – The STH 83 Site
- Alternative 6 – The Department Site
  - Alternative 6A – Access on the existing road
  - Alternative 6B – Access on the Department easement
  - Alternative 6C – Access on Department owned property (fee title)
  - Alternative 6D – Access by a one-lane road with pullouts
  - Alternative 6E – Access by extending lower Reddelien Road
  - Alternative 6F – Access by Silver Spring Drive or Silver Spring Lane
- Alternative 7 – Two site alternatives
  - Alternative 7A - Development of Department carry-In and STH 83 motor boat launch sites
  - Alternative 7B– Development of motor boat launches at both Department and STH 83 sites

***Comment 2: An Environmental Impact Statement (EIS) is needed.***

Response: EAs are similar to EISs in both content and process. The primary difference is that an EIS includes an administrative hearing. An EIS is not required for the development of a public boat launch and if prepared would likely add little new information or additional value.

***Comment 3: Discuss the Department Site access policy.***

Response: The Department Site is closed per NR 45, Wis. Admin. Code, Use of state property, until development is complete and the site is opened for public use.

***Comment 4: The EA does not adequately identify wetlands at the Department Site and underestimates wetland impacts.***

Response: Wetlands are identified by vegetation adapted to aquatic conditions, saturated soil features, and hydrology. Department and Southeastern Wisconsin Regional Planning Commission (SEWRPC) staff evaluated hydrophytic vegetation, redoximorphic soil features, and hydrology and identified wetlands within the Department Site development area. SEWRPC prepared Attachment 12, *Proposed North Lake Boat Launch Site Wetland Delineation* which describes the methods used to identify wetlands, results and discussion, and conclusions. The wetland boundaries were surveyed and incorporated into site planning. The Department Site access road, including fill for roadway side slopes, and parking lot developments will impact 0.16 acre of wetland.

Natural Resource Consulting, Inc. (NRC) conducted a field assessment at the Department Site during November 12 to 20, 2008. The Department reviewed and considered NRC's *December 5, 2008, Wetland and Habitat Evaluation, Proposed N. Lake Boat Launch, Kraus Site – Town of Merton, Waukesha County, WI* letter report during the preparation of this EA. The Department and SEWRPC staff re-evaluated wetland delineations and verified the delineation. The Department determined that the Department Site wetlands are not considered part of the bed of North Lake.

***Comment 5: Discuss the boat launch ramp and its impact on the lakebed.***

Response: The Department Site's 12 foot wide by 42 foot long concrete boat launch ramp and boarding dock interface was designed as compactly as possible with minimal lakebed impact while meeting design standards for safe boat launch and retrieval. The ramp design is shown in Attachment 14, *Final Project Development Plans*. The ramp will extend from the shoreline into a waterdepth of 3 to 4 feet. Rip-rap scour protection will be installed at the end of the ramp. Approximately 78 cubic yards of gravel and sand substrate will be removed for the ramp and 0.01 acre of lakebed will be impacted.

In-water construction will be avoided from April 1 thru May 31, as recommended by the area fish manager, to minimize fish spawning impacts. Ramp construction will occur within a turbidity barrier to minimize any lake sediment disturbance.

The ramp and associated boating activity are not expected to impact fish populations and habitat, water quality, or lake ecology significantly. Largemouth bass and bluegill

may continue to nest near the ramp or relocate to other similar habitat that is widely available in the lake. The sandbars adjacent to the ramp may continue to be used as staging areas for youth sailing classes and other recreational activities.

***Comment 6: Describe stormwater surface flow in the Reddelien Road/Silver Spring Road area and analyze what effects, including effects to residential properties and septic systems in the area, the Department Site development may have.***

Response: A topographic map of the Reddelien Road, and Silver Spring Road area is illustrated in Attachment 7 and illustrates a steep slope west of the Department Site access road to almost level with a slight slope to the lake. Historic fill and development near the lake may have raised ground surface elevations along Reddelien and Silver Spring Road approximately one foot above the surrounding area. Stormwater generally flows downslope from the west to North Lake with some drainage through the Department Site. A portion of the Department Site and some residences along Reddelien and Silver Spring Road are located in the 100-year floodplain.

The Department Site access road and parking lot development have been designed to maintain existing stormwater surface flow patterns. Plans are illustrated in Attachment 15, *Stormwater Analysis Report*.

The north-south segment of the access roadway will be reconstructed with four cross culverts to maintain existing west to east drainage. The east-west segment of the access roadway will be constructed at the same elevation as the existing access road allowing flood waters to overtop the road as currently occurs and three cross-culverts will be installed to maintain the hydraulic connection between the wetlands that are north and south of the roadway.

The parking lot will slope slightly to the north into a designed drainage swale that discharges to North Lake. In addition, new drain tile system will be constructed along the south perimeter of the parking lot to maintain existing drainage patterns and convey drainage east to North Lake.

Properties that may currently experience problems with surface water ponding in low lying areas, wet basements and poor functioning septic systems during prolonged precipitation events will likely continue to experience problems in the future.

***Comment 7: Consider a bike trail, a boat washing station, wetland bridges, carry-in parking only marked parking spaces, and dredging of North Lake's North Bay as part of the Department Site development.***

Response: The purpose of the Department Public Access Site is to provide recreational boaters and anglers an opportunity to launch watercraft on and have winter access to North Lake.

Bicycles may travel on the access road. However, separate bicycle facilities are not planned.

A boat washing station is not proposed because of the additional wetland impacts and costs associated with constructing a water supply well and washwater treatment facilities. Signage will inform boaters that aquatic invasive species can be managed without washing by removing aquatic plants and draining water from bilges and motors during boat recovery.

Wetland bridges are not proposed because they would neither eliminate nor significantly minimize wetland impacts and would significantly increase the cost of the project.

The 16 car-trailer and three car only parking spaces, which include Americans with Disabilities Act spaces, meet minimum public access standards. Creating additional parking spaces for carry-in parking only is not proposed due to site limitations.

Dredging the North Bay is beyond the scope of this public access site development project. The North Lake Management District may develop a proposal and apply for funding and approval for the dredging of the North Bay of North Lake.

***Comment 8: How will the Department Site development prevent the introduction and spread of aquatic invasive species?***

Response: Invasive species are found in many inland lakes in Wisconsin. Eurasian water milfoil and zebra mussel invasive species are present in North Lake. Transient boaters represent minimal additional risk of introducing invasive species into North Lake.

The Department conditions construction approvals to require contractors to decontaminate equipment to prevent the introduction of invasive species.

Invasive species' educational signs will be posted at the Department Site. The signs will direct boaters to remove aquatic vegetation from boats and trailers and to drain lake water from bilges and motors to prevent the transfer of invasive species.

***Comment 9: What are the Department Site's hours of operation? Who will manage and maintain the site?***

Response: The Department will determine the hours of operation, post the hours at the site, and control site access. Department public access sites are typically open 24 hours a day. Some sites have limited hours, however, NR 1.91(4)(d)6., Wis. Adm. Code, states that any boat launched during operating hours must be allowed egress from the water at any time.

The site will provide access for winter recreation on North Lake, including ice fishing. Parking lot snow removal operations will store snow near the launch ramp. Motorized vehicle access to the lake from the launch site will be prohibited.

Department staff will inspect, manage, and maintain the Department Site. The portable restroom will be maintained by a contractor on a regular basis through all seasons.

***Comment 10: Discuss boating regulations, including motor boat restrictions and slow-no-wake requirements, on North Lake.***

Response: Chapter 30.77, Wisconsin Statutes, allows local municipalities to enact local regulations relative to boating in the interest of public health, safety or welfare, including

the public's interest in preserving the state's natural resources. Motor boats are allowed to operate on North Lake. Local regulations currently in place on North Lake include:

- Require boats to travel at slow-no-wake speeds within 100 feet of a dock, raft, pier, or swimmer,
- Set a maximum speed limit of 35 miles per hour for all boats
- Set slow-no-wake speed from one hour after sunset until one hour before sunrise the next day
- Require boats towing people skiing or tubing to operate in a counter clockwise direction
- The Village of Chenequa and Town of Merton require slow-no-wake during high water conditions.

***Comment 11: How will the Department Site development plans minimize aesthetic impacts to nearby residential property owners and lake users?***

Response: Project development plans are illustrated in Attachment 14. The development will preserve a majority of the mature trees and shrubs along the access road. An eight foot tall wooden privacy fence and vegetative plantings will provide screening for adjacent residential properties and minimize secondary aesthetic and noise impacts. Earthen berms which would increase wetland impacts are not proposed for screening. An enclosure will screen the portable restroom. The downcast lampshade on the dusk to dawn light fixture will control lighting near the boat launch and limit visual impacts to neighbors and lake users.

***Comment 12: Discuss traffic on the Department Site access road and Reddelien Road.***

Response: The Department Site asphalt access road will be 24 feet wide, including one foot gravel shoulders and three to one side slopes, and designed to accommodate two-way car and trailer traffic. A launch site entrance sign will be placed along Reddelien Road. A stop sign will be placed at the site exit to Reddelien Road. A 10 mile per hour speed limit sign and other traffic control and informational signs may be placed along the roadway and parking lot. The Department will post signs indicating that parking is

allowed only in designated parking areas and that vehicles parked in undesignated areas may be subject to a citation or towed. The Department, or a contractor, will plow snow, spread sand, and salt the access road during winter.

New car and trailer traffic will be present at the Department Site. Secondary traffic impacts on Reddelein Road are expected to be minimal on peak summer weekends because of the limited, 16 car and trailer and three car only, parking stalls available at the launch site.

The average daily traffic was 3,494 vehicles per day on CTH K near West Shore Road in 2004. The speed limit is 25 miles per hour on CTH K near West Shore Road. The Town of Merton regulates speed limits and parking along Reddelien Road which accommodates two-way car-trailer traffic.

Traffic safety concerns most often involve passenger cars and are most common on congested roadways, near intersections, and during poor weather. Other traffic safety factors include driver experience and time of day.

***Comment 13: Discuss how the Department Site development will affect amphibians, rare species, and other wildlife.***

Response: North Lake and its surrounding uplands and wetlands support a variety of wildlife species. Common amphibians include American toads, spring peepers, gray tree frogs, leopard frogs, wood frogs, green frogs, and chorus frogs. Other amphibian species are likely to be present. No state or federal threatened or endangered species or state species of special concern have been observed at the Department Site.

Rare species recorded within five miles of the project area, and with suitable habitat in some of the project area wetlands, include lake chubsucker (*Erimyzon sucetta*), least darter (*Etheostoma microperca*), pale green orchid (*Platanthera flava*), Hooker's orchid (*P. hookeri*), and forked aster (*Aster furcatus*). Butler's gartersnake (*Thamnophis butleri*), a state threatened species, was recorded within five miles; however, the Department Site is outside the currently established range for the species. No nearby records are listed for Blanding's turtle (*Emydoidea blandingii*), a state threatened

species, but the wetland is within the range of and includes suitable habitat for this species.

The Department Site development will decrease the amount of locally available habitat but is not expected to affect the presence or abundance of any amphibians or wildlife species. Wildlife may temporarily disperse during construction activities and relocate into adjacent widely available nesting, foraging, and sheltering habitat areas.

Construction can be scheduled to postpone work during fish spawning and measures such as exclusion fencing, collection, and relocation can be implemented to minimize potential impacts to Blanding's turtles and other native reptile and amphibian species.

***Comment 14: Discuss public safety, emergency, and spill response.***

Response: Department Conservation Wardens patrol and the Town of Merton and the Village of Chenequa operate Water Safety Patrols on North Lake. The majority of boating violations are lack of proper number or type of personal floatation devices in the watercraft, improper nighttime lighting, and waterskiing without an observer. The North Lake Management District indicates that speeding is not a current problem on North Lake. There should be no significant impact on watercraft operations and safety. Most impacts that do occur will be on summer weekends and holidays. All transient and riparian boaters are required to be aware of and comply with state and local boating regulations.

Emergencies, fires, and spills in the North Lake area can be reported by calling 911. Department Conservation Wardens, Waukesha County Sheriff's Department, and Stone Bank, North Lake, and Chenequa Fire Department-Emergency Medical Services can provide emergency response services.

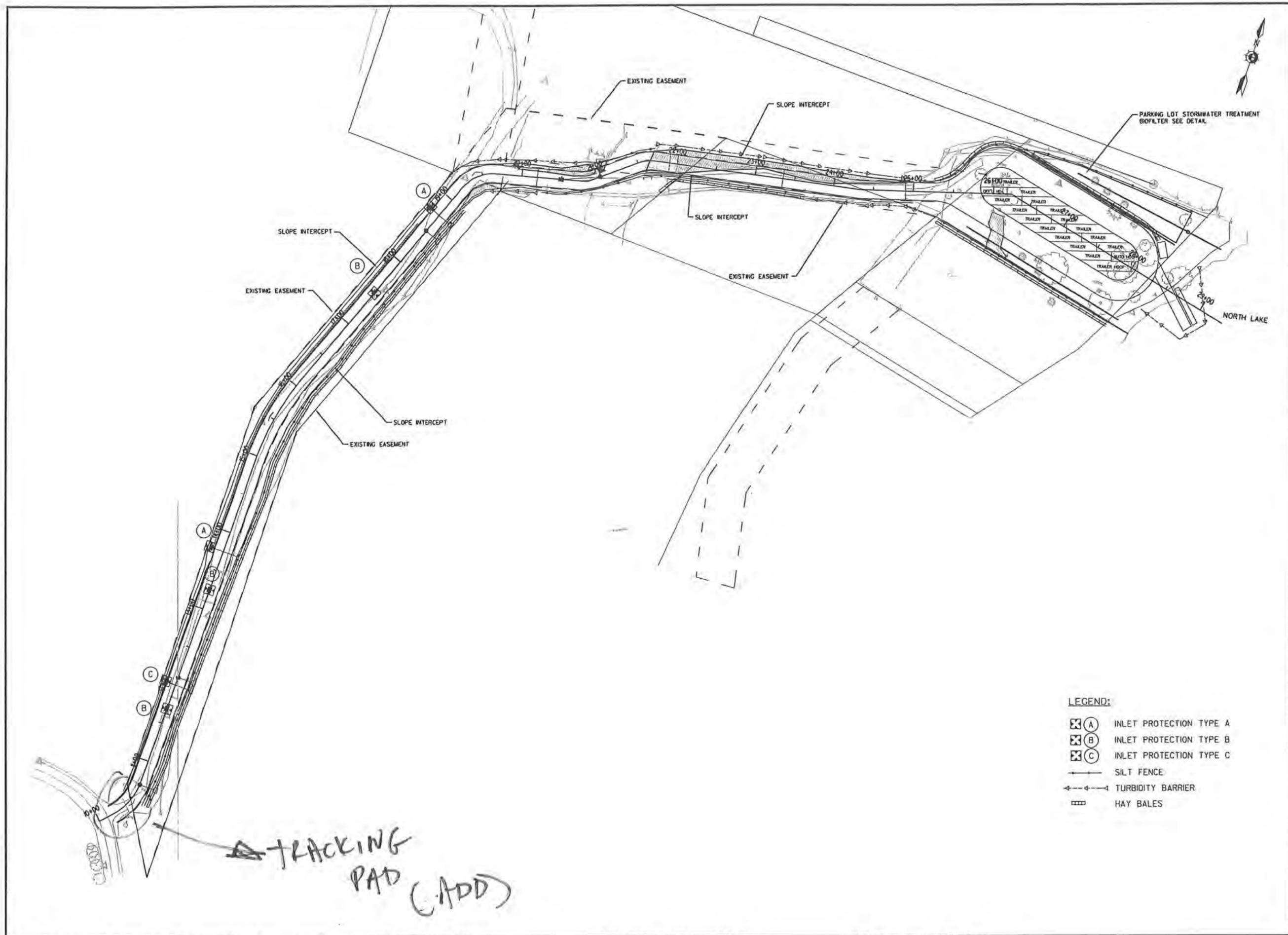
Incidental petroleum spills are typically less than five gallons and are not expected to be a significant environmental threat. Responsible parties can clean up most minor petroleum spills with sorbent materials which can be bagged and disposed in the trash.

***Comment 15: Discuss economic issues including budget priorities, project funding, and property value impacts.***

Response: The Department is mindful of its public stewardship role, budgeting, and budget prioritization. Under the authority of NR 1.90, Wisconsin Administrative Code, Public access policy for waterways, it is the goal of the State of Wisconsin to provide, maintain, and improve access to navigable waters of the state. The Department's Southeast Region Access Team has designated North Lake, the ninth largest lake in Waukesha County and the largest without public access for more than 25 years, as a high priority for establishing adequate public access. In 2008, Waukesha County had the highest number of registered boats, and the second highest number of residents who purchased fishing licenses, of any county in Wisconsin. Department Stewardship funds will pay the estimated \$475,000 development costs over a 20 year bonding period. Department Site construction is planned to begin in mid 2010. The Department Site is projected to be open to the public and operational in late 2010.

Wisconsin home sales and median prices both decreased in the second quarter of 2009 relative to that same quarter in 2008 according to data released by the Wisconsin Realtors Association. The Department Site development is unrelated to larger economic and real estate factors and is not expected to impact the number of property transactions or selling prices in the area significantly.

Insert Attachment 14, Final Project Development Plans



**LEGEND:**

- ⊠ (A) INLET PROTECTION TYPE A
- ⊠ (B) INLET PROTECTION TYPE B
- ⊠ (C) INLET PROTECTION TYPE C
- +— SILT FENCE
- ←-←-← TURBIDITY BARRIER
- ▨ HAY BALES

TRACKING PAD (ADD)

**KAPUR & ASSOCIATES, INC.**  
 CONSULTING ENGINEERS  
 MILWAUKEE, WISCONSIN  
 414.357.6668

State of Wisconsin  
 Department of Administration  
 Division of State Facilities

Agency / Institution:  
 Department of Natural Resources  
 North Lake

Project Title:  
**North Lake Access Site  
 Statewide Public Access**

Project Location:  
 Department of Natural Resources  
 North Lake

Sheet Title:  
 EROSION CONTROL

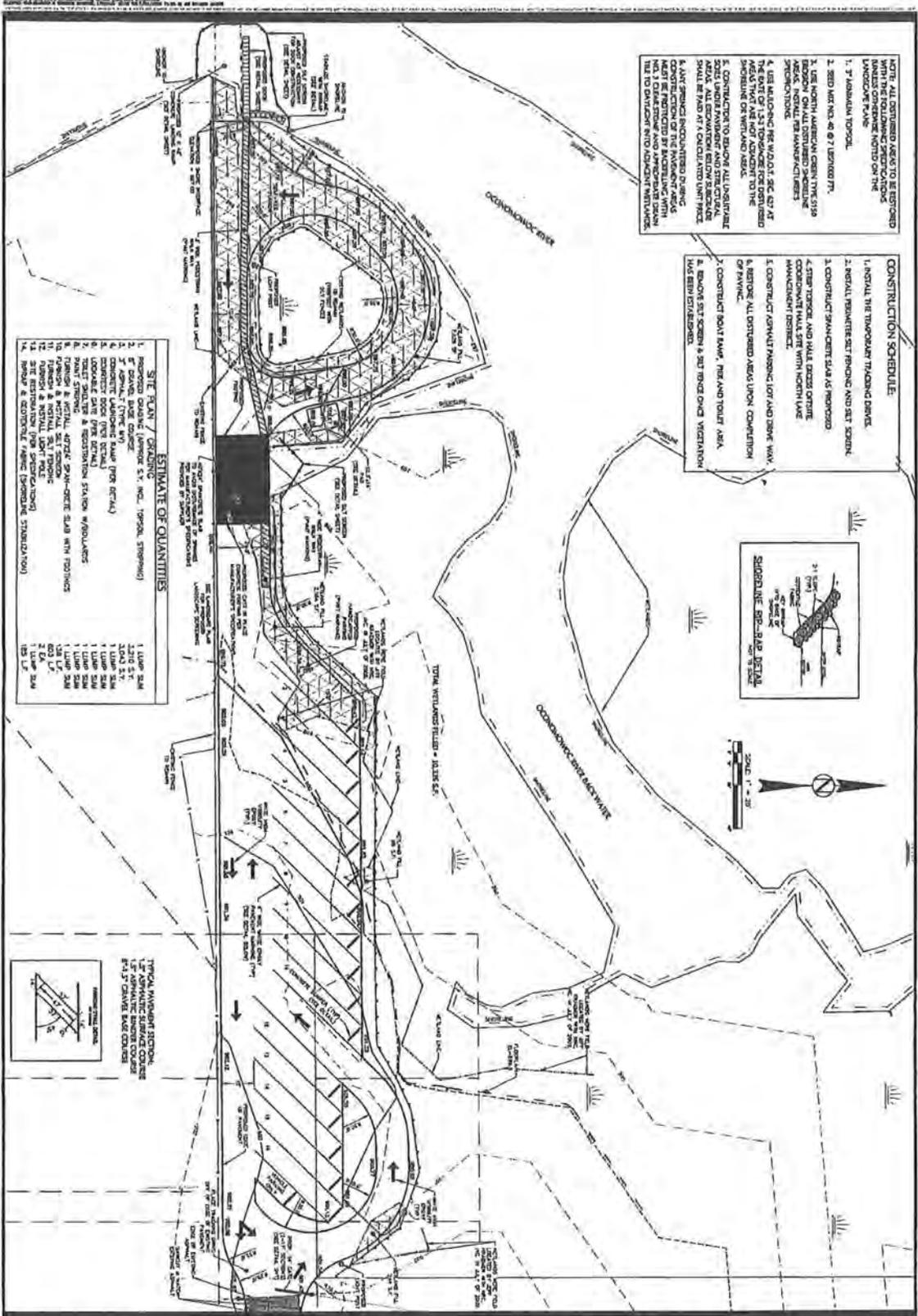
Revisions:

No.	Date	By	Description
1	00/00/00	ABC	Addendum No. 1


Scale 1" = 50'-0"

DSF Number	05L21
Set Type	DR
Date Issued	2/15/08
Sheet Number	C104

Insert Attachment 15, Stormwater Analysis Report



NOTE: ALL DISTURBED AREAS TO BE RESTORED WITH THE FOLLOWING SPECIFICATIONS WITHIN THE SPECIFIED TIME PERIODS LISTED ON THE LANDSCAPE PLAN:

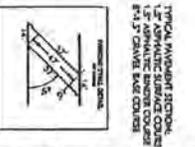
1. 7" MULCH/NO TOPSOIL
2. SEED MIX NO. 49 @ 7 LBS/1000 SQ. FT.
3. USE NORTH AMERICAN GRASS TYPE 519 BROWN ON ALL DISTURBED SLOPING AREAS. INITIAL PERMANENT SEEDING SHALL BE COMPLETED WITHIN 14 DAYS OF THE DATE OF THE START OF CONSTRUCTION.
4. USE MULCHING AND SOIL STABILIZATION TO PROTECT ALL DISTURBED AREAS FROM EROSION AND TO PROMOTE THE GROWTH OF VEGETATION.
5. CONSTRUCTION TO REMOVE ALL UNDESIRABLE SPECIES FROM DISTURBED AREAS. ALL UNDESIRABLE SPECIES SHALL BE PAID AT 1.00 CENTS PER LBS. OF REMOVAL.
6. ALL PERMANENT EROSION CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD AND SHALL BE MAINTAINED THROUGHOUT THE LIFE OF THE PROJECT.

**CONSTRUCTION SCHEDULE:**

1. INSTALL THE TEMPORARY TRUCKING DRIVE.
2. INSTALL PERMANENT SLOPING AND SEED SCORING.
3. CONSTRUCT SWAY-OFF SLAB AS SHOWN.
4. START TERRACE AND WALL EXCESS DRAINAGE AND SLOPE PROTECTION WITH HIGHLY VEGETATIVE PLANTINGS.
5. CONSTRUCT PERMANENT PAVING LOT AND DRIVE WAY.
6. RESTORE ALL DISTURBED AREAS UPON COMPLETION OF PAVING.
7. CONSTRUCT SOIL BANK, FIRE AND TRAIL AREA.
8. REMOVE SLOPE SCORING AND SEED SCORING VEGETATION.
9. REMOVE EXCESS EROSION CONTROL MEASURES.

**SITE PLAN / CONSTRUCTION ESTIMATE OF QUANTITIES**

ITEM	QUANTITY
1. 1" MULCH	1000 LF
2. SEED MIX NO. 49	10000 LBS
3. NORTH AMERICAN GRASS TYPE 519 BROWN	10000 LBS
4. MULCHING AND SOIL STABILIZATION	10000 SQ. FT.
5. PERMANENT EROSION CONTROL MEASURES	10000 LF
6. SWAY-OFF SLAB	10000 SQ. FT.
7. DRIVEWAY PAVING	10000 SQ. FT.
8. SOIL BANK	10000 LF
9. FIRE AND TRAIL AREA	10000 SQ. FT.
10. EXCESS EROSION CONTROL MEASURES	10000 LF
11. VEGETATION	10000 LF
12. PERMANENT PAVING	10000 SQ. FT.
13. TRAIL AREA	10000 SQ. FT.
14. TOTAL	100000



**PROJECT INFORMATION**

PROJECT: NORTH LAKE BOAT LAUNCH  
 LOCATION: TOWN OF MERTON, WISCONSIN  
 SHEET NO.: 14235  
 DATE: MARCH 10, 2008  
 DRAWN BY: M. TRACY  
 CHECKED BY: M. TRACY  
 DATE: 07/27/2008

**SITE GRADING & EROSION CONTROL PLAN**  
**NORTH LAKE BOAT LAUNCH**  
 TOWN OF MERTON, WISCONSIN  
**STH "83" & LAKE STREET (ALT. A)**

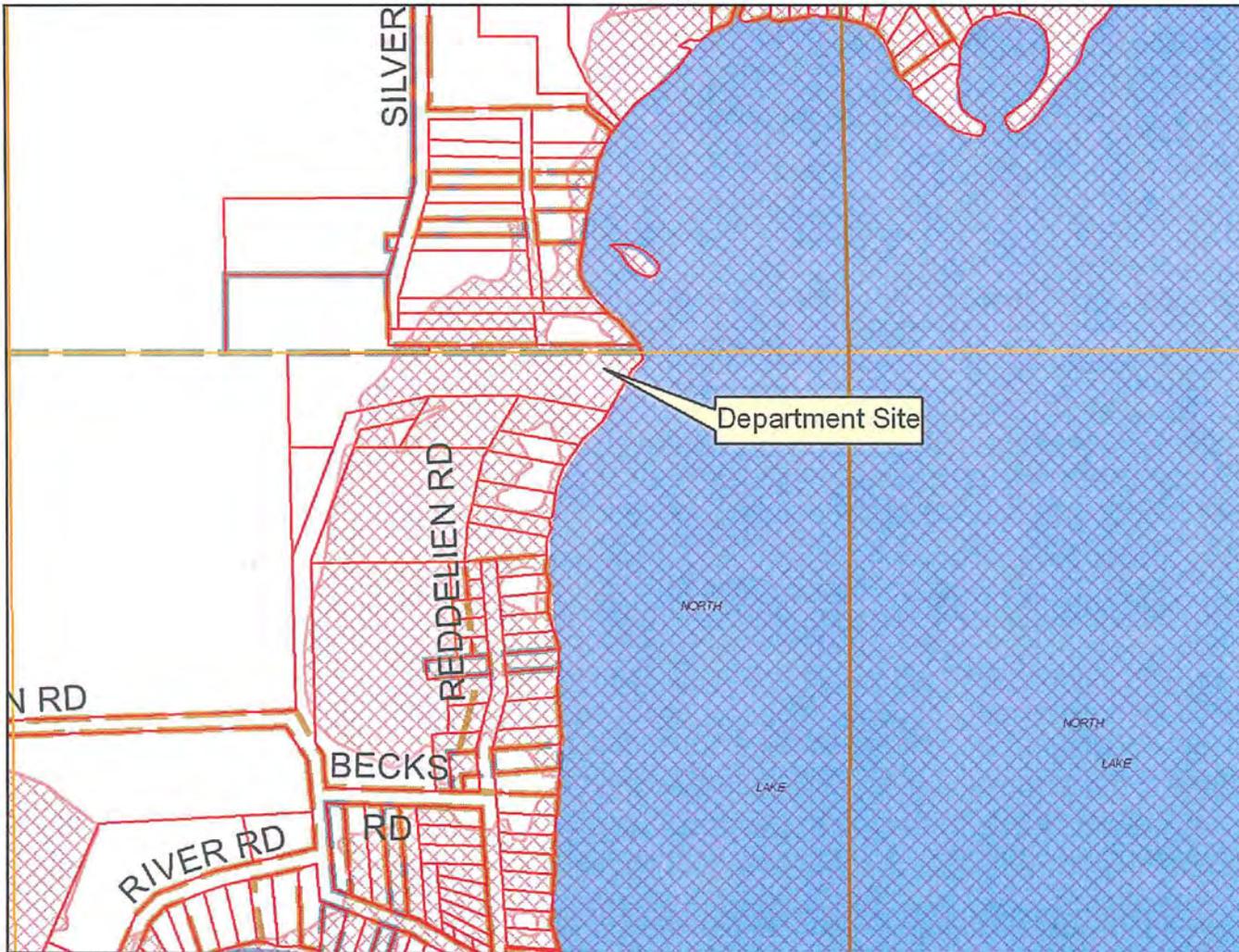
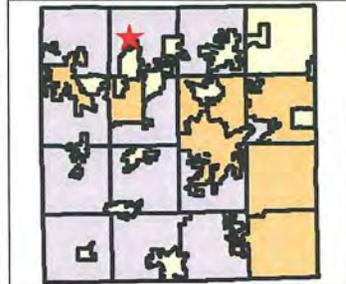
**YAGGY COLBY ASSOCIATES**

REGISTERED PROFESSIONAL ENGINEERS  
 1000 W. WISCONSIN AVENUE, SUITE 100  
 MILWAUKEE, WISCONSIN 53233  
 TEL: 414.224.1100  
 FAX: 414.224.1101  
 WWW.YAGGYCOLBY.COM

Attachment 16



# Waukesha County GIS Map



### Legend

**Street Centerlines (Basemap)**

- County
- Interstate
- Interstate Ramp
- State
- State Ramp
- US
- US Ramp

**Road Classification**

- Old Division Boundaries
- Surrounding Counties
- PLSS Quarter Section Lines
- PLSS Quarter Section Lines
- Parcels
- Shared Interest Parcels
- Assessor Plat
- Condo Plat
- CC&P
- Subdivision Plat
- Lakes and Rivers
- Streams and Creeks

**FEMA Floodplains (2006)**

- 1% Chance Flood Area (Zone A No Base E1)
- 1% Chance Flood Area (Zone AE w/ Base E1)
- Floodway (Zone AE)

**Flood Zone**

- 1% Chance Flood Area (Zone A No Base E1)
- 1% Chance Flood Area (Zone AE w/ Base E1)
- Floodway (Zone AE)

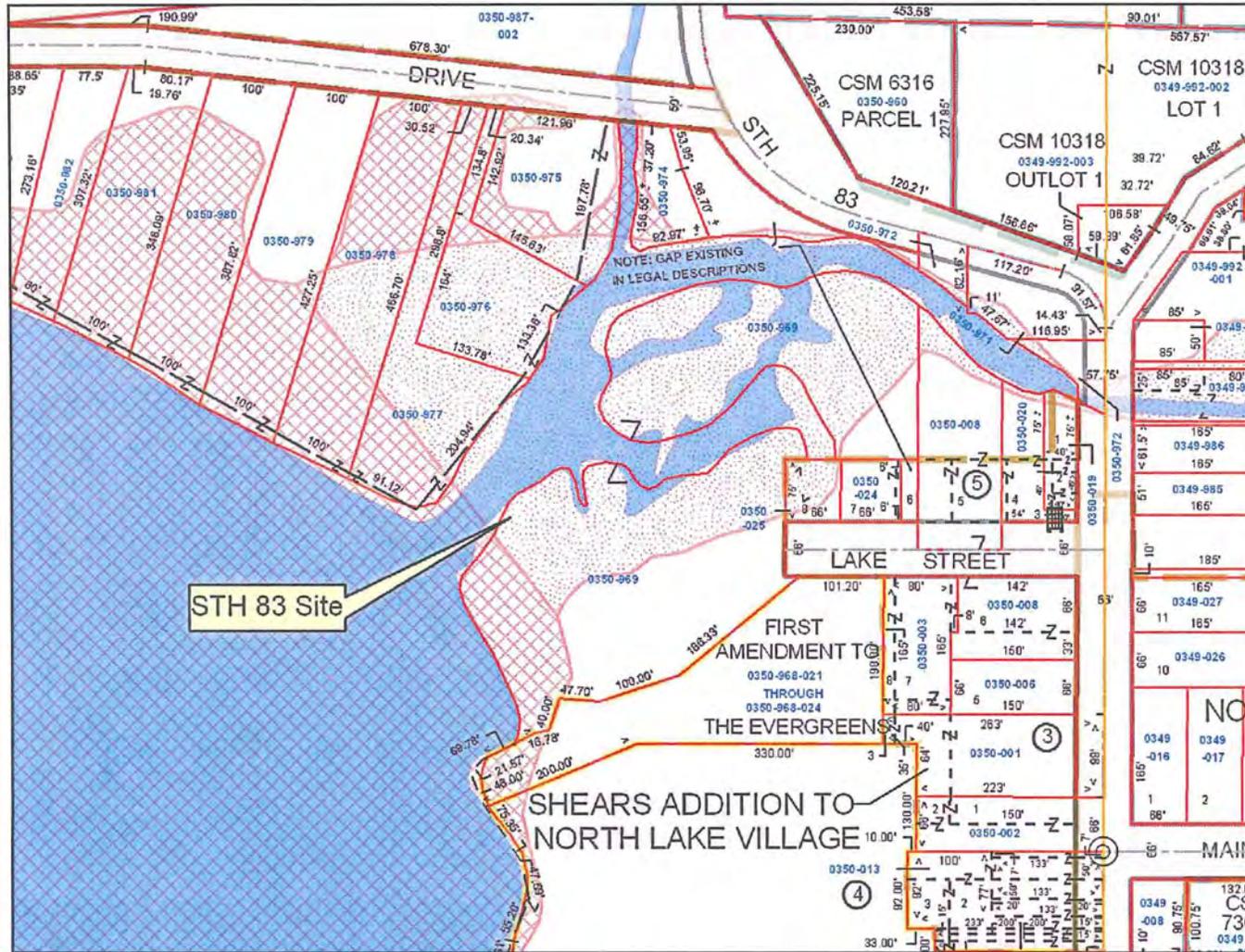
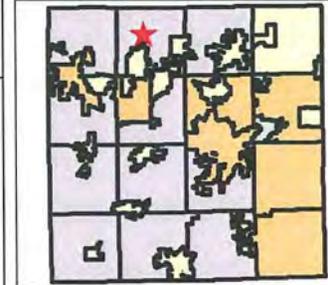


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Attachment 17



# Waukesha County GIS Map



STH 83 Site



### Legend

**Points of Interest**

- ✈ Airport
- 📍 Cemetery
- 🚒 Fire Station
- 🏛 Government Building
- 🏥 Hospital
- 📖 Library
- 📧 Post Office
- 🏞 Park or Recreation
- 🎓 School
- 🏠 Unincorporated Place
- 🏞 County Parks
- 🚓 Police Station
- 👮 Sheriff's Station
- 🗺 Civil Division Boundaries
- 🗺 Surrounding Counties
- 📏 PLSS Section Lines
- 📏 PLSS Quarter Section Lines

**Cartographic Elements**

**Type**

- Easement Line (Map)
- - - Derivation area
- - - Extended Tie Line
- - - Identification Area
- - - Meander Line
- - - Hole Leader
- - - Parcel Line (Owner)
- - - Tangency Tie
- ⊥ Tie Hook
- - - Tie Line
- - - ROW Centerline
- - - RR ROW Centerline
- - - ROW Median
- - - Sub Block 100
- - - Sub Block 200
- ▭ Parcels
- ▭ Shared Interest Parcels

**Road Rights of Way**

**ROW Type**

- ▭ Dedicated
- ▭ Proposed
- ▭ Reserved
- ▭ Vacated
- ▭ Accession Plot
- ▭ Conds Plat
- ▭ CSM
- ▭ Subdivision Plat

**Railroad Rights of Way**

- ▭ RR ROW Status
- ▭ Active
- ▭ Inactive

**Lakes and Rivers**

- ▭ Stream and Creeks
- ▭ FEMA Floodplains (2005)

**Flood Zone**

- ▭ 1% Chance Flood Area (Zone A or Base B1)
- ▭ 1% Chance Flood Area (Zone AE or Base B3)
- ▭ Floodway (Zone AE)

Attachment 1B

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# Wisconsin DNR News Release

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## Public access development for North Lake

News Release Published: November 10, 2008 by the [Southeast Region](#)

Contact(s): Jim Ritchie, Public Waterways Access Coordinator, (414) 263-8670

**Environmental Assessment available for public review and comment**

**MILWAUKEE** – A Department of Natural Resources environmental assessment for development of the W.C. (Whitey) Kraus public access site on North Lake is available for public review and comment. DNR purchased the six acre site on the west side of North Lake in 2005 to provide needed public access for boating and recreation. North Lake, a 437-acre lake located in the Town of Merton and Village of Chenequa, is the largest lake in Waukesha County without an adequate public access site.

The proposed development of this site includes installation of a boat ramp, accessible boarding dock, parking lot for 16 cars with trailers, two car-only parking stalls, landscaping and stormwater controls to manage runoff from the site. Preliminary development plans are included as an attachment to the environmental assessment.

A public informational meeting was held on October 23, 2008, to present the preliminary development plans and receive input from local residents and other interested parties.

“Development of this property will ensure that anglers and recreational boaters have a permanent year-round public access site on North Lake,” says Jim Ritchie, Public Waterways Access Coordinator. “Interested parties have contacted the department for many years requesting we provide access to North Lake. We believe this development will fulfill that need for access to the lake.”

DNR has prepared an environmental assessment for the public access development, and the proposed action is not anticipated to result in a significant adverse environmental effect. The department has made a preliminary determination, in accordance with the Wisconsin and National Environmental Policy Acts, that an environmental impact statement will not be required for this action.

Copies of the environmental assessment that led to the Department’s preliminary determination are available at the North Lake Town Hall Library located at N76 W31429 Hwy. VV, North Lake, WI., and the Department’s Waukesha Service Center in the State Office Building located at 141 NW Barstow, Waukesha, WI. Copies can be obtained from Jim Ritchie at (414) 263-8670, or [Jim.Ritchie@Wisconsin.gov](mailto:Jim.Ritchie@Wisconsin.gov).

Public comments, either written or oral, on the environmental assessment are welcome and must be received by Jim Ritchie, Department of Natural Resources, 2300 N. Dr. Martin Luther King Jr. Drive, Milwaukee, WI 53212, or [Jim.Ritchie@Wisconsin.gov](mailto:Jim.Ritchie@Wisconsin.gov) no later than 4:30 p.m. on Wednesday, December 10, 2008.