

EIS Comments

Lyn Bivins

207 Juniper Dr.

Sheboygan, WI 53081

Owning property in the Town of Wilson, I was eager to read the EIS draft.

My take was that, after all is said and done, there will be significant, irreversible environmental impacts that will adversely affect the welfare of the citizens of the local community and will contribute negatively to the health of Lake Michigan and the rare shoreline habitat.

But where's the rest of the report?

Where's the site plan that shows me the exact placement of greens, fairways, structures and infrastructure? And I don't mean the very general drawing showing vague placement of the golf holes superimposed on an aerial photograph of the land.

Where's the scientific studies that show that this project will not do harm?

I need and you should need more detailed information to make an informed assessment of the risks and dangers.

Could it be that Kohler doesn't have a detailed site plan? I think that's entirely possible given that their course designer, Pete Dye, is known for never putting together detailed drawings, preferring to work on-the-fly transforming his artistic vision into reality.

As Herb Kohler has said,

"He walks the course, he puts a dot for a tee, a dot for the landing area and a dot for his green and that's the last time pencil hits paper."

Or, as Dye explains the process,

"I never have drawn plans. I go out there and I yell at (the shapers of the course) and scream at them and talk to them. Most of 'em come out pretty good, I guess."

I'm sorry, this just isn't good enough for a piece of property that the Army Corps. of Engineers recently deemed eligible for inclusion in the National Register of Historic Places, because of its archeological significance.

As Citizens we are asked to give up State Park land, and standby and watch as:

Rare wetlands are filled in,

A nationally recognized migratory flyway is destroyed,

Pesticides leach into Lake Michigan and our groundwater,

Wells run dry and wildlife is driven out.

All of this justified based on outdated scientific studies, Kohler promises to follow established guidelines, and conjecture.

There's a lot of scientific description of the land in question, but there is very little scientific evidence provided that this project will not do harm.

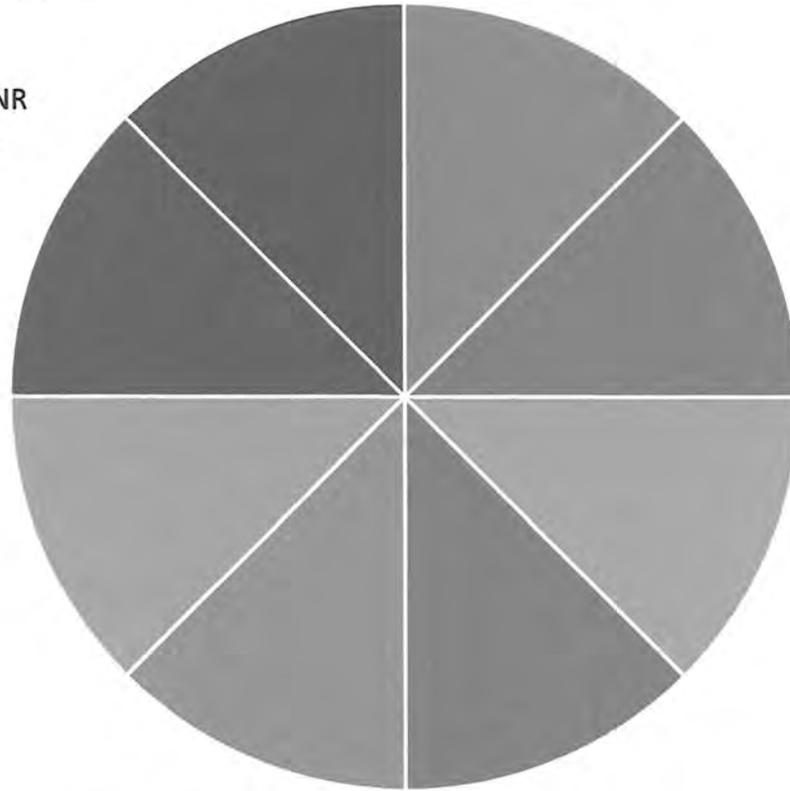
A central phrase in the WDNR's mission statement reads,

"To protect and enhance our natural resources: Our air, land and water; our wildlife, fish and forests and the ecosystems that sustain all life."

I urge you to go back to the drawing board with this draft, demand a detailed site plan and further scientific study before drafting your final EIS and allowing Kohler to proceed to the permit-gathering phase of this project.

Proposed Kohler Golf Course.
This is a very complicated project with many areas of IMPACT.
These are the 8 (not to scale) I uncovered and explored in the DNR Environmental Impact Statement.
- Claudia Bricks
314 Pioneer Rd.
Sheboygan, WI 53081

Areas of IMPACTS



- TOWN & RESIDENTS
- LAND
- WATER
- HABITATS
- AIR
- ECONOMIC
- STATE PARK
- UNFORESEEN

Claudia J. Bricks
314 Pioneer Rd.
Sheboygan, WI 53081

July 20, 2016

Jay Schiefelbein
Department of Natural Resources
2984 Shawano Avenue
Green Bay, WI 54313-6727

Re: Presenting my concerns on the EIS from the DNR regarding the proposed
Kohler Golf Course in the Town of Wilson

I have read the EIS and have pondered three major items:

1. This EIS is very incomplete. Why was it written now, before Kohler had any permits, (or even an application on file)? This would have forced them to give more information to the writers of the EIS so it was more complete.
2. Given the DNR's stated mission to protect and enhance our natural resources, why are you even thinking about approving this project? Here's what I found . . .

Section 6- Department Evaluation of Project Significance starting on page 58 with unavoidable impacts- clearly states these impacts:

- Ground water pumping and drawdowns of residents' wells as being probable and unpredictable. (2-23 feet; avg. 7 feet drawdown). Also pages 24-29 & 59. We all have to share the same Silurian Dolomite fractured Aquifer. **THIS NEEDS MORE STUDY**
 - Destruction of 5 or more acres of functional wetlands and 2.91 acres of rare wetlands. Pages 32, 33 & 61.
 - Deforestation of 50% of the trees, affecting all wetlands and all wildlife. **THIS NEEDS MORE STUDY**
 - Destruction of plant and animal habitats, some of which are rare or endangered (i.e. [REDACTED] and rare mammal (Bat?) Pgs. 42 & 62. 'Incidental Take Permits' should not be allowed for endangered species. **THIS NEEDS MORE STUDY**
 - Grading of dunal structures, some of which are rare and protected in other State Parks
 - Sandy soil leaching of pesticides and fertilizers into the shallow groundwater aquifer, wetlands and eventually Lake Michigan and the Black River. **THIS NEEDS MORE STUDY**
3. It requires, at the very least giving Kohler 4 acres of State land, (probably more like 20 acres) to reconstruct the main entrance, build a round-a-bout to accommodate campers and golfers alike. This seems unthinkable when one considers that this tremendously popular Park is visited by over 400,000 people each year, which is close to the number of people who descended on the Whistling Straits 2015 PGA Championship last summer. How are all those cars and people going to get over one tiny bridge into the area? **THIS NEEDS MORE STUDY**

My other comments:**Impacts not mentioned, glossed over or need more study:**

- Potential Septic system failure impacts due to its being constructed on high water table land
- Beach access for beach walkers
- There will be more than minimal impact of the Migratory Bird habitats if 50% of the trees are bulldozed or cut down. **THIS NEEDS MORE STUDY**
- Just exactly how much State Park land will be given away for this project?
- Archaeological findings that are eligible for the National Registry of Historic Places
- Impact to all wildlife, especially Amphibians and Reptiles. Pgs. 40-43
- Air quality impact of hundreds of cars idling as they wait to park during a major tournament. Our Sheboygan air is already of very poor quality because of the power plant
- Impact of thousands of people and traffic during a major tournament. Pg. 52 LOS rating of A didn't take this into account. Pg. 62. This would be a major impact for area residents as well as campers. **THIS NEEDS MORE STUDY**
- Algae or cladophora overgrowth because of increased fertilizers entering Lake Michigan. Hika Bay, just south of Whistling Straits, is a perfect example. Nutrient Management Plan just doesn't seem adequate. Pg. 6-7
- Impact to Kohler-Andrae Park beaches from increased fertilizers. Beach water is already of low quality and listed with other Wisconsin beaches as the 8th worst in the nation.
- Eradication of mosquitoes by using pesticides (organophosphates and/or organochlorine pesticides, which are known carcinogens?) Who will monitor Kohler following DATCP regulations? Pg. 8 & 60.
- Economic impact- pgs. 2, 51 & 52. 227 jobs and \$121 million in County revenue. Most Town residents will likely never play golf here and will only see a fraction of this predicted revenue, but they will experience the named impacts/consequences listed in this letter. They will also have to put up with the impacts of construction for 2-3 years. How do you put a price tag on that?

The DNR's stated mission in part is:

To protect and enhance our natural resources:

our air, land and water;
our wildlife, fish and forests
and the ecosystems that sustain all life.

And to consider the future
and generations to follow.

Letter to DNR from Claudia J. Bricks cont'd

I wish Kohler and the DNR would put as much energy into preserving this land as it is in destroying it. What about a Sanctuary? Cultural Artifact Museum? Conservancy? It just seems to be all about money and economic growth.

I have another economic view point:

How do you put a price tag on monarchs feeding on milkweed?

Or spring peepers using the wetlands each spring to sing out their mating chorus?

Or a muskrat? Or a red tailed hawk flying high above? Or a great blue heron?

Or a fox and its kits? Or a turtle basking in the sun on a log? And yes, the [REDACTED]
and [REDACTED]

How do you put a price tag on these?

The truth is. . . you can't. They are priceless. If their home is destroyed, where will they go?

If you don't protect them and our other natural resources as your mission states. . . who will?

This is the wrong place for a golf course. There is just too much impact to get beyond. Someone has to tell Mr. Kohler that and say "NO, not here."

I hope it is you. I am asking you to do just that and deny this golf course.

If this land is destroyed, it will be gone forever.

Thank you.

Claudia J. Bricks
314 Pioneer Rd.
Sheboygan, WI 53081

REACTIONS TO DRAFT EIS

BY Lee Trotta 7/9/2016

The following are my reactions when reading over the Kohler Company's Draft EIS for their golf course project. They are not ranked in importance, but simply listed in the order in which they are presented. Section numbers are given for reference.

1.1 – A 5-acre irrigation pond! Wow! That's huge! It would probably be the largest unnamed lake in the County. We knew about the tree removal and wetland filling, but this is new information. Many States have regulations against irrigation ponds planned for areas with "significant wildlife population" (e.g., Maine). Have you ever driven through adjacent Kohler Andrae State Park without seeing a deer? How many more critters live in the as-yet-undisturbed northern parcel? Where is the water coming from to fill the pond? – from their hi cap irrigation well (according to section 3.3.4). Currently there are zero irrigation ponds in Sheboygan County capable of pumping over 10 million gallons a year (DNR Wisconsin Water Use 2014 Withdrawal Summary). According to section 3.3.4, "anticipated average annual water use for the irrigation system is between 15 million and 25 million gallons per year".

3.1 Utilities bored beneath a wetland are planned. While a feasible engineering feat, the utility line could become a water conduit over time and thus disrupt the wetland.

3.2 The report says, "Heavy equipment access through the park may impact park users and resources." That is a likely certainty and reason enough for complaint by park users all over the State (for a period of 2 years).

3.3 – The management of large crowds during golf events has not been discussed. Such events may well disrupt or prevent the daily activities of park goers and town residents alike.

3.3.4 –The report says, "Kohler expects needing irrigation system flow rates of up to 1,500 gallons per minute (gpm) and average long term volumes of 15,000,000 to 25,000,000 gallons per year". There is no precedent that the fractured dolomite aquifer they tap will be able to provide this much without negative effects on connected wetlands, rivers, residential water supplies, and State Park water supply. The pump tests to date were not announced or monitored by outside entities. All the design alternatives presented in section 4.3 would not affect this critical need for water and the resultant negative impacts.

5.1.1 – I am not an expert in soils, but anytime you cover a [REDACTED] system with less porous materials you destroy it. The rarity and value of a [REDACTED] system is not discussed here (though mentioned in 5.1.7 under "rare wetlands"). Once destroyed, you cannot recreate such an ecosystem somewhere else to make up for your mistake. I am an expert in geology and I am coauthor of the report (Kammerer, 1998) referenced in this section. The important aspect not mentioned here is that there is no affordable alternative for local residents who may lose their Silurian dolomite water supply. The loss

of just one residential water supply would destroy the home's value and should be enough to decide against placing a golf course here.

5.1.4 – Just a technical note – the statement that the deep aquifer may contain elevated concentrations of gross alpha is a misuse of the term. Gross alpha is simply a measurement of the radioactivity given off by whatever minerals may exist in the aquifer. It should not be referred to as a “concentration” in the sentence. Also, the statement cannot be made categorically that “The bedrock is overlain with a confining layer of up to 90 feet of silt and clay”. The top of the Silurian is undulating and can be pockmarked with caverns which would reduce the confining layer to zero feet. This would put direct connection between surficial wetlands and aquifer withdrawal. The stated assumption that wetlands will not be affected is little more than wishful thinking until follow-up drill testing is done. The discussion of pump test results is an improvement over previous reports. They provide logical estimates while indicating the unpredictability of a fractured rock aquifer. The plan for well deepening in the case of residential well problems resulting from golf course pumping will be inadequate in some cases. Where wells are already near the bottom of the Silurian or where there are no more fractures at lower depths, lowering pumps and/or deepening wells does not help. The fact that Kohler sets the rules for reimbursement is not auspicious. Wells may be affected up to 3 miles away, but Kohler only responds within a 1-mile radius.

5.1.5 – Floodplain considerations affect a portion of the golf course construction. Most of us are not allowed to build anything on a floodplain. FEMA may scuttle the whole plan due to restrictions on building on a floodplain.

6.1 – The summary of adverse impacts is self-explanatory. It may not be as long a list as it should be.

Alizée Desmoulin
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July 20th, 2016

The Wisconsin Department of Natural Resources must refuse the Kohler Company proposed golf course in the Black River Forest of the Town of Wilson for the following reasons:

1. The proposed project is abutting Lake Michigan, one of the largest bodies of freshwater in the world. Several state, federal, and international treaties have been enacted to protect this precious and unique resource, among them the Great Lakes Compact between the United States and Canada. Would the building of a golf course counter any of these legally binding provisions?
2. The Black River runs through the proposed golf course property. It has already been declared an "impaired navigable waterway" according to the DNR. This designation legally requires the highest national protection. The inevitable drainage of contaminants from the golf course is contrary to this U.S. Geological Survey ruling of the Black River floodplain.
3. There is a substantial acreage of intact wetlands upon the proposed golf course property. Wisconsin law, under the Clean Water Act, requires the protection of all wetlands from contamination, draining, and filling, due to the essential ecosystem functions they provide when in an intact condition, including mitigating floods and droughts, cleaning surface water, and providing percolation for groundwater recharge.
4. The majority of the proposed golf course property is covered in mature, climax, old-growth woodland. Known colloquially as the Black River Forest, this ecosystem is primarily composed of native red pine and white pine species, a combination that is a unique product of the geology along the Lake Michigan shoreline. As such, it is one of the last stretches of this forest left untouched by human encroachment and development projects like the one proposed.
5. The proposed golf course project property contains sensitive dune habitat that has taken hundreds of thousands of years, following the last glaciation, sculpting much of this Great Lakes region, to arrive at its present pristine state of accumulated sands for the occurrence of a thriving, vibrant, and ecologically-balanced juniper species sand dune habitat.
6. The western shoreline of Lake Michigan is an environment critically important to wildlife because it is ecologically considered one of only four flyways through the United States (the East Coast, West Coast, and Great Plains are the other three). As such, any drastic or minor modification of habitat to make way for humans threatens the survival of any North American continental migratory species, whose danger of extinction is heightened as a direct result. Due to this unique location, Wisconsin must safeguard its natural resources to avoid imperiling wildlife species of national and state significance.
7. The Black River Forest provides a habitat extension of wetland, dune, and forest environments for wildlife species who call the Kohler Andrea State Park their home. Any reduction in acreage in an already strained-for-space collection of ecosystems would completely fragment the protected lands of the park. This would diminish the viability and survival of all species due to

Citizen input by Alizee Desmoulin concerning the proposed Kohler golf course vs. the Black River Forest

- the destruction of intact large tracts of undeveloped landscape. The resulting homogenization of habitat would threaten the survival of all park species, requiring a certain range and therefore plunge the park species to the south into danger of extinction from the entire area.
8. The dense undergrowth and lush vegetation of this miniature wilderness provides habitat for potentially undiscovered native species of wildlife. Although several scarce club moss species are easily visible, the often impenetrable cover conceals other life forms of flora and fauna that could be decimated before even being discovered.
 9. The Town of Wilson designates this property as P1. This land use classification is for passive outdoor public recreational purposes and therefore would not accommodate the for-profit, ultra-active, commercial use of the property. Under the zoning regulations, this land is not to be built upon, in order to maintain the integrity of the sensitive site as a wildlife and water corridor. However, the proposed golf course plans include the construction of architectural structures in direct contradiction to the only allowable use of parks and protected areas at this location.
 10. The Friends of the Black River Forest members have voluntarily created and maintained the woodland trails that snake through the property and provide for biking, birdwatching, hiking, and horseback riding. Approval of Kohler's golf course would erase all the endless hours of hard work that have neither been acknowledged nor compensated for. Would this give Town of Wilson residents' claim to adverse possession?
 11. After an extensive tour of the property, a Native American member of the Ho-Chunk Nation found that ancient burial mounds, potentially from several Native American tribes formerly residing in the Great Lakes region, are currently located on the Black River Forest property. Observation of the abundant hills would substantiate this finding, giving Native American Nations burial ground rights because tribal law supersedes commercial development.
 12. The plan utilizes State Park land to the south of the proposed golf course to access the property instead of using Kohler land at the north end of the property for access. This easement, if approved, would be contrary to the original intent of Herb V. Kohler, Sr. who gifted land to the state of Wisconsin in the 1965 Warranty Deed. The wording read that this land had to be maintained in perpetuity for the benefit and enjoyment of the public for passive recreation, thereby prohibiting the addition of campgrounds, maintenance sheds, and the like.
 13. In addition, Herb V. Kohler Sr. wanted the land currently proposed for the golf course to be maintained as wilderness in perpetuity as well, so the golf course project is diametrically opposed to the original intent for this property. Why should Herb V, Kohler, Jr. be allowed to desecrate the family legacy of safeguarding the land? There is an article in the Sheboygan Press documenting Kohler's attempt to gift all of the Black River Forest land to the State. He only retracted his offer when discovering that campgrounds would be developed on the property.
 14. If the proposed golf course project is approved, the effects upon the Kohler Andrea State Park would be total. Since there is only one main entrance leading into the State Park, access to public recreation would be severely hampered in favor of private commercial recreation if Kohler usurps the Park's entry and purpose. In addition, if as planned, a PGA golf tournament would be held at this property north of the park, all access points for residents and visitors to the park could be closed to the public, as is already the case for Whistling Straits in the Town of Mosel. Traffic would be an impossible issue to contend with for all concerned.

15. Any Environmental Impact Statement should include information regarding floral and faunal habitat of the Black River Forest species listed on the Federal Endangered Species Act.

In conclusion, I adamantly recommend refusal of the proposed Kohler golf course in the Town of Wilson. I am in favor of safeguarding the Black River Forest for future generations, while upholding the written mission statement of the Department of Natural Resources, as well as Wisconsin State Statutes.

In addition, I would like to bring your attention to Kohler Company's negative environmental legacy, in particular, the Environmental Protection Agency's Scorecard report at: <http://scorecard.goodguide.com>

1. In a comparison with Rock, Milwaukee, Manitowoc, and Dane counties, Sheboygan County has the greatest overall amount of recognized toxins released to the environment. Sheboygan County releases 546,259 pounds of pollutants. Of these, Kohler Company generates roughly 51,421 pounds of pollutants annually. Thus, Kohler ranks third in Sheboygan County as the most polluting industry. The factories of Kohler Company release benzene, lead, chromium and nickel. Other chemicals include manganese, antimony, copper, zinc, barium and triethylamine.
2. Of the two Environmental Protection Agency recognized superfund sites in Sheboygan County, the Kohler Company landfill is located in Kohler, only 300 feet from the Sheboygan River. The site has been used to dispose of industrial wastes, municipal wastes and foundry sludge. The groundwater beneath is contaminated with cadmium, chromium and phenols and, according to the Environmental Protection Agency, has contaminated drinking water sources.
3. This groundwater feeds directly into an aquifer that is used for drinking. This Sheboygan harbor and river landfill site extends eight miles through the towns of Kohler, Sheboygan and Sheboygan Falls, all within Sheboygan County. This landfill has been leaching heavy metals and PCBs into the Sheboygan River and its two tributaries: the Mullet and Onion Rivers. These contaminants are at such high levels as to initiate a ban on ingesting fish from the Sheboygan River and its tributaries. The site is still being decontaminated through national funding.

This information should prove advantageous in determining the relative merit of any environmental statements provided by Kohler Company during this investigative process undertaken by the Wisconsin Department of Natural Resources at this time. In view of this, all Environmental Impact Statements should be performed by a third party to ensure an unbiased outcome and especially in consideration of the despicable ecological track record and federally recognized contamination of the Kohler Company in Sheboygan County.

Purple outline "understudy" what for WHY

I believed the DNR, but now I feel that the Kohler Company and the DNR have misled the public into believing the Park giveaway to Kohler would be 4 acres, which is the footprint of the easement road to the maintenance and pesticide storage building. The map in the Draft EIS (8.4) shows at least 20 acres for the Kohler project boundary.

This land should be registered as historic land. The steps taken thus far show Poor Planning. Why was Kohler allowed to bulldoze an area for heavy equipment to enter the property to do test wells before the land was surveyed by the United States Army Corp of Engineers? The minimalist approach that Kohler markets seems to be more destructive for making sure 'minimal' things will remain to be discovered and preserved.

The Environmental Impact Report submitted by Kohler is completely inadequate, showing mostly 'theoretical' statements by Kohler, which are not science-based data from qualified professionals. The EIR is also lacking additional impact studies that should be science-based, which need to be addressed, that have been either overlooked or completely ignored.

The Sheboygan County Economic Development Corp, which recognizes Kohler as a Gold Sponsor is blindly supporting Kohler's golf course project, as presented in a news release on March 24, 2015. While the SCEDC has contributed to Sheboygan's business development in many ways, to date all SCEDC supported businesses have not destroyed ecosystems.

Your mission directives on the DNR website include: protecting and enhancing (not destroying) natural resources of air, land, water, wildlife, fish, forests and the ecosystems that sustain all life. Also to provide a healthy sustainable environment and a full range of outdoor opportunities for ALL people, while protecting and enhancing the natural ecosystem.

Do not give away of our State Park Lands. Do not approve destruction and pollution of an ecosystem. It is not necessary, it will not serve the public. This land was purchased with Federal funds and if converted to Kohler's private use, it must be for the general public's recreational use, not just the wealthy who can afford to putt around a golf.

And stop wasting taxpayers' money on a non-applicant.

And please adhere to the DNR's Mission to continuously protect and enhance natural environments for future generations.

Mr. Jay Schiefelbein
Environmental Analysis and Review Specialist
WisDNR
2984 Shawano, Ave.
Green Bay, WI 54313-6727

Dear Mr. Schiefelbein:

On page 1166, Webster's Universal Encyclopedic Dictionary defines "minimalist" as "one who favors restricting the functions and powers of a political organization ... to a minimum."

In reading the "Draft Environmental Impact Statement for Proposed Kohler Golf Course," I found several references to the Kohler Company's desire to build a "minimalist" golf course in the Black River Forest; none of those references addresses the only minimal effect on the forest would be to leave it alone. No chainsaws, no bulldozers, no high-capacity wells, no fertilizers, no insecticides, no filling in of wetlands, no loads of topsoil for turf, no cutting "sightlines" to Lake Michigan for clubhouse patrons, no clubhouse, no service building, no roundabout.

I was dismayed, in reading the first 57 pages of the document, to see the Wisconsin Department of Natural Resources appears to have written it to show how the Kohler Company would be able to build its 5th golf course in Sheboygan County, despite any opposition from concerned and caring citizens. For example, on page 47, the document states the Kohler Company has submitted an application for a Conditional Use Permit to the Town of Wilson to turn the Black River Forest into a gold course. To my knowledge, a request for such an activity has not been submitted to the Town of Wilson nor any other governmental entity. With no request, how can the WisDNR spend taxpayer money to write the Kohler Company's CUP to the WisDNR?

The document is filled with references to what the Kohler Company will, would, is planning, proposes, plans, or anticipates doing. I counted 19 such word choices before I stopped counting. How does the WisDNR know the Kohler Company would do those things if there is no written documentation of such plans? For example, in the Storm Water Conveyance section, it is stated "...additional detail is needed..." on 15 of the 18 holes and regarding the effect of special events, the comment "...unknown at this time..." and "...have not been disclosed..." appear. This is not an acceptable evaluation of a project of this magnitude.

Because I live approximately 500 yards north of the northern edge of the proposed golf course, I am very concerned about high capacity wells and the probable drawdown of the Silurian dolomite aquifer, which is the source of my household water. While my well is 170 feet deep, my pump is less than 125 feet down; it is at the possible border of the potential drawdown (of 2.4' to 23') level. Should there be a problem with my water, I do not feel at all

confident that adequate resolution of the problem will be achieved because the document states Kohler will determine if it is the cause of the well problem. My confidence is further eroded by the statement that the location, capacity and number of wells for non-irrigation have not been determined. By this time, I had begun to think, "This is worse than half-baked. It is not even a recipe!"

Then I hit the financial boon of the proposed gold course: \$1,116,000 in tax revenue! But whose revenue is that? State, County, Town of Wilson? We don't know, but we do know the Kohler Company has sued the Town of Mosel and the Village of Kohler to reduce its taxes because its revenue is not what was anticipated. Let's review: Kohler provides inflated income figures to enhance its chances to be allowed to build aspects of its businesses, then sues to reduce its taxes when its projections fall short. Should we fall for this in the Town of Wilson?

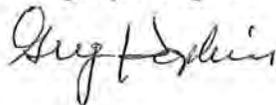
Regarding the sale of part of the Kohler-Andre State Park, I am opposed to selling any land owned by the citizens for the personal profit of an individual or company. The National Park Service requires that to even consider the sale of such land, there must be equal or greater size, value, and recreational utility. In the case of the Black River Forest, there is no equal value because the Black River Forest comprises the largest dune complex on Wisconsin's western shore of Lake Michigan; it is irreplaceable.

Fortunately, I finally arrived at Section 6, Department Evaluation of Project Significance, on page 58! This is where the reality of the dangers of building a golf course on such fragile land show up. The cautions in the document include:

- Water level drawdown could affect all Town of Wilson residents
- There will be loss of wetlands essential to cleaning our groundwater as well as unique habitat for plants and animals
- Native American Burial Mounds and other artifacts (will probably fall under Federal jurisdiction)
- Half of the almost 100% forested canopy would be gone
- Rare plants would have to be removed, transplanted away from the Black River Forest
- The habitat for rare invertebrate and a rare mammal would be disturbed
- There is a significant health risk from pesticides and insecticides leaching into the groundwater, the Black River and Lake Michigan; cumulative effects can be worse
- A significant portion of local residents oppose the project

Thank you for considering my thoughts and concerns. I sincerely hope this project can be stopped.

Greg Hopkins
346 Edgewater Rd.
Sheboygan Wi, 53081-8737



Proposed Kohler Golf Course, Town of Wilson, Sheboygan Co.

Do you wish to make an oral statement? Yes No

Name*: ANNE Huijs

Representing: _____

Address: 5954 S. 12th Street
Sheboygan, WI 53081

Phone: 414-640-1691

E-mail: Msvonnec3989@aol.com

**PLEASE TURN IN COMMENT SHEET
UPON COMPLETION.**

Check box to subscribe to email updates about the proposed Kohler golf course. (Be sure to include an email address above.)

* Personally identifiable information collected on this form is used for administrative purposes and may be provided to requesters under the public records laws, ss. 19.31 to 19.39, Wis. Stats.

Please provide your comments on the Draft EIS (please use the back of the sheet if necessary):

I want the Kohler golf course.
The Rivardale golf course is not affecting us
in any way. I want tax relief and
more tourism in our area. Also more jobs.

Proposed Kohler Golf Course, Town of Wilson, Sheboygan Co.

Do you wish to make an oral statement? Yes No

Name*: Amber Levenhagen

Representing: self

Address: 2901 Curry Parkway

Madison WI 53713

Phone: 920 946 6346

E-mail: amberleventhagen@gmail.com

Check box to subscribe to email updates about the proposed Kohler golf course. (Be sure to include an email address above.)

* Personally identifiable information collected on this form is used for administrative purposes and may be provided to requesters under the public records laws, ss. 19.31 to 19.39, Wis. Stats.

Please provide your comments on the Draft EIS (please use the back of the sheet if necessary):

emailed + verbal
remarks about the negative
impact of this park

**PLEASE TURN IN COMMENT SHEET
UPON COMPLETION.**

NARA DETIENNE

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION
GROUND WATER BRANCH
Washington 25, D. C.

GROUND WATER NOTES
HYDRAULICS

No. 5

August 1952

THE RELATION BETWEEN THE LOWERING OF THE PIEZOMETRIC SURFACE
AND THE RATE AND DURATION OF DISCHARGE OF A WELL
USING GROUND WATER STORAGE

By
Charles V. Theis

This paper develops some of the basic concepts on which much of our present-day theory of ground-water hydraulics is founded. Although published in the Transactions of the American Geophysical Union, part 2 (pp. 519-524), August 1935, the supply of reprints has long since been exhausted and the paper is now generally to be found only in the better-stocked reference libraries.

It is reproduced as part of the new series of Ground Water Notes to permit distribution to all ground-water field personnel for their ready reference and use. Minor changes have been made in notation only, to be consistent with current Branch usage.

When a well is pumped or otherwise discharged, water levels in its neighborhood are lowered. Unless this lowering occurs instantaneously it represents a loss of storage, either by the unwatering of a portion of the previously saturated sediments if the aquifer is nonartesian or by release of stored water by the compaction of the aquifer due to lowered pressure if the aquifer is artesian. The mathematical theory of ground-water hydraulics has been based, apparently entirely, on a postulate that equilibrium has been attained and therefore that water-levels are no longer falling. In a great number of hydrologic problems, involving a well or pumping district near or in which water-levels are falling, the

Open file

current theory is therefore not strictly applicable. This paper investigates in part the nature and consequences of a mathematical theory that considers the motion of ground-water before equilibrium is reached and, as a consequence, involves time as a variable.

To the extent that Darcy's law governs the motion of ground-water under natural conditions and under the artificial conditions set up by pumping, an analogy exists between the hydrologic conditions in an aquifer and the thermal conditions in a similar thermal system. Darcy's law is analogous to the law of the flow of heat by conduction, hydraulic pressure being analogous to temperature, pressure-gradient to thermal gradient, permeability to thermal conductivity, and specific yield to specific heat. Therefore, the mathematical theory of heat-conduction developed by Fourier and subsequent writers is largely applicable to hydraulic theory. This analogy has been recognized, at least since the work of Slichter, but apparently no attempt has been made to introduce the function of time into the mathematics of ground-water hydrology. Among the many problems in heat-conduction analogous to those in ground-water hydraulics are those concerning sources and sinks, sources being analogous to recharging wells and sinks to ordinary discharging wells.

C. I. Lubin, of the University of Cincinnati, has with great kindness prepared for me the following derivation of the equation expressing changes in temperature due to the type of source or sink that is analogous to a recharging or discharging well under certain ideal conditions, to be discussed below.

The equation given by H. S. Carslaw (Introduction to the mathematical theory of the conduction of heat in solids, 2nd ed., p. 152, 1921) for the temperature at any point in an infinite plane with initial temperature zero at any time due to an "instantaneous line-source coinciding with the axis of z of strength Q " (involving two-dimensional flow of heat) is

$$v = \frac{Q}{4\pi kt} e^{-(x^2 + y^2)/4kt} \quad (1)$$

where v = change in temperature at the point x, y at the time t ; Q = the strength of the source or sink--in other words, the amount of heat added or taken out instantaneously divided by the specific heat per unit-volume; k = Kelvin's coefficient of diffusivity, which is equal to the coefficient of conductivity divided by the specific heat per unit-volume; and t = time.

The effect of a continuous source or sink of constant strength is derived from equation (1) as follows:

$$\text{Let} \quad Q = q(t') dt'$$

assumes cylinder

in which the symbols have the meanings given with equation (5). In equation (4) the same units must of course be used throughout. Equation (4) may be adapted to units commonly used

$$s = \frac{114.6Q}{T} \int_{1.87r^2S/Tt}^{\infty} \frac{e^{-u}}{u} du \quad (5)$$

where s = the drawdown, in feet, at any point in the vicinity of a well discharged at a uniform rate; Q = the discharge of the well, in gallons a minute; T = the coefficient of transmissibility of the aquifer, in gallons a day, through each 1-foot strip extending the height of the aquifer, under a unit-gradient--this is the average coefficient of permeability (Meinzer) multiplied by the thickness of the aquifer; r = the distance from pumped well to point of observation, in feet; S = the specific yield, as a decimal fraction; and t = the time the well has been pumped, in days.

Equation (5) gives the draw-down at any point around a well being discharged uniformly (and continuously) from a homogeneous aquifer of constant thickness and infinite areal extent at any time. The introduction of the function, time, is the unique and valuable feature of the equation. Equation (5) reduces to Thiem's or Slichter's equation for artesian conditions when the time of discharge is large.

Empirical tests of the equation are best made with the data obtained by L. K. Wenzel (Recent investigations of Thiem's method for determining permeability of water-bearing sediments, *Trans. Amer. Geophys. Union*, 13th annual meeting, pp. 313-317, 1932; also Specific yield determined from a Thiem's pumping test, *Trans. Amer. Geophys. Union*, 14th Annual Meeting, pp. 475-477, 1933) from pumping tests in the Platte Valley in Nebraska. Figure 1 presents the comparison of the computed and observed draw-downs after two days of pumping. The observed values are those of the generalized depression of the water-table as previously determined by Mr. Wenzel. The computed values are obtained by equation (5), using values of permeability and specific yield that are within one per cent of those determined by Mr. Wenzel by other methods. The agreement represented may be regarded as showing either that the draw-downs have been computed from known values of transmissibility and specific yield or that these factors have been computed from the known draw-downs.

Theoretically, the equation applies rigidly only to water-bodies (1) which are contained in entirely homogeneous sediments, (2) which have infinite areal extent, (3) in which the well penetrates the entire thickness of the water-body, (4) in which the coefficient of transmissibility is constant at all times and in all places, (5) in which the pumped well has an infinitesimal diameter, and (6) - applicable only to unconfined water-bodies - in which the water in the volume of sediments through which the water-table has fallen is discharged instantaneously with the fall of the water-table.

$$\text{Then } v(x, y, t) = \int_0^t \left[\frac{\varphi(t')}{4\pi k(t-t')} \right] e^{-(x^2 + y^2)/4k(t-t')} dt'$$

$$\text{Let } \varphi(t') = \lambda, \text{ a constant}$$

$$\text{Then } v(t) = \frac{\lambda}{4\pi k} \int_0^t \left[\frac{e^{-(x^2 + y^2)/4k(t-t')}}{t-t'} \right] dt'$$

$$\text{Let } u = \frac{x^2 + y^2}{4k(t-t')}$$

$$\begin{aligned} \text{Then } v(t) &= \frac{\lambda}{4\pi k} \int_{(x^2 + y^2)/4kt}^{\infty} \left[\frac{e^{-u}}{(t-t')} \right] \left[\frac{x^2 + y^2}{4k} \right] \frac{du}{u^2} \\ &= \frac{\lambda}{4\pi k} \int_{(x^2 + y^2)/4kt}^{\infty} \frac{e^{-u}}{u} du \end{aligned} \quad (2)$$

The definite integral, $\int_{(x^2 + y^2)/4kt}^{\infty} \frac{e^{-u}}{u} du$ is a form of the

exponential integral, tables of which are available (Smithsonian Physical Tables, 8th rev. ed., table 32, 1933; the values to be used are those given for $Ei(-x)$, with the sign changed.) The value of the integral is given by the series

$$\int_x^{\infty} \frac{e^{-u}}{u} du = -0.577216 - \log_e x + x - \frac{x^2}{2 \cdot 2!} + \frac{x^3}{3 \cdot 3!} - \frac{x^4}{4 \cdot 4!} + \dots \quad (3)$$

Equation (2) can be immediately adapted to ground-water hydraulics to express the draw-down at any point at any time due to discharging a well. The coefficient of diffusivity, k , is analogous to the coefficient of transmissibility of the aquifer divided by the specific yield. (The term "coefficient of transmissibility" is here used to denote the product of Meinzer's coefficient of permeability and the thickness of the saturated portion of the aquifer; it quantitatively describes the ability of the aquifer to transmit water. Meinzer's coefficient of permeability denotes a characteristic of the material; the coefficient of transmissibility denotes the analogous characteristic of the aquifer as a whole.) The continuous strength of the sink is analogous to the discharge rate divided by the specific yield. Making these substitutions, we have

$$s = \frac{Q}{4\pi T} \int_{r^2 S/4Tt}^{\infty} \frac{e^{-u}}{u} du \quad (4)$$

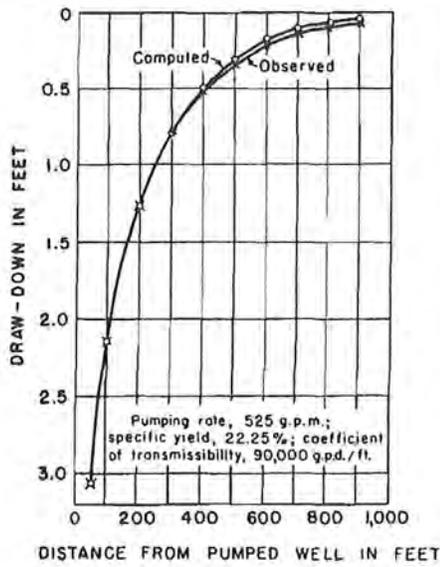


FIGURE 1.—OBSERVED AND COMPUTED DRAW-DOWNS IN VICINITY OF A WELL AFTER PUMPING 48 HOURS

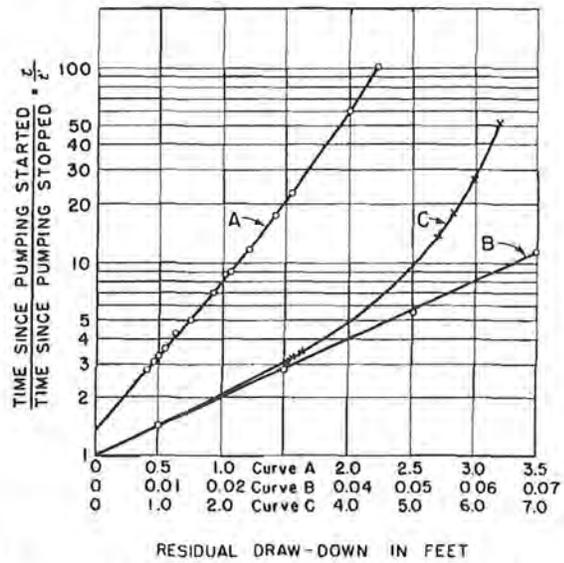


FIGURE 2.—RECOVERY-CURVES OF CERTAIN WELLS

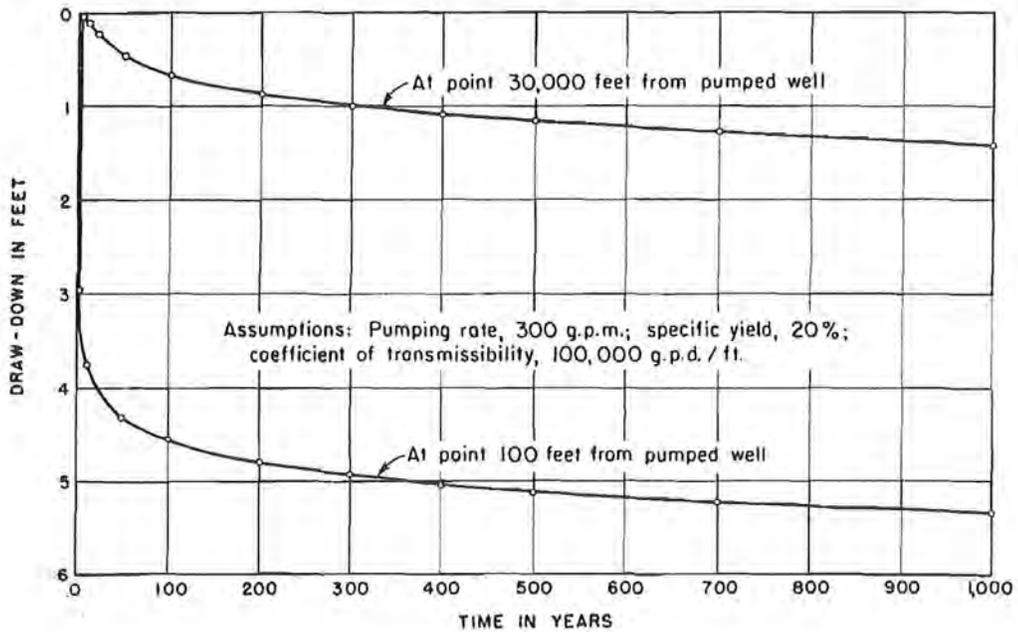


FIGURE 3.—LOWERING OF WATER-TABLE NEAR WELL PUMPING CONTINUOUSLY FROM THICK AQUIFER

These theoretical restrictions have varying degrees of importance in practice. The effect of heterogeneity in the aquifer can hardly be foretold. The effect of boundaries can be considered by more elaborate analyses, once they are located. The effect of the well failing to penetrate the entire aquifer is apparently negligible in many cases. The pumped well used in the set-up that yielded the data for Figure 1 penetrated only 30 feet into a 90-foot aquifer. The coefficient of transmissibility must decrease during the process of pumping under water-table conditions, because of the diminution in the cross-section of the area of flow due to the fall of the water-table; however, it appears from Figure 1 that if the water-table falls through a distance equal only to a small percentage of the total thickness of the aquifer the errors are not large enough to be observed. In artesian aquifers the coefficient of transmissibility probably decreases because of the compaction of the aquifer, but data on this point are lacking. The error due to the finite diameter of the well is apparently always insignificant.

In heat-conduction a specific amount of heat is lost concomitantly and instantaneously with fall in temperature. It appears probable, analogously, that in elastic artesian aquifers a specific amount of water is discharged instantaneously from storage as the pressure falls. In non-artesian aquifers, however, the water from the sediments through which the water-table has fallen drains comparatively slowly. This time-lag in the discharge of the water made available from storage is neglected in the mathematical treatment here given. Hence an error is always present in the equation when it is applied to water-table conditions. However, inasmuch as the rate of fall of the water-table decreases progressively after a short initial period, it seems probable that as pumping continues the rate of drainage of the sediments tends to catch up with the rate of fall of the water-table, and hence that the error in the equation becomes progressively smaller.

For instance, although the draw-downs computed for a 24-hour period of pumping in Mr. Wenzel's test showed a definite lack of agreement with the observations, similar computations for a 48-hour period gave the excellent agreement shown in Figure 1. Unfortunately data for periods of pumping longer than 48 hours have not been available.

The equation implies that any two observations of draw-down, whether at different places or at the same place at different times, are sufficient to allow the computation of specific yield and transmissibility. However, more observations are always necessary in order to guard against the possibility that the computations will be vitiated by the heterogeneity of the aquifer. Moreover, it appears that the time-lag in the drainage of the unwatered sediments makes it impossible at present to compute transmissibility and specific yield from observations on water-levels in only one observation-well during short periods of pumping. Good data from artesian wells have not been available, but such data as we have hold out the hope that transmissibility and specific yield may be determined from data from only one observation-well.

A useful corollary to equation (5) may be derived from an analysis of the recovery of a discharged well. If a well is discharged for a known period and then left to recover, the residual draw-down at any instant will be the same as if discharge of the well had been continued but a recharge well with the same flow had been introduced at the same point at the instant discharge stopped. The residual draw-down at any instant will then be

$$s' = \frac{114.6Q}{T} \int_{1.87r^2S/Tt}^{\infty} \frac{e^{-u}}{u} du - \int_{1.87r^2S/Tt'}^{\infty} \frac{e^{-u}}{u} du \quad (6)$$

where t is the time since discharge started and t' is the time since discharge stopped.

In and very close to the well the quantity $\frac{1.87r^2S}{Tt'}$ will be very small as soon as t' ceases to be small because r is very small. In many problems ordinarily met in ground-water hydraulics, all but the first two terms of the series of equation (3) may be neglected, so that, if $Z = \frac{1.87r^2S}{Tt}$ and $Z' = \frac{1.87r^2S}{Tt'}$ equation (6) may be approximately rewritten

$$\begin{aligned} s' &= \frac{114.6Q}{T} \left[-0.577 - \log_e Z + 0.577 + \log_e Z \frac{t}{t'} \right] \\ &= \frac{114.6Q}{T} \log_e \frac{t}{t'} \end{aligned}$$

Transposing and converting to common logarithms, we have

$$T = \frac{264Q}{s'} \log_{10} \frac{t}{t'} \quad (7)$$

This equation permits the computation of the coefficient of transmissibility of an aquifer from an observation of the rate of recovery of a discharged well.

Figure 2 shows a plot of observed recovery-curves. The ordinates are $\log(t/t')$; the abscissas are the distances the water-table lies below its equilibrium-position. According to equation (7) the points should fall on a straight line passing through the origin. Curve A is a plot of the recovery of a well within 3 feet of the well pumped for Mr. Wenzel's test, previously mentioned. Most of the points lie on a straight line, but the line passes to the left of the origin. This discrepancy is probably due to the fact that the water-table rises faster than the surrounding pores are filled. The coefficient of permeability computed from the equation is about 1200, against a probably correct figure of 1000. Curve B is plotted from data obtained from an artesian well near Salt Lake City. The points all fall according to theory.

Curve C shows the recovery of a well penetrating only the upper part of a nonartesian aquifer of comparatively low transmissibility. It departs markedly from a straight line. This curve probably follows equation (6), but it does not follow equation (7), for in this case $(1.87r^2S/Tt')$ is not small. Equation (6), involving r and S , neither of which may be known in practice, is not of practical value for the present purpose. Further empirical tests may show that it is feasible to project the curve to the origin, in the neighborhood of which $1.87r^2S/Tt'$ becomes small, owing to the increase in t and t' , and apply equation (7) to the extrapolated values so obtained in order to determine at least an approximate value of the transmissibility.

The paramount value of equation (5) apparently lies in the fact that it gives part of the theoretical background for predicting the future effects of a given pumping regimen upon the water-levels in a district that is primarily dependent on ground-water storage. Such districts may include many of those tapping extensive nonartesian bodies of ground-water. Figure 3 shows the vertical rate of fall of the water-level in an infinite aquifer, the water being all taken from storage. The curves are plotted for certain definite values of pumping rate, transmissibility, and specific yield, but by changing the scales either curve could be made applicable to any values set up.

These theoretical curves agree qualitatively with the facts generally observed when a well is pumped. The water-level close to the well at first falls very rapidly, but the rate of fall soon slackens. In the particular case considered in Figure 3 the water-level at a point 100 feet from the pumped well would fall during the first year of pumping more than half the distance it would fall in 1000 years. A delayed effect of the pumping is shown at distant points. The water-level at a point about 6 miles from the pumped well of Figure 3 would fall only minutely for about five years but would then begin to fall perceptibly, although at a much less rate than the water-level close to the well. Incidentally the rate of fall after considerable pumping is so small that it might easily lead to a false assumption of equilibrium. The danger in a pumping district using ground-water storage lies in the delayed interference of the wells. For instance, although in 50 years one well would cause a draw-down of only 6 inches in another well 6 miles away, yet the 100 wells that might lie within 6 miles of a given well would cause in it a total draw-down of more than 50 feet.

In the preparation of this paper I have had the indispensable help not only of Dr. Lubin, who furnished the mathematical keystone of the paper, but also of Dr. C. E. Van Orstrand, of the United States Geological Survey, and of my colleagues of the Ground Water Division of the Survey, who cordially furnished data and criticism.

Author's Note:

The factor S in the equations given is called "specific yield" in the text of the paper. Later consideration has shown it advisable to call this term the "coefficient of storage" of the aquifer and to define it as the quantity of water in cubic feet that is discharged from each vertical prism of the aquifer with basal area equal to 1 square foot and height equal to that of the aquifer when the water level falls 1 foot. For non-artesian aquifers this concept is closely akin to that of specific yield and, as shown in the paper, computations of its value seem to be in close agreement with those determined for specific yield. For artesian aquifers, the concept is related to the compressibility of the aquifer and the value of the coefficient is of a smaller order of magnitude than that for non-artesian aquifers.

NARA DETIENNE

The first edition of this book appeared as No. 11 in the series of Bulletins of the International Institute for Land Reclamation and Improvement/ILRI. Because the ILRI Bulletins have now been discontinued, this completely revised edition of the book appears as ILRI Publication 47.

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- To collect information on land reclamation and improvement from all over the world;
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- To contribute – by supplementary research – towards a better understanding of the land and water problems in developing countries.

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Preface

This is the second edition of *Analysis and Evaluation of Pumping Test Data*. Readers familiar with the first edition and its subsequent impressions will note a number of changes in the new edition. These changes involve the contents of the book, but not the philosophy behind it, which is to be a practical guide to all who are organizing, conducting, and interpreting pumping tests.

What changes have we made? In the first place, we have included the step-drawdown test, the slug test, and the oscillation test. We have also added three chapters on pumping tests in fractured rocks. This we have done because of comments from some of our reviewers, who regretted that the first edition contained nothing about tests in fractured rocks. It would be remiss of us, however, not to warn our readers that, in spite of the intense research that fractured rocks have undergone in the last two decades, the problem is still the subject of much debate. What we present are some of the common methods, but are aware that they are based on ideal conditions which are rarely met in nature. All the other methods, however, are so complex that one needs a computer to apply them.

We have also updated the book in the light of developments that have taken place since the first edition appeared some twenty years ago. We present, for instance, a more modern method of analyzing pumping tests in unconfined aquifers with delayed yield. We have also re-evaluated some of our earlier field examples and have added several new ones.

Another change is that, more than before, we emphasize the intricacy of analyzing field data, showing that the drawdown behaviour of totally different aquifer systems can be very similar.

It has become a common practice nowadays to use computers in the analysis of pumping tests. For this edition of our book, we seriously considered adding computer codes, but eventually decided not to because they would have made the book too voluminous and therefore too costly. Other reasons were the possible incompatibility of computer codes and, what is even worse, many of the codes are based on 'black box' methods which do not allow the quality of the field data to be checked. Interpreting a pumping test is not a matter of feeding a set of field data into a computer, tapping a few keys, and expecting the truth to appear. The only computer codes with merit are those that take over the tedious work of plotting the field data and the type curves, and display them on the screen. These computer techniques are advancing rapidly, but we have refrained from including them. Besides, the next ILRI Publication (No. 48, *SATEM: Selected Aquifer Test Evaluation Methods* by J. Boonstra) presents the most common well-flow equations in computerized form. As well, the International Ground-Water Modelling Centre in Indianapolis, U.S.A., or its branch office in Delft, The Netherlands, can provide all currently available information on computer codes.

Our wish to revise and update our book could never have been realized without the support and help of many people. We are grateful to Mr. F. Walter, Director of TNO Institute of Applied Geoscience, who made it possible for the first author and Ms

Hanneke Verwey to work on the book. We are also grateful to Brigadier (Retired) K.G. Ahmad, General Manager (Water) of the Water and Power Development Authority, Pakistan, for granting us permission to use pumping test data not officially published by his organization.

We also express our thanks to Dr J.A.H. Hendriks, Director of ILRI, who allowed the second author time to work on the book, and generously gave us the use of ILRI's facilities, including the services of Margaret Wiersma-Roche, who edited our manuscript and corrected our often wordy English. We are indebted to Betty van Aarst and Joop van Dijk for their meticulous drawings, and to Trudy Pleijsant-Paes for her patience and perseverance in processing the words and the equations of the book. Last, but by no means least, we thank ILRI's geohydrologist, Dr J. Boonstra, for his discussion of the three chapters on fractured rocks and his valuable contribution to their final draft.

We hope that this revised and updated edition of *Analysis and Evaluation of Pumping Test Data* will serve its readers as the first edition did. Any comments anyone would care to make will be received with great interest.

G.P. Kruseman
N.A. de Ridder

THE NEW NORTH

Public comment for DNR hearing (July 20, 2016) for the Proposed Kohler Golf Course

Many Wisconsin counties, including Sheboygan and the 17 others that make up the New North region, have had a fairly simple focus over the past few years – find ways to create and fill new jobs. We've talked about ways to boost employment by attracting new investment and diversifying the regional economy, while also sustaining and growing existing businesses and brands. A diverse economy, strengthened by collaboration, will drive regional success.

Sheboygan County finds itself well-positioned for job growth in one of the most active and profitable sectors in our state – tourism. With a world-class spa retreat and equally renowned golf courses, there is now an effort to add another great Kohler Co. golf course. The DNR's draft Environmental Impact Statement confirms that the economic potential the new course would provide to the county and the region is undeniably positive. It also confirms that this impact can be made in an responsible manner that respects and enhances the environment.

The draft EIS quotes data from an economic report showing the new course would bring 227 new jobs to the area and provide over \$20 million a year in total economic impact to the county. With a tax impact of more than \$1 million a year, area schools will also benefit, along with property owners in the Town of Wilson, Sheboygan County and the state. What's especially positive, however, is the tourism, recreation and hospitality impact.

It is estimated that 80 percent of the people who play at the new course will come from out of state and that they'll spend up to \$6 million annually on lodging, food, retail goods and other recreation. As a whole, tourism/hospitality dollars spent in the New North region – which extends throughout northeast Wisconsin and includes internationally known Lambeau Field and Door County – total tens of millions of dollars per year. Sheboygan County remains a very big jewel in this crown, a jewel that will get even bigger and shinier with the addition of a beautiful new Kohler golf course that respects and enhances the land.

The reputation of the Kohler Co. precedes itself when it comes to building golf courses that are environmentally sound, of the absolute highest quality, successful and respectful to the communities around them. The draft EIS confirms that the new golf course will be a good neighbor and an asset to our community. The fact that the project will be built and owned by a local Wisconsin family with a solid track record of promoting environmental sustainability and running quality recreational public golf courses and businesses also speaks to long-term stability.

The Kohler Co. has been very open about this project, providing details and information to the community during an exhaustive planning and approval process. It's clear that this is more than just a passing investment for the company. The Kohlers have been an active and caring part of this community for generations, and the company has owned this land for more than 75 years. That's commitment.

As the draft EIS confirms, this project brings new investment, new employment, increased business for the community, new tax base and responsible development to the region. This is very much a project that builds upon a strong tourism destination brand for Sheboygan, the New North region and the State of Wisconsin.

We support this project and would be very excited to see it move forward.

Jerry Murphy, Executive Director | The New North, Inc.

600 N. Adams St., Green Bay, WI 54307 | PH (920) 336-3860

Jerry Murphy is executive director of the New North, Inc., a 501(c)3 nonprofit, regional marketing and economic development organization fostering collaboration among private and public sector leaders throughout 18 counties in Northeast Wisconsin.



July 20 ,2016

Dept. of Nat'l Recourses hearing

my notes

Members of the Board

Im here to present a short scenario & idea for consideration - followed by :

Websters Definition of 3--KEYwords that pertain to the proposed matter before you :(ANOTHER KOHLER golf course)

These 3 words are: 1 Propaganda, 2 Fact , & 3Conscience.

(I give my wild west show & Circus Idea.) deep wells -pond pump mils.of gals.water fill wetland ..cut trees ..pave it all have a biggeer 3 ring circus ev.3 yrs or so) Use St Prk for my Own personal Prk lot and private entrance and totally unnessary round about)

I speculate that this will bring in millions of Dollars, be sooo great for the county and our local economy it'll really put us on the map, as a major DESTINATION...I wont be needing you or anyone to issue me any permits or tell me what rules or ordinances I should follow because there not adhered to anyway ..or I can get them changed by my cohorts and friends in high places. -BECAUSE YOU SEE ITS MY LAND I SHOULD BE ABLE TO DO WHAT I WANT WITH IT.

Def: 1) Propaganda:the spreading of info. Ideas opinions images.in support of a cause by a group or person to influence people, often giving only one part or by not giving all the facts, or by ones secretly emphasizing only one way of looking at the facts or truth.

Def: 2)Fact --reality...the truth something that actually exists that which is true—in accordance with reality

Def. :3)Conscience --Inner scense of what is Right or Wrong

You all obviously have or ... had some scense of caring or love for the out doors and nature , that compelled you to pick your careers in Natural Resources... You all have a Conscience.. You have been supplied the truth and the facts.

...I emlore you- I CHALLENGE YOU

Please READ YOUR MISSION STMTS.. Believe --in it-- listen to your Conscience

Please use the info. & knowledge Given to you --- See thru the Propaganda and the PROFIT minded...

Work with us ..The People -residents of WIS—understand - our view & carry out our public will..

WE have serious factual documented concerns, we truly care about this pristine area that borders a Beloved St.Park and Shoreline..If this DEVASTATION is allowed to happen - its gone FOREVER!

WE ASK YOU TO DO YOUR JOB --LIVE THE mission stmt.—

PROTECT AND SAVE OUR NATURAL RESOURCES & SAVE OUR PARK LANDS--- NOW FOR THE FUTURE, AND GENERATIONS TO FOLLOW.

KathleenRammer



To protect and enhance our natural resources:

our air, land and water;
our wildlife, fish and forests
and the ecosystems that sustain all life.

To provide a healthy, sustainable environment

and a full range of outdoor opportunities.

To ensure the right of all people

to use and enjoy these resources
in their work and leisure.

To work with people

to understand each other's views
and to carry out the public will.

And in this partnership

consider the future
and generations to follow.

Testimony before the Wisconsin DNR, Sheboygan Falls, July 20, 2016

By James E. Schultz, Town of Wilson Resident
517 Indian Oaks Lane, Sheboygan WI 53081

I will not repeat the testimony I gave to the DNR on the UW-Sheboygan campus on July 14, 2015, in which I gave 10 of the many reasons why the proposed golf course is a step backwards from the many wonderful contributions the Kohler family has previously made to the area. Instead I am going to read the contents of my letter to the editor of the *Milwaukee Journal Sentinel* which appeared since then on September 13, 2015.

Kohler course is a bad idea

Though Whistling Straits is to be appreciated, the Kohler plan for another golf course near Sheboygan is a bad idea ("Another round for golf course plan," Sept. 7).

Unlike Whistling Straits, which was constructed on an abandoned military base in a sprawling rural area, building this course would destroy a forest close to many residences. Kohler's Jim Richardson said that unlike Scottish courses, "American golfers who pay for a premium resort experience want to play on a soft, green carpet ... watered daily in the summer" ("A course of its own," July 29).

This clearly poses a threat to the many nearby wells. A sign in the existing park next to the proposed course says, "Kohler Dunes State Natural Area. Please stay on the cordwalk to protect this unique area." Yet the *Journal Sentinel* reported when describing the recent PGA event, "The fans turned grassy trails into straw and dust" ("Major win for Day, state," Aug. 17).

Unlike Whistling Straits, the proposed golf course is upstream from numerous residences, as well as a conservancy, a wilderness park and other natural areas before it flows into Lake Michigan, which already has dead spots. Runoff loaded with chemicals could affect wildlife, including trout, wood ducks and eagles.

As anyone attending the recent meetings knows, the list of reasons against this proposed course goes on.

James Schultz
Sheboygan

I think the sign clearly shows how the DNR viewed this area well before the request was made to change it. This unique area is too fragile for golfers and fans to turn it into (again in the words of the *Milwaukee Journal Sentinel* Reporter) "straw and dust".



Debbie Desmoulin
1704 N. 35th St.
Sheboygan, WI
53081

July 24, 2015 & now July 20 2016

Total Opposition to proposed Kohler golf course due to environmental loss of the Black River Forest

I completely object on so many levels without reservation to the Kohler golf course proposal. The irreversible destruction of the Black River Forest, which is a wildlife refuge forest preserve, complete with wetlands and whole ecosystems, would be completely devastating to the entire area.

The Department of Natural Resources' mission is "to protect and enhance our natural resources". Nothing that Kohler plans with this project would enhance our natural resources. After clear-cutting most of the trees, all of the animals that make the Black River Forest their home would have to relocate, which means that we will be inadvertently killing them off because there are limited natural habitats for them to relocate to. The diversity of plants that grace the forest floor will be sacrificed as well.

The DNR is supposed to protect these natural resources: air, land, water, wildlife, and forests, which are destined to be decimated by Kohler's project. In summary, a golf course replacing the Black River Forest would inevitably destroy the "ecosystems that sustain all life." What worse place to develop a golf course than a wildlife refuge forest preserve that is the Black River Forest?

Kohler Company already chose to build the Whistling Straits golf course on Lake Michigan, but at least, it is to my understanding, it was formerly a property that was NOT a wildlife refuge, contrary to the Black River Forest complete with Indian mounds and wetlands.

Since the DNR's mission is to "ensure the right of all people to use and enjoy these resources" Kohler's private price-prohibitive golf course is diametrically opposed to this goal. Kohler may argue that this is his private property, but he is requesting to use public land to enter the course, compromising the integrity of our State Park. His request must be totally denied.

The pesticides and herbicides used in golf course maintenance, will inevitably seep into the Black River and Lake Michigan, a major water resource for the whole Midwest, which is already severely compromised. Therefore, this decision needs to be made taking environmental concerns into consideration rather than corporate profit.

Since the DNR vows to “consider the future and generations to follow”, developing yet another golf course on one of our last rich, diverse, wildlife refuges, goes counter to that goal.

Consider the immediate environment surrounding the proposed golf course. Most of those homes rely on well water. Many of the wells surrounding the Whistling Straits golf course further north in the Town of Mosel, are dried up and need to be dug deeper in order to find water.

Kohler Company might also choose to pump water directly from Lake Michigan. Since a golf course is a heavy water-consuming business, this proposal depletes our water supply and in turn, diminishes this precious natural resource.

Considering that this area is rich in wetlands complete with a thriving mosquito population, Kohler Company will want to dry up the wetlands and spray overhead for the comfort of his customers, making the Town of Wilson toxic for those living in proximity, including any remaining wildlife, making this area change from lush wildlife habitat to artificial, sterile “green”.

In conclusion, the only acceptable decision concerning the Black River Forest would be to leave it as is and not develop it at all for private commercial use.

Questions to the
Wisconsin Department of Natural Resources
Concerning
the
Draft Environment Impact Statement
Dated June, 2016
Regarding the Proposed
Kohler 18-Hole Golf Course
Town of Wilson
Sheboygan County, Wisconsin

Written By:

Gary E. Webers
340 Wahgouly Road
Town of Wilson, Wisconsin

General

All sections referred to in this document directly correspond with those sections found in the Draft Environmental Impact Statement, Proposed Kohler Golf Course, Town of Wilson Sheboygan County, June 2016. Deviations will be so indicated.

Copies of this document to: Wisconsin Department of Natural Resources
Friends of the Black River Forest
Mr. John Ehrmann Town of Wilson Chair/President

The writer of this document is a Viet Nam veteran, retired design engineer and resident of the Black River Area, Town of Wilson, Wisconsin for over twenty years. He is also a life-long resident of Wisconsin. Mr. Webers may be contacted at: G_WEBERS@yahoo.com or the address provided on the Title sheet.

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All section number directly correspond to those within the Draft Environmental Impact Statement

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Summary of Questions within this Document

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What documentation has been provided to substantiate the claim of 227 full time permanent jobs being created?

What is the projected rate of pay, benefits, and duration for said jobs?

Why is there a discrepancy between Kohler Company’s published FTE and the WDNR’s EIS stating “Full Time Permanent Jobs”?

What documentation can be provided to substantiate the \$21 million in annual economic activity beyond the 1.12 million cited in Section 5.2.6?

How much of this revenue will the county actually see and how much will go to Kohler Company?

Will the EIS include the threatened lawsuit against the Town of Mosel for reduced taxes due to Whistling Straits (KC Golf Course) not earning the anticipated revenues?

Will the EIS include Kohler Company suing its own village for reduced taxes on corporate buildings?

Page 2.

What benefit will this LEED certification be to the ecosystem of the Black River Woods potentially threatened by construction of the proposed golf course?

What governing body will oversee adherence to the guidelines of the LEED certification?

How will the area be impacted when additional parking (beyond the stated 150) is required for national tournaments?

What measures will be incorporated in the design and construction to insure mandated spill containment is abided by?

What changed between 2013 and the date of the EIS, that a shared entrance is now viable?

Page 3.

Why the contradiction between the two sections cited?

How are two-lane roads with narrow shoulders going to sustain traffic flow while being used for vehicle overflow parking?

How much additional environmental damage will parking on these roads cause?

What type of pesticides is Kohler Company currently using on existing golf courses?

What specific types will be used on the PGC?

Page 4.

Additionally, what is to keep heavy pesticide use from destroying beneficial insects?

Shouldn't the burden of proof that a residents well didn't fail due to the high draw from the aquafer by the PGC be on the Kohler Company?

Shouldn't the Kohler Company have to prove that their overuse of the aquafer is not responsible for area resident's wells losing head?

What guarantees are being offered to Town of Wilson residents?

What evidence has been supplied to indicate that only wells within a 1-mile radius will be affected?

Page 5.

What evidence has been supplied by Kohler to accurately demonstrate the amount of private wells near Whistling Straits affected and the number falling either inside or outside the 1-mile radius?

How will Kohler-Andrea State Park well(s) be affected?

What provisions has Kohler Company made to insure the park's water supply is not lost to visitors?

Isn't it true that the irrigation pond will be supplied from the same aquafer, thus is also "potable" (drinking) water?

Page 6.

If, these are globally rare wetlands, isn't the WDNR supposed to protect them from destruction of this nature?

Aside from the destruction of a valuable ecosystem, how will this impact the adjacent state park?

So which is it, will the already stressed Black River be further affected by the PGC or will it not?

Isn't phosphorus a component of fertilizers?

Page 7.

From the above statements, it seems more than likely that the PGC will adversely affect wildlife habitat. Isn't this what the WDNR is supposed to protect?

How could hunting with high-powered rifles be allowed in an area bounded by residences?

How will the PGC deal with White-tailed deer on a daily basis? Deer aren't going to necessarily respect property boundaries, especially since they now roam this area at will.

Shouldn't the underlined statement have been addressed before drafting the EIS?
Won't heavy traffic and crowds impact the environment?

Page 8.

If the above statement is true, why would the WDNR allow this now pristine shoreline area be destroyed?

What safeguards are there to protect these rare dunes either during construction or during daily and tournament play?

As questioned on page 7, shouldn't the WDNR have had all of this information before drafting the EIS?

Where does this leave Town of Wilson residents who may have their wells run dry?

Total of: 38 questions

The following document has been prepared in response to the content of the Draft Environmental Impact Statement (hereafter EIS) published by the Wisconsin Department of Natural Resources (hereafter WDNR).

Section 1.2 Project Purpose

It would seem that the purpose of an EIS is to state a specific project's impact to the local environment. The EIS does however, contain certain economic data.

A Kohler produced brochure dated March, 2015 states that "227 FTE (Full Time Equivalent) jobs will be created in Sheboygan County..." The EIS states, "full time permanent" jobs.

Questions: What documentation has been provided to substantiate the claim of 227 full time Permanent jobs being created?

What is the projected rate of pay, benefits, and duration for said jobs?

Why is there a discrepancy between Kohler Company's published FTE and the WDNR's EIS stating "Full Time Permanent" jobs?

In Section 5.2.6, the EIS cites the following:

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

Question: What documentation can be provided to substantiate the \$21 million in annual economic activity beyond the 1.12 million cited in Section 5.2.6?

As the WDNR has taken upon itself to include this unsubstantiated economic data in the EIS, it would also seem pertinent to include documented negative economic impact of dealing with Kohler Company.

Questions: Will the EIS include the threatened lawsuit against the Town of Mosel for reduced taxes due to Whistling Straits (Kohler Company Golf Course) not earning the anticipated revenues?

Will the EIS include Kohler Company suing its own village for reduced taxes on corporate buildings?

Section 3.1 Proposed Golf Course Features

Clubhouse

The EIS states that the proposed golf course clubhouse will be designed to be eligible for Leadership in Energy and Environmental Design (LEED) certification.

Question: What benefit will this LEED certification be to the ecosystem of the Black River Woods potentially threatened by construction of the proposed golf course?

What governing body will oversee adherence to the guidelines of the LEED certification? Assuming said certification is of any value beyond "talking point."

The EIS further states that the parking lot near the clubhouse will accommodate 150 vehicles.

Question: How will the area be impacted when additional parking is required for national tournaments?

Maintenance Building

The EIS states that the maintenance building will included a "dedicated self-contained area for storage, mixing and loading of herbicides, pesticides and fertilizers."

Question: What measures will be incorporated in the design and construction to insure mandated spill containment is abided by?

Entrance Road

In a letter dated March 13, 2013, written by Kurt Thiede of the WDNR, it is stated that a shared entrance with the then Tented Forest project and the park will cause difficulties for the park, Kohler Company and local residents.

Question: What changed between 2013 and the date of the EIS, that a shared entrance is now viable?

The EIS states to the effect that a roundabout will be added to the entrance after crossing the two-lane bridge. During those instances when the proposed golf course (hereafter PGC) is hosting a tournament and the park is at peak usage, this proposed method of handling traffic still seems inadequate.

In Section 5.2.7 the EIS cites:

"The traffic study concluded that all proposed traffic movements at the intersection of CTH V and Beach Park Road would operate at a LOS B or better. The study also shows that all movements at the proposed golf course entrance location to Beach Park Road would operate at LOS A. In both cases, the LOS would significantly exceed the minimum acceptable value. The LOS calculations

were based upon the existing road intersection configuration and showed that no traffic improvements would be required.”

However, in Section 6.2 Wildlife and Rare Species, it is cited:

“Higher levels of traffic may increase congestion at the Kohler-Andrae entrance and increased demand for overflow parking on nearby roads during Kohler-Andrae’s peak visitor times and golf course special events.”

Questions: Why the contradiction between the two sections cited?

How are two-lane roads with narrow shoulders going to sustain traffic flow while being used for vehicle overflow parking?

How much additional environmental damage will parking on these roads cause?

Pest Management

Within Section 3.3.3 Pest Management the EIS cites that:

“Pesticides include insecticides, herbicides, and fungicides as well as any substance used to control plant growth and pests. Kohler would apply pesticides in accordance with an IPM plan and according to product labels. New IPM practices are being tested and developed on an ongoing basis, and contemporary water and pest management practices reduce the risk of environmental impacts significantly compared to twenty years ago (Rossi and Grant, 2009).”

However, in Section 6.2 the EIS cites:

“By their very nature, most pesticides create some risk of harm to humans, animals, or the environment because they are designed to kill or otherwise adversely affect living organisms. Studies have shown that several commonly used pesticides have been identified as probable human carcinogens and may be linked to birth defects, endocrine disruption, reproductive effects, neurotoxicity, and kidney/liver damage. Chronic, long term exposure to many pesticides and the associated health risks are not completely understood and it may take years of research before the effects are fully known...”

This could easily become a health risk to Kohler employees and local residents.

Questions: What type of pesticides is Kohler Company currently using on existing golf courses?
What specific types will be used on the PGC?

Also in the aforementioned section, the EIS states:

“The Kohler Property has predominantly sandy soils with high infiltration rates and high hydraulic conductivity. This combined with a shallow depth to the surficial groundwater aquifer increases the

potential for pesticides and fertilizer to leach into the shallow aquifer which may additionally reach the Black River, Lake Michigan, and the associated wetlands.”

Assuming the accuracy of the above statement, it could also be said that there is a high risk that these chemicals will leach into local wells, creating a health risk for adults and children using residential wells.

Question: Additionally, what is to keep heavy pesticide use from destroying beneficial insects?

Section 3.3.4 Water Usage

High water usage is of concern to many of Town of Wilson residents, especially those living in what is termed the Black River Area (roughly bounded by County Highways EE to the north, V to the south, Sheboygan 12th street to the west and Lake Michigan to the east).

The EIS states that any claims against Kohler Company for well loss will have to be proved by the claimant, and approved by Kohler Company before the company will financially assist with renewing the home-owner’s water supply. This is contrary to what Kohler published in July, 2015.

In a mailing to Town of Wilson residents, Kohler Company states to the effect, that one of the 11 Benefits of the proposed golf course is: “2. Include a well-protection program for Town of Wilson residents as a special insurance.”

The fact that Kohler published a statement to the effect of offering a well-protection program would indicate that there is concern that this amount of usage will adversely affect residential wells.

Question: Shouldn’t the burden of proof that a residents well didn’t fail due to the high draw from the aquifer by the PGC, be on the Kohler Company?

Shouldn’t the Kohler Company have to prove that their overuse of the aquifer is not responsible for area resident’s wells losing head?

What guarantees are being offered to Town of Wilson residents?

On page 28 of the EIS, it is stated:

“Kohler Co. will determine if the resident's well is within one (1) mile of the irrigation well. Wells within a one mile radius will automatically be included in this procedure. Wells falling outside the one mile radius will be considered on a case-by-case basis taking into account all available information submitted by the resident.”

Questions: What evidence has been supplied to indicate that only wells within a 1-mile radius will be affected?

What evidence has been supplied by Kohler to accurately demonstrate the amount of wells near Whistling Straits affected and the number falling either inside or outside the 1-mile radius?

Many residents within the Black River Area are retired, living on fixed incomes. If they lose their water, they will lose their home. And, by the verbiage within the EIS will be at the mercy of Kohler Company to assist with regaining well functionality. This verbiage is considerably different than that published by Kohler Company in 2015.

As the PGC will be in close proximity to a State Park, with the stated amount of consumption of 25 million gallons/year, another question immediately brought to the forefront.

Questions: How will Kohler-Andrea State Park well(s) be affected?

What provisions has Kohler Company made to insure the park's water supply is not compromised?

The EIS projects between 15 - 25 million gallons/year of water usage with an additional 1.5 – 2 million gallons for clubhouse usage. The EIS also provides that water for clubhouse use is “potable” water coming from a separate well, while that used for irrigation will be supplied by high-capacity pumps to an irrigation pond.

Question: Isn't it true that the irrigation pond will be supplied from the same aquafer, thus is also “potable” (drinking) water?

According to a 2005 U.S. Geological Survey Report authored by Cheryl A. Buchwald (available on-line at <https://pubs.usgs.gov/of/2009/1076/pdf/ofr20091076.pdf>) the per capita water usage in Sheboygan County is 315.5 Gallons/Day/Person.

Assuming the average person uses the full 315.5 gallons/day and using a 365 day year (the PGC will not be open a full 365 day year) provides that the average person will consume 115,157.5 gallons of water. At the stated rate of usage, 25 million gallons/year, Kohler's PGC water usage will be the equivalent of 217 persons/year based on available data.

Using precise water usage data for the average home within the Town of Wilson may provide a more accurate picture and would most likely be less Gallons/Day/Person making the PGC usage equivalent to a higher number of individuals per year.

Either way, it's a considerable amount of drinkable water being used to water the lawn.

Section 5.1 Physical and Biological Environment

Rare Wetlands

“Several globally rare wetlands within the Project Area on Kohler Property are proposed to be directly impacted by filling for the construction of various holes and the associated grading and construction of tee boxes, greens, fairways, and tree clearing. Secondary impacts from things such as changes in hydrology, irrigation, and application of fertilizer may impact rare wetland communities.”

Question: If, these are globally rare wetlands, isn't the WDNR supposed to protect them from destruction of this nature?

Black River Floodplain

“Current agricultural impacts appear to be minimal. Recreational usage is limited to the unpaved trails that run through the Kohler- Andrae portion of the area. Access through the Black River Floodplain wetlands on foot is difficult.”

Thus, as per the above statement, the floodplain is currently not impacted by any outside force. The following EIS statement indicates that it will be negatively impacted by the PGC.

“Proposed impacts to this area include modification of the current access road, construction of the new golf course entrance, and filling for holes # 2, 10, and 11. Filling in this part of the wetland may negatively impact the plant diversity by removing a portion of the tree cover and may encourage the expansion of invasive species through disturbance.”

Question: Aside from the destruction of a valuable ecosystem, how will this impact the adjacent state park?

Surface Water, Water Quality

In Section 5.1.9, the EIS states that:

“The Black River is listed on the 2014 303(d) Impaired Waters List based on a degraded biological community due to high total phosphorus (WDNR, 2014b).”

That section also states that:

“The Black River would be buffered from the golf course by riparian wetlands, and there would be no surface water withdrawals for irrigation. Because of high soil permeability, surface water runoff inputs to surface waters would be minimized.”

However, in Section 6.2 the EIS states:

“The Kohler Property has predominantly sandy soils with high infiltration rates and high hydraulic conductivity. This combined with a shallow depth to the surficial groundwater aquifer increases the potential for pesticides and fertilizer to leach into the shallow aquifer which may additionally reach the Black River, Lake Michigan, and the associated wetlands.”

Question: So which is it, will the already stressed Black River be further affected by the PGC or will it not?

Isn't phosphorus a component of fertilizers?

Section 5.1.11 Wildlife

This section of the EIS poses the following:

"The Project would result in significant changes to the current landscape and the associated habitats used by wildlife. Some of the changes ... may have adverse impacts."

"Habitat value would likely be diminished, however."

"Tree clearing may also occur in forested areas between tee and fairways to provide lines of sight. Interior forest bird nesting habitat is likely present within and adjacent to the Project boundary and would likely be eliminated. Wildlife species inhabiting these areas would be permanently impacted by the loss of habitat."

"The proposed amount of clearing would be considered a land use change."

"Native amphibians and reptiles within the project area would likely be impacted by construction activities occurring within suitable habitat."

"Native mammals within the project area would likely be impacted by construction activities occurring within suitable habitat."

Question: From the above statements, it seems more than likely that the PGC will adversely affect wildlife habitat. Isn't this what the WDNR is supposed to protect?

"White-tailed deer would likely adapt well and flourish in the fragmented forest edge habitat of the Kohler Property. It is likely there would be the need to control deer populations with hunting to diminish damage to plantings that would likely result from increased deer numbers."

Questions: How could hunting with high-powered rifles be allowed in an area bounded by residences?

How will the PGC deal with White-tailed deer on a daily basis? Deer aren't going to necessarily respect property boundaries, especially since they now roam this area at will.

"The department's Ecological Landscapes of Wisconsin publication says this about the lakeshore landscape in the Sheboygan area: "The Lake Michigan shoreline is heavily used by migratory birds of many kinds, including waterfowl, loons, grebes, gulls, terns, shorebirds, raptors, and passerines."

Many sites along the Lake Michigan shore are popular with birders because of the high diversity of birds and many rarities that can be observed there. Providing and maintaining a sufficient variety and abundance of the habitats needed by these birds is a priority conservation goal.

Question: If the above statement is true, why would the WDNR allow this now pristine shoreline area be destroyed?

Section 5.2.1 Potential Impacts

This section of the EIS provides the following:

“Emergency services in the area may be impacted as a result of the Project, especially during major events. Details regarding traffic control, crowd management, and emergency response to the Site have not been provided. The Project may impact local transportation to and from the site and a method of mass transit may have to be considered, especially during major events.”

Questions: Shouldn't the underlined statement have been addressed before drafting the EIS?

Won't heavy traffic and crowds impact the environment?

Impact to transportation to and from the site. Will this not affect the state park?

Section 5.2.11 Visual and Aesthetic Resources

The EIS quotes Kohler Company as follows:

“Kohler has stated that the lakeshore and associated dune habitats are essential to the natural and minimalistic golf course design and according to the current proposal would not be modified.”

While the state park has placed boardwalk to help preserve fragile sand dunes, the PGC appears to have holes 9, 17, and 18 placed directly on top of where dunes currently exist. The green for Hole 16 seems close to the dunes as well.

Course designer, Mr. Pete Dye has been reported as saying, “Its sand. You can push the sand from (point) A to B and no problem.”

Question: What safeguards are there to protect these rare dunes either during construction or during daily and tournament play?

Section 6.3 Significance of Risk

“There is information and data that would have been beneficial for the writing of the draft EIS to more accurately and with more certainty review the Project and quantify risk to environmental, historical, archeological, and socioeconomic resources.”

“Additional information regarding potential traffic impacts (using Saturday and Sunday afternoons as peak traffic times as compared to Friday afternoons, and including a roundabout analysis) would

also allow the department to more accurately review and provide suggestions to ensure that users of the Kohler-Andrae and the golf course would be able to enter and exit reasonably.”

Question: As questioned on page 7, shouldn't the WDNR have had all of this information before drafting the EIS?

It would seem that Kohler Company is looking for a “blank check” in that it will receive a favorable report without supplying the necessary information.

“The impacts to the groundwater aquifer and the wells that are supplied by the aquifer are not fully understood. The department has completed an analysis with the best information currently available and discusses the results above in Section 5.1.5, Groundwater Resources. There is significant uncertainty in the prediction of drawdown levels in fractured rock aquifers.”

Question: Where does this leave Town of Wilson residents who may have their wells run dry?

Citizen Concerns

Concerns over this project are as follows:

1. Impact on the Quality of Life for Town of Wilson residents, particularly those in the Black river area.
 - A. Congestion of roadways, making it more difficult to visit the state park.
 - B. Heavy traffic making it unsafe for families or children to bicycle on town roads.
 - C. Loss of wildlife. Once the habitat is destroyed, wildlife will eventually die or go elsewhere.
 - D. Excessive noise. Maintenance vehicle usage (lawn equipment) at 5:00 AM., and additional vehicular traffic.
 - E. Loss of Black River area aesthetics.
2. Potential loss of wells.

Kohler Company has demonstrated in past, and by the language within the EIS that they will not assist residents who lose their well after the PGC is operational. Wells may also become contaminated by chemicals used to maintain the golf course.

This may create financial hardship for older residents or potential loss of property. Chemical contamination will be harmful to both adults and children, plus will render a once viable well useless.

3. Negative Economic Impact

Kohler hired an outside firm to demonstrate positive Economic impact to Town of Wilson and surrounding communities, which seems to remain undocumented.

Look at the make-up of the Town of Wilson. What gains are going to be made by businesses of the town?

Kohler Company threatened the Town of Mosel with a lawsuit unless they lowered taxes on Whistling Straits due to the course not earning the expected profits.

Essentially, Kohler expected the taxpayer to make up their corporate shortfall. What's to lead any resident to believe that Kohler Company won't do the same to the Town of Wilson?

Kohler has also sued their own village to gain lowered taxes on their factory buildings.

Negative economic impact due to costs of road repair due to over-used roads. Repair of Town of Wilson roads will eventually fall on town taxpayers. Cost of repair to state or county roads will fall on taxpayers.

4. Potential hunting within the Town of Wilson to eliminate deer and other wildlife threatening greens and fairways?

Hunting with high-powered rifles would make it unsafe for all residents, but especially younger children.

Random hunting on the Kohler & Kohler-Andrea properties could lead to avoidable accidents within nearby residential areas.

5. Proposed Golf Course not a recreational benefit to majority of town residents or the average resident of Sheboygan County.

The cost of a round at Whistling Straits is cost prohibitive to the average citizen. There is little doubt that the PGC will be as well. Thus, this will not be a recreational area of benefit to residents of the Town of Wilson.

By the statement of Jim Richardson, Kohler Company representative, it "will be a great thing for Destination Kohler." It's not about the average citizen, or the Town of Wilson, it's about corporate profit and greed.

[Remind Mr. Kohler that he's not taking it with him, and he will be judged by his deeds while here on earth.]

6. Five-acre open pond.

Mosquitos are in abundance in the Black River Area due to close proximity to open water, wooded areas, and wetlands. This brings about several concerns that were not addressed within the body of this document.

A. If this water is not aerated in some manner, algae will begin forming, providing a breeding

ground for airborne pests. This would most likely lead to additional pesticide use.

- B. An open pond could provide a catch-basin for chemical run-off which will further aid in the formation of algae.
- C. Chemicals that either leach into said pond or are introduced become a potential hazard for wildlife that may use the pond as a source of drinking water.
- D. The pond could potentially leak or supply chemically contaminated water into soil leading to groundwater contamination. Another potential danger to residential wells.

7. Potential loss of Property Value

In section 5.2.4 Changes in Private Property Values, it is stated:

“The proposed golf course is not anticipated to directly impact private property values.”

The key word is, “anticipated.” It still remains to be seen, but others may not find living near a Kohler owned golf course, attractive.

Potentially another negative economic impact. The risk in this case belongs solely to the homeowner residing near the PGC.

- 8. The Draft Environmental Impact Statement presented by the Wisconsin Department of Natural Resources is incomplete, plus contains numerous contradictions. Many of which are demonstrated within this document.
- 9. Risk to a publically (taxpayer) owned state park.
 - A. Loss of accessibility during PGC tournaments.
 - B. Potential loss of drinking water: well-draw down or contamination.
 - C. Roundabout creating hazard for those with longer RV's making park inaccessible.
 - D. Loss of park land.
 - E. Potential destruction of now protected sand dunes.

Appendices

While reviewing the above document please consider the following:

Source water protection

Source water protection helps prevent contaminants from entering sources of drinking water. It's the first line of defense to reduce the chance that contaminants will be in a glass of water from your tap. Source water protection avoids potential health risk and minimizes the need for costly monitoring, new wells or treatment systems that add to your water bill. WDNR Website.

<http://dnr.wi.gov/topic/DrinkingWater/SourceWaterProtection.html>

Why should my community develop a wellhead protection plan?

- Wellhead protection is an investment in the future of your community. Your community can take a proactive step to reduce the potential for contamination of your community's wells and to make your water supply safe for you and your children.
- Wellhead protection is a way your community can make its own decisions. Your community can tailor its wellhead protection plan to meet its specific circumstances.
- Wellhead protection is cost effective. A modest investment in a wellhead protection program can save a community tens to hundreds of thousands of dollars by preventing contamination. If a well becomes contaminated, a community can be faced with costs to clean up groundwater, treat groundwater, drill a new well, provide an alternate source of water to its customers or some combination of actions. An ounce of prevention is truly worth a pound of cure.
- Wellhead protection assures a positive climate for economic growth. A community with an active WHP program can avoid the adverse economic impacts associated with a contaminated water supply, which might include a loss of jobs or a drop in real estate value. WDNR Website

<http://dnr.wi.gov/topic/DrinkingWater/WellheadProtection/faq.html#Inventorying>

Our Mission

To protect and enhance our natural resources:

our air, land and water;
our wildlife, fish and forests
and the ecosystems that sustain all life.

To provide a healthy, sustainable environment and a full range of outdoor opportunities.

To ensure the right of all people to use and enjoy these resources in their work and leisure.

To work with people to understand each other's views and to carry out the public will.

And in this partnership consider the future and generations to follow.

<http://dnr.wi.gov/about/mission.html>

Dear DNR,

My name is Terry Shircel, a resident of the Town of Wilson...6278 South 18th Street and own another land parcel on Shircel Road. I am here tonight to **SUPPORT** the proposed golf course plan for the Town of Wilson property owned by the Kohler Company.

As a former Town of Wilson Plan Commission member, any property owner in the township has a right to use “their” land for “their” use as long as it follows the township’s Long Range Plan, policies, and ordinances. Kohler Company has done so. People may not like it, but they have the same right as any property owner in the township. **FACT (from DNR’s EIS Report):** The draft EIS confirms that a golf course “**IS**” an acceptable use for the land under current zoning. A conditional Use Permit will be required from the Town of Wilson.

I have read the draft Environmental Impact Statement (EIS) that the Wisconsin Department of Natural Resources recently issued. The DNR’s draft EIS, is an extensive science and engineering based study has the factual evidence I wanted to read concerning this project and it answers the many questions I personally had about this golf course proposal. While others use scare tactics and political associations to try to discredit this proposal, the DNR’s own scientific, non-political findings, and consulting findings are from individuals who are trained and educated to investigate all aspects of any proposed plan.

Opponents have stated that the proposed plan will use pesticides, fertilizers, and runoff into Black River and/or Lake Michigan. **FACT (from DNR’s EIS Report):** “The draft EIS notes that there will be NO fertilizer or pesticide runoff into the Black River or Lake Michigan. The course will use grasses and plants requiring minimal fertilization and establish an integrated pest management program to minimize chemical pesticide use.

Opponents have stated that the proposed plan has a possible impact of destroying thousands of years of Native American Cultural Heritage Artifacts. **FACT (from DNR's EIS Report):** Burial mounds located on a small portion of the site will remain undisturbed. Recent archaeology report offers the opportunity for discovery, deeper learning and working together in a spirit of respect and collaboration. The U.S. Army Corps of Engineers is overseeing this aspect of the project, including consulting with Tribes that may wish to be involved in this effort. I just wonder how many home owners living east of 12th Street in Town of Wilson toward the lake and south of Indian Mound Park even had the U.S. Army Corps of Engineers assist them when they constructed their homes for possible Indian artifacts or burial grounds?

Opponents have stated that the proposed plan has a possibility of deforesting 50 percent of the trees and destruction of rare or endangered species. **FACT (from DNR's EIS Report):** The Kohler Company plan includes "removing" invasive species and "**planting**" native species and trees to enhance natural habitat, increase wildlife diversity and help transform parts of the site now classified as "degraded." The plan "minimizes" impact to special habitat or species of concern, with minimal impact to the migratory bird population. The draft EIS also indicate that environmentally sensitive design standards will be used to achieve eligibility for Leadership in Energy & Environmental Design (LEED) green building certification.

Opponents have stated that the proposed plan impacts residents' wells from pumping millions of gallons of water for irrigation. **FACT (from DNR's EIS Report):** The draft EIS confirms that a proper well system and irrigation pond **WOULD NOT** negatively impact the water table or groundwater. As a precaution, Kohler will establish and fund a special insurance program to rectify potential well issues for neighbors, similar to the successful program used at Whistling Straits with the Town of Mosel.

In addition, opponents have stated that the proposed plan impacts traffic, congestion, safety and noise from a major golf tournament. **FACT (from DNR's EIS Report):** The draft EIS finds **NO LONG-TERM** negative impact to property values, traffic, noise, air quality, flood plain, surface water, groundwater and wells.

Furthermore, any easement issues with Timberlake homeowners will be addressed by the Kohler Company that will grant homeowners in the neighboring Timberlake subdivision a permanent, legal easement to access the Lake Michigan shoreline.

Kohler Company proposed plans also call for public access to Kohler-Andrae State Park. **FACT (from DNR's EIS Report):** The draft EIS highlights plans for the golf course and state park to share an expanded entry road at the south end of the property, steering traffic away from neighboring homes to the north. The plans call for adding a roundabout to improve circulation and make access to Kohler-Andrae Park easier. The draft EIS confirms that "NO" public trails would be affected by the project.

And lastly, I support the Kohler Company's golf course plan for the "economic" impact it would have for residents of the Town of Wilson and Sheboygan County as a whole. **FACT (from DNR's EIS Report):** The draft EIS includes information from an "outside" consulting firm that the golf course's total annual estimated economic impact would be \$20.6 million in Sheboygan County. Some \$9.7 million impact for the Town of Wilson. This study stated that an 11-county area would realize a total estimated economic impact for operations and golf tourism of about \$25.1 million per year. Locally, the proposed golf course project would create the equivalent of about 227 new full-time jobs. In addition, construction and building of the course and related facilities will create an additional 95 jobs during construction. Local teens and adults would benefit greatly from this proposed gold course plan.

I support the proposed golf course plan as presented.

Sincerely submitted,



Terry Shircel
6278 South 18th Street
Sheboygan, WI 53081

Comments by R. James Tobin, July 20, 2016

on Draft Environmental Impact Statement for Proposed Kohler Golf Course,
Town of Wilson, Sheboygan County, June 2010

1. The study identifies numerous adverse environmental impacts from this proposed project, should the project move forward.

2. The impacts of this proposed development mostly affect the continuity of the wooded shoreline of Lake Michigan in the Town of Wilson. Running from north of Milwaukee County to Door County, as this document indicates, this shoreland constitutes major migrating bird habitat, which would be adversely affected, notably by the planned removal of half the trees in the Kohler Woods.

3. The proposed development would also adversely affect the living environment of the Town of Wilson, particularly in its eastern portion, which is distinguished by a combination of low density housing and high density tree growth, a situation favorable to shared human and wildlife habitation, highly valued by the great majority of its residents.

4. Kohler attempts to balance adverse environmental impacts with predictions of great economic benefits to Sheboygan County. I see this as an irrelevant

and spurious balance, because economic values are not equivalent to environmental values, which are priceless; because the Town of Wilson would have to approve this project, and because Sheboygan County already has more than one famous golf course.

5. The Town of Wilson has exactly one motel and two or three restaurants, which could not possibly accommodate the vast hordes of visitors expected during world class tournaments which Kohler hopes for. The Town of Wilson does not want to be a world class destination. It would rather be-- like the fictional Lake Wobegon-- a little town the world forgot.” It also has one golf course which does not have a large impact.
6. It is admitted that water supplies for the surrounding areas, which are totally dependent on wells, would be adversely affected, to an unknown degree.
7. Heavy construction equipment during the years of development would surely—the document says “may”--impact park users and resources.

8. [page 6] “management of large crowds and coordination of traffic and emergency response to the Kohler and Kohler-Andrae Properties has not been discussed to date.”
9. New, slow release pesticide products “does not eliminate the risk of leaching into the groundwater (Kovach et al, 1992; page 70
10. New pesticides and new IPM practices “reduce the risk of environmental impacts significantly compared to twenty years ago.” Page 7. Note: “reduce,” not eliminate. If pesticides are found in groundwater in amounts exceeding those permitted, “DATC *can require mitigation.*” Note the hedging language.
11. Proposed irrigation water usage is estimated to be at a Rate of 1.500 gallons per minute and between 15 and 25 million gallons per year. This is disgraceful
12. “There may be siting and environmental issues at any [alternate] site.”
(p.11.)

13. "Further design refinement to avoid and minimize wetland and other environmental impacts would be *considered* during final design and regulatory permitting evaluations." No guarantee.

14. Storm water runoff control would require that "less porous soil and topsoil would need to be brought into the site." Page 17

15. The spoil types in question are discussed in technical terms on pages 18-20, and seem to raise some concerns.

16. Carbon emission balance would require retention of "woody and native vegetation any y investment in course-wide energy efficient technologies.
Page 21

17. Storm water management, regulated by code, would require certain procedures are *proposed*.

18. "Increases in the floodplain *may require* department and FEMA review and approval..."

19. Wetland habitat (121.1 acres on the Kohler and Kohler Andrae

properties (not broken out) provides for “a variety of flora and fauna, including threatened, endangered and special concern species....Several globally rare wetlands within the Project Area on Kohler Property are proposed to be directly impacted by filling for the construction of various holes and the associated grading and construction of tee boxes, greens, fairways, and tree clearing. Secondary impacts from things such as changes in hydrology, irrigation, and application of fertilizer may impact rare wetland communities.” Page 33 “These wetlands support threatened and endangered species habitat functions and are important breeding grounds for amphibians. Additionally, the wetlands retain intact groundwater processes, including groundwater recharge and discharge, which benefits local surface and groundwater quality within adjacent habitats.” Page 34.

20. Proposed filling for road construction and holes 2, 10, and 11 may [that hedge word again] “negatively impact the plant diversity by removing a portion of the tree cover and may encourage the expansion of invasive species through disturbance.”

21. **5.1.11 Wildlife “habitat value would likely be diminished....Interior forest bird nesting habitat is likely present within and adjacent to the Project boundary [for the Pileated Woodpecker for instance—RJT] and would likely be eliminated. Wildlife species inhabiting these areas would be permanently impacted by the loss of habitat.” Page 38. Reduction of the forest to 50% cover would likely result in...reduction of available stopover habitat on the Kohler Property.” Page 39. The area south of Sheboygan has been identified as an important resource for migratory birds through a world-wide program in which Wisconsin participates, in fact as a Tier 1 area, the highest level of significance for migratory bird stopover habitat.” A DNR publication speaks of high diversity and many bird rarities at Lake Michigan shoreline. “Providing and maintaining a sufficient variety and abundance of the habitats needed by these birds is a priority conservation goal.” Page 40.**

22. **5.1.2 Endangered and Threatened Species, Natural Communities and Habitat. A table of these on or adjacent to the Kohler Project is provided. A rare mammal and a rare invertebrate are mentioned but not identified. Page 42. Additional surveys and U.S. and Wildlife Service**

required conservation measures related to the rare mammals are not yet known.” Page 43

23. “Emergency services in the area may—[surely will]—be impacted as a result of the Project, especially during major events.” Page 46

24. 5.2.8 Utilities. Locations have not been provided, so environmental impacts cannot yet be fully quantified. Page 53-54.

25. LAWCON funds received require separate federal review. Page 55

26. “The natural scenic beauty of the view of the dunes from the lake may [that weasel word again] by tree removal and structure construction” Landscape aesthetics “may be difficult to achieve given the slopes and the current canopy of the site and the elevation of the primary dune in relation to the areas to the west.” Page 57.

27. Archaeological “consultations for this project will likely fall under federal jurisdiction” Page 58

28. Sections 6.2 Summary of Adverse Impacts That Cannot be Avoided and 6.2 Environmental Effects, Their long-Term and Short-term Significance and Cumulative Impacts; 6.3 Significance of Risk; 6.4 Significance of Precedent; and 6.5 Significance of Controversy. These run from pages 56 to 64 and are all important, so I shall not try to summarize them. However, the final paragraph reads: **“Controversy surrounding the project will likely continue through the environmental impact statement process and into departmental regulatory permitting and local government review should the Project continue to move forward.”** My reading of this draft statement leads me to the firm conclusion that the project should NOT move forward, and it is my earnest hope that Kohler will decide in the interest of important environmental values to terminate its plans for this destructive development.

Statement of Christa Westerberg

Counsel to Friends of the Black River Forest

The DNR is required by law to hold a public hearing on draft environmental impact statements it prepares for major projects, but that's not what is happening here today.

In a very unusual move, the DNR has decided to allow Kohler to clear a significant regulatory hurdle—the EIS process—without all the normal information, like permit applications that lay out the specifics of the golf course project and other reports.

Instead of an EIS hearing, this is a hearing on the environmental Cliff Notes for the Kohler golf course—and even that may be an overstatement.

So, what don't we know? As just one example, the DNR admits it doesn't know where several significant features of the golf course will go, like stormwater controls, utilities, cart and drive routes, and the septic system that it supposed to treat waste for hundreds of people per day. Alone or in combination, these features will require significant ground disturbance.

Without this information, the draft EIS cannot credibly say things like there will be 5.01 acres of wetlands directly impacted by Kohler's project. It's only 5.01 acres for the parts of the golf course Kohler has chosen to tell the DNR—and the public—about.

The DNR also can't say that the private septic system Kohler plans to use to treat waste for hundreds of people in area that's highly susceptible to contamination will actually protect groundwater. The draft EIS refers to "studies" that say septic will be safe, but Kohler hasn't chosen to provide this information to DNR. This is a significant public health issue that people deserve to know about.

You can't give the public their one shot at commenting on a project's environmental impacts when the draft EIS only describes a fraction of that project. It's also unfair to ask DNR scientists and professionals to prepare an EIS on incomplete information. DNR has claimed it has legal authority to draft the EIS and hold the hearing now, and we strongly disagree with that. But that doesn't explain why the DNR has *chosen* to draft the EIS now, and why it is depriving the public of their chance to meaningfully comment on this project's actual impacts.

In the meantime, Kohler's talking points ring hollow. Kohler says it wants a fact-based analysis, but Kohler hasn't provided all the facts. Kohler says this golf course has a minimalist design, but it's only provided part of the design. In any case, putting an 18-hole golf course, clubhouse, and Lake Michigan observation tower in a significant ecological area is like saying an aircraft carrier on Walden Pond is minimalist. It can't, by definition, be done.

The DNR must rewrite the draft EIS and re-notice this public hearing, after it has Kohler's applications and the information necessary to write an accurate, informative, and scientifically defensible EIS. And, it must give the public complete and timely public notice of its opportunity to comment. The law requires it, and the public deserves it.

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Groundwater

Diminishing Resource,
Increasing Conflict

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Trust and Estate Matters:
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More on Adverse Possession
P34



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BY CHRISTA WESTERBERG

Groundwater:

Diminishing Resource, Increasing Conflict



America's Dairyland also prizes its lakes and rivers, but now agriculture and other groundwater users are posing risks to the amount and health of the water.

Wisconsin's waters have been protected since before it was a state. The concept of the public trust doctrine, or the state holding navigable waters in trust so they remain forever free and open to the public, was passed down from the Northwest Ordinance to the Wisconsin Constitution, article IX, section 1.¹ State statutes have since been crafted to protect Wisconsin's groundwater and surface water and to give the Wisconsin Department of Natural Resources (DNR) primary responsibility for overseeing this resource.

But Wisconsin's waters are facing a threat: they are being dried from the bottom up. As high-capacity wells proliferate in Wisconsin, water in groundwater-fed streams and lakes is being diverted to these wells beneath the surface, reducing surface water levels and stream flows. At the same time, the DNR has been working to implement *Lake Beulah Management District v. DNR*, the 2011 Wisconsin Supreme Court decision that held the DNR "has the authority and a general duty to consider whether a proposed high capacity well may harm waters of the state."²

This article explains the legal basis for Wisconsin's groundwater regulations and legal developments since the *Lake Beulah* case was decided. It also previews potential legislative action concerning this often unseen – but increasingly consequential – natural resource.

Wisconsin Groundwater Quantity Laws and *Lake Beulah*

Wisconsin has declared a policy of enhancing the quality and protection of all waters of the state.

This policy extends to groundwater, or water below the earth's surface that originates from rainfall percolating through the soil, but that can sometimes be pumped faster than it is replenished. The Wisconsin Legislature has granted necessary power to the DNR to organize a comprehensive program to achieve the state's policy.³

One component of this program is regulation of high-capacity wells, or wells that (alone or together with other wells on the same property) can pump more than 100,000 gallons of water per day. These wells require a permit from the DNR before construction.⁴ Surface water withdrawals, wells that are located in the Great Lakes Basin, and wells that can pump more than 2 million gallons of water per day are subject to different or additional requirements not discussed in this article.⁵

The DNR's high-capacity well permitting authority is under Wis. Stat. section 281.34 and specifically requires the agency to conduct an environmental review for wells located within 1,200 feet of a trout stream or outstanding or exceptional resource waters, wells that remove most of the water from a basin, or wells that could significantly affect a stream. The DNR may deny or place conditions on wells that would affect these areas and on wells that would impair a public water supply. Wells are also subject to construction, location, and other requirements under the Wisconsin Administrative Code.⁷

The agency has additional duties related to wells. In *Lake Beulah*, the Wisconsin Supreme Court reviewed the DNR's well-permitting authority under statute and the public trust doctrine. The court unanimously determined that when presented with sufficient, concrete

SUMMARY

Until recently, "out of sight, out of mind" described most people's attitudes about groundwater. But in the last few decades, growing concern about the quantity and quality of Wisconsin's streams and lakes has brought to the legal forefront disagreements about access to the waters that lie beneath.

Wisconsin's waters are being dried from the bottom up. As high-capacity wells proliferate in Wisconsin, water in groundwater-fed streams and lakes is being diverted to these wells beneath the surface, reducing surface water levels and stream flows. At the same time, the DNR has been working to implement the Wisconsin Supreme Court's 2011 decision in *Lake Beulah Management District v. DNR*.

This article explains Wisconsin's groundwater regulations and legal developments since the *Lake Beulah* decision. It also previews potential legislative action concerning this increasingly consequential natural resource.

scientific evidence that a proposed high-capacity well might harm waters of the state, the DNR has the authority and general duty to investigate or consider the environmental impact of the well. The information can come from state residents, the applicant, or even the DNR itself and should ideally be supplied while the well application is under review. In some cases, the DNR must deny the permit application or include conditions in a well permit.⁸

Once well permits are granted, they remain in effect indefinitely, unless modified or rescinded by the DNR. Permittees must submit an annual pumping report identifying, among other things, the amount of water pumped; results are available in a searchable database on the DNR's website.⁹

Recent Legal Developments

After *Lake Beulah*, the DNR began screening all proposed high-capacity wells for potential effects on waters of the state, and sometimes imposed conditions on well permits to mitigate or monitor effects. The DNR also posts recent high-capacity well applications on its website to provide information and facilitate public access to the review process described in *Lake Beulah*.¹⁰ Yet the DNR's process has been subject to challenge, particularly in Wisconsin's Central Sands region.

The Central Sands lies between the Wisconsin River to the west, and the headwater streams of the Fox and Wolf Rivers to the east. It contains many

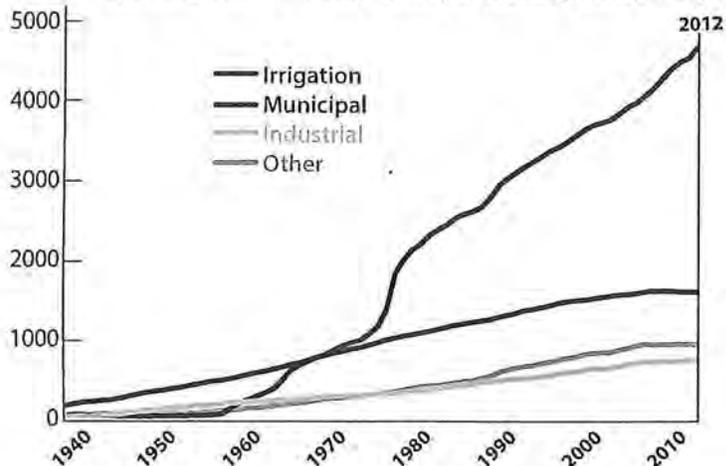


Christa Westerberg, U.W. 2002, is a shareholder at McGillivray, Westerberg & Bender LLC, Madison. The firm's emphasis is in environmental, civil rights, and open government law. She has represented citizens' groups and other entities in high-capacity well permitting actions.

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High Capacity Wells by Type in Wisconsin⁶

Number of operating wells with a daily capacity of 100,000 gallons per day or more



Data: Wisconsin Department of Natural Resources Credit: Kate Prengaman/Wisconsin Center for Investigative Journalism

Research has connected these withdrawals to flow reductions and drying of streams and lakes in the Central Sands, beyond effects attributable to climate or natural fluctuations.

high-quality water resources, including groundwater-fed trout streams, kettle lakes, and wetlands. It is also home to the state's largest concentration of high-capacity wells – approximately 2,500 – in part because of the area's sandy, well-drained soils.

Both the number of well applications and the amount of water pumped have increased over time. In 2013, total withdrawals for irrigation statewide were 101 billion gallons; in 2012, which saw a summer drought, withdrawals reached 135 billion gallons.¹¹ Research has connected these withdrawals to flow reductions and drying of streams and lakes in the Central Sands, beyond effects attributable to climate or natural fluctuations. For example, Long Lake in Plainfield, which previously had a maximum depth of approximately 10 feet, dried completely in 2006. The Little Plover River, a high-quality trout stream, was near dry in 2003 and has

dried annually in stretches since 2005.¹²

Two recent high-capacity well applications in the Central Sands have been subject to legal challenge – one by the permittee, and one by neighbors who had already experienced drawdowns in nearby surface waters. Both concerned permits for large-scale dairies proposed by Milk Source Holdings LLC in Adams County.

In the first case, the DNR granted a modified high-capacity well permit to New Chester Dairy to facilitate its expansion from 4,300 cows to 8,600 cows, making it one of the largest dairies in Wisconsin.¹⁴ Because the increased water withdrawal necessary for the dairy could have a significant adverse effect on the nearby Patrick Lake, the dairy conducted groundwater modeling to show the wells at their proposed location would not harm the resource. Though the DNR granted the permit, there were enough uncertainties in the

modeling analysis that the DNR required New Chester to conduct groundwater monitoring near the site to confirm the model's predicted effects on the groundwater table. The permit required

time, as "gradual intrusions into navigable waters," even if one project's effect might seem *de minimus*.¹⁸

In this case, existing pumping had already reduced the nearby Pleasant Lake

factor in the agency's decision to issue the permit, despite urging from science staff that cumulative impacts should be considered.

Yet the DNR contended that it lacked authority to consider cumulative impacts in individual permit decisions. The agency's chief argument cited the "modified reasonable use doctrine" in *State v. Michaels Pipeline*, a public-nuisance case filed on behalf of homeowners who experienced property damage and dried wells as a result of dewatering for a sewer pipe installation project.¹⁹ The decision rejected the prior rule of nonliability for virtually any use of groundwater,

Proposals included limiting DNR permitting authority, exempting or grandfathering existing wells from future regulations, and defining remedies for harmful groundwater withdrawals.

monitoring for three years, with results to be reported to the DNR.

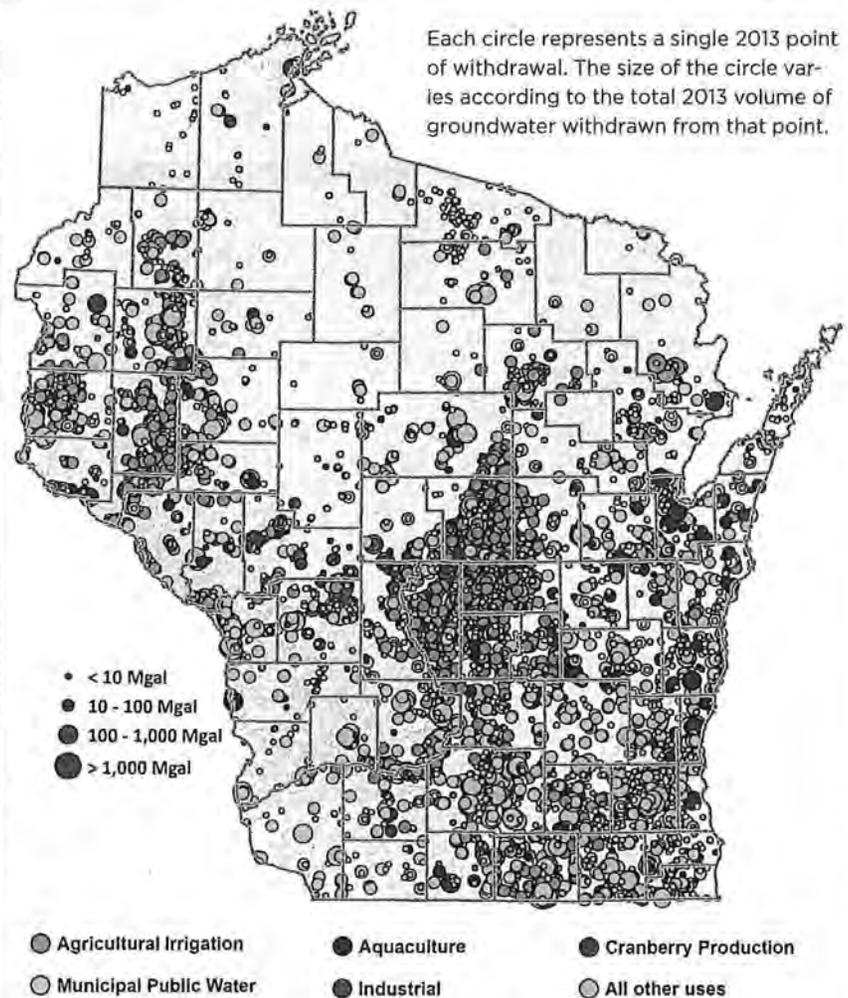
In an administrative contested-case proceeding, New Chester Dairy challenged the DNR's authority to require monitoring and the reasonableness of the monitoring conditions themselves. The administrative law judge (ALJ) determined on summary judgment that the DNR had express authority under statute, regulation, and case law to impose the monitoring conditions, including under Wis. Stat. section 281.11 and the *Lake Beulah* decision.

After an evidentiary hearing, the ALJ also determined that the permit monitoring conditions were reasonable and necessary to ensure the wells would not have a significant adverse effect on nearby waters of the state, and that the conditions were supported by substantial evidence.¹⁵ New Chester Dairy has since appealed this decision to circuit court, where it remains pending.¹⁶

In the second case, citizens groups, individuals, and the Pleasant Lake Management District challenged a high-capacity well permit that the DNR issued to Richfield Dairy, which would house 4,300 cows and 250 steers.¹⁷ The DNR permit, as later modified, authorized maximum pumping of 72.5 million gallons per year. The petitioners contended that the DNR's permit decision failed to consider the cumulative impacts of existing and likely future pumping on water resources in the region, to which the dairy would only contribute. Cumulative impacts typically occur over

by approximately two feet, and stream flows by up to 40 percent. The DNR agreed cumulative impacts were not a

2013 Groundwater Annual Withdrawals¹³



instead holding that withdrawals may trigger liability if they cause unreasonable harm by lowering the water table or reducing artesian pressure. Because the case discussed and recognized liability in terms of substantial harm caused by an *individual* water user, the DNR argued it could not deny a permit based on harm caused by *multiple other* water users.

After a nearly two-week contested-case hearing, the ALJ rejected this argument. As a matter of fact, the ALJ found “[i]t is scientifically unsupported, and impossible as a practical matter, to manage water resources if cumulative impacts are not considered.” That is, “when assessing impacts to a resource, one must examine how existing and proposed impacts affect the resource as a whole from a pre-pumping or pre-impacted condition.”²⁰ The decision additionally recognized that the Richfield Dairy wells, when combined with pumping from other wells, would exacerbate

existing reductions in nearby lakes, streams, and wetlands.

As a matter of law, the ALJ determined the DNR “took an unreasonably limited view of its authority to regulate high-capacity well permit applications.”²¹ In doing so, he relied on

As high-capacity wells proliferate in Wisconsin, water in groundwater-fed streams and lakes is being diverted to these wells beneath the surface, reducing surface-water levels and stream flows.

statutes, the *Lake Beulah* case, and longstanding public-trust-doctrine case law that recognized cumulative impacts in permitting decisions: “the *Lake Beulah* decision has clearly mandated consideration of all available ‘concrete, scientific evidence,’ which has for decades included consideration of cumulative impacts.”²² Because the science had

demonstrated that cumulative impacts were harming waters of the state, these effects must be considered when permitting Richfield Dairy’s wells.

In the end, the ALJ ordered the DNR to modify the dairy’s high-capacity well permit to reduce maximum pumping

to 52.5 million gallons per year. This amount represented the “appropriate balance between the rights of private parties to a reasonable use of waters of the State, and the rights of the public to not experience detrimental impacts to those public waters.”²³ No party appealed the decision.

Legislative Action

Legislators have expressed interest in revising Wisconsin’s high-capacity well permitting framework since the *Lake Beulah* decision.

One change has already occurred, while the *Richfield Dairy* case was pending. As part of the state’s 2013-15 biennial budget act, the legislature added Wis. Stat. section 281.34(5m), which states: “No person may challenge an approval, or an application for approval, of a high capacity well based on the lack of consideration of the cumulative environmental impacts of that high capacity well together with existing wells.”²⁴ This change is effective for well-permit applications on or after July 1, 2014, the budget act’s effective date. The Wisconsin Legislative Council has noted it is possible that this provision may be challenged on constitutional grounds.²⁵

Bills drafted in the 2013-14 legislative session also attempted to tackle high-capacity well permitting. Proposals included limiting DNR permitting authority, exempting or grandfathering existing wells from future regulations,



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and defining remedies for harmful groundwater withdrawals.²⁶

The topic will likely reemerge in 2015. If it does, a strong guiding point is the Wisconsin Supreme Court's emphasis on following the science in permitting decisions. Otherwise, there could be an "absurd result where DNR knew a proposed high capacity well would cause harm to waters of the state but had to issue the permit."²⁷ Legislation should also observe the public trust doctrine and cases interpreting it, to avoid a constitutional challenge. Finally, legislators can look to neighboring states for their approaches to groundwater and cumulative impacts, such as established

mechanisms in Michigan and Minnesota for permitting new wells and restoring already-affected waters.

Conclusion

Recent legal developments have provided Wisconsin's groundwater, and the surface waters that depend on it, protection from the increasing effects of well pumping and other stressors. While both legal and resource conflicts may continue in the near future, recent precedent may help create a framework for resolving these conflicts legislatively, administratively, or through future court decisions. **WL**

ENDNOTES

¹*Gillen v. City of Neenah*, 219 Wis. 2d 806, ¶ 23, 580 N.W.2d 628 (1998).

²2011 WI 54, 335 Wis. 2d 42, 799 N.W.2d 73.

³Wis. Stat. § 281.11.

⁴Wis. Stat. § 281.34.

⁵See Wis. Stat. §§ 281.343, 281.35.

⁶Graphic from the Wisconsin Center for Investigative Journalism Project: Groundwater supply, available at <http://wisconsinwatch.org/series/groundwater-supply/>. Used with permission of the Wisconsin Center for Investigative Journalism.

⁷Wis. Admin. Code chs. NR 812, 815.

⁸2011 WI 54, ¶ 4, 335 Wis. 2d 42.

⁹See Wisconsin DNR, High Capacity Well Information, <http://dnr.wi.gov/topic/Wells/High-Capacity.html> (last revised May 7, 2015).

¹⁰Wisconsin DNR, Recent high capacity well applications, <http://dnr.wi.gov/topic/wells/highCapWellAppsRecent.html> (last updated May 28, 2015).

¹¹Wisconsin DNR, Wisconsin Water Use, 2013 Expanded Withdrawal Summary (hereinafter DNR 2013 Report), available at <http://dnr.wi.gov/topic/WaterUse/documents/Withdrawal-ReportDetail.pdf>.

¹²George J. Kraft & David J. Mechanich, Groundwater pumping effects on groundwater levels, lake levels, and streamflows in the Wisconsin Central Sands (2010), available at <http://digioll.library.wisc.edu/cgi-bin/EcoNatRes/EcoNatRes-idx?id=EcoNatRes.Kraft-Ground>.

¹³Graphic from DNR 2013 Report and used with permission of the Wisconsin DNR.

¹⁴*In re Conditional High Capacity Well Approval for Two Potable Wells to be Located in the Town of New Chester, Adams County Issued to New Chester Dairy, Inc. & Milk Source Holdings LLC*, Wis. Division of Hearings & Appeals, No. DNR-13-011, Order (Sept. 18, 2014).

¹⁵*Id.*

¹⁶*New Chester Dairy LLC v. DNR*, No. 14-CV-1055 (Outagamie Circuit Ct.).

¹⁷*In re Conditional High Capacity Well Approval for Two Potable Wells to be Located in the Town of Richfield, Adams County Issued to Milk Source Holdings LLC*, Wis. Division of Hearings Appeals, Nos. IH-12-03, IH-12-05, DNR-13-021, DNR-13-027, Order (Sept. 3, 2014), available at www.doa.state.wi.us/documents/dha/Decisions/DNR/2014/dnr13021.pdf (hereinafter *In re Richfield Dairy*). The author represented Friends of the Central Sands and other petitioners challenging the permit.

¹⁸*Sterlingworth Condominium Ass'n Inc. v. DNR*, 205 Wis. 2d 710, 729, 556 N.W.2d 791 (Ct. App. 1996).

¹⁹63 Wis. 2d 278, 217 N.W.2d 399 (1974).

²⁰*In re Richfield Dairy*, *supra* note 17.

²¹*E.g.*, *Hixon v. PSC*, 32 Wis. 2d 608, 146 N.W.2d 577 (1966).

²²*In re Richfield Dairy*, *supra* note 17.

²³*Id.*

²⁴2013 Wis. Act 20, § 2092g.

²⁵Wis. Legis. Council Information Memo., The Permitting of Groundwater Withdrawals from High Capacity Wells in Wisconsin, IM-2014-05 (Oct. 27, 2014).

²⁶*E.g.*, 2013 Senate Bill 302.

²⁷*Lake Beulah*, 2011 WI 54, ¶ 28, 335 Wis. 2d 42. **WL**

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DNR Draft Environmental Impact Statement Comment Sheet/Hearing Appearance Slip

Proposed Kohler Golf Course, Town of Wilson, Sheboygan Co.

Do you wish to make an oral statement? Yes No

Name*: Mary O'Keefe
Representing: Environmental

PLEASE TURN IN COMMENT SHEET UPON COMPLETION.

Address: 5000
4104 Oakdale Ct Sheboygan

Phone: _____

E-mail: _____

Check box to subscribe to email updates about the proposed Kohler golf course. (Be sure to include an email address above.)

* Personally identifiable information collected on this form is used for administrative purposes and may be provided to requesters under the public records laws, ss. 19.31 to 19.39, Wis. Stats.

Please provide your comments on the Draft EIS (please use the back of the sheet if necessary):

Please DO NOT tamper with our
distinct delicate ecosystem!

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Proposed Kohler Golf Course, Town of Wilson, Sheboygan Co.

Do you wish to make an oral statement? Yes No

Name*: Sarah K. PETHAN

Representing: _____

Address: 639 Monroe St. #210
Sheboygan Falls, WI 53085

Phone: 920.234.2300

E-mail: skpethan@gmail.com

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Please provide your comments on the Draft EIS (please use the back of the sheet if necessary):

will provide comments via mail or email to DNR.

Thank you.

DNR Draft Environmental Impact Statement Comment Sheet/Hearing Appearance Slip
Proposed Kohler Golf Course, Town of Wilson, Sheboygan Co.

Do you wish to make an oral statement? Yes No

Name*: Harry Batterman

Representing: _____

Address: 2823 County Road V
Sheboygan WI 53081

Phone: 920-698-0250

E-mail: LBatman4U@excel.net

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Please provide your comments on the Draft EIS (please use the back of the sheet if necessary):

Location Questions
Well water usage

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DNR Draft Environmental Impact Statement Comment Sheet/Hearing Appearance Slip
Proposed Kohler Golf Course, Town of Wilson, Sheboygan Co.

Do you wish to make an oral statement? Yes No

Name*: Amela Marguardt

Representing: _____

Address: 1524 Kaat Lane

Sheboygan WI 53081

Phone: 719-570-0850

E-mail: _____

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Please provide your comments on the Draft EIS (please use the back of the sheet if necessary):

The DNR is supposed to protect our
natural resources. The Keweenaw ponds &
marshes are globally rare. Please protect
them.

DNR Draft Environmental Impact Statement Comment Sheet/Hearing Appearance Slip

Proposed Kohler Golf Course, Town of Wilson, Sheboygan Co.

Do you wish to make an oral statement? Yes No

Name*: Angela Hullin

Representing: citizens & children of WI

Address: 6709 Lake Aire Ct
Sheboygan

Phone: _____

E-mail: angiet17@yahoo.com

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Please provide your comments on the Draft EIS (please use the back of the sheet if necessary):

- Speaking on behalf of children of Wisconsin.

- Precedent of land giveaway

- Need for complete EIS.

(Will submit typed comments to Jay Scheifelbein also.)

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Proposed Kohler Golf Course, Town of Wilson, Sheboygan Co.

Do you wish to make an oral statement? Yes No

Name*: Rebecca Sher

Representing: Sheboygan County Audubon Society

Address: _____

2224 S 9th St Sheboygan WI 53081

Phone: 262-707-7478

E-mail: becca@beccashers.com

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Please provide your comments on the Draft EIS (please use the back of the sheet if necessary):

Sheboygan County Audubon Society opposes
the proposed plan due to a lack of
information about exactly which species
will be affected and how those species
will be affected. Thank you.

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DNR Draft Environmental Impact Statement Comment Sheet/Hearing Appearance Slip

Proposed Kohler Golf Course, Town of Wilson, Sheboygan Co.

Do you wish to make an oral statement? Yes No

Name*: Dane Checinski

Representing: Sheboygan County Economic Dev't Corp.

Address: 508 New York Ave, Room 205

Sheboygan, WI 53081

Phone: 920-452-7479

E-mail: dane.checinski@sheboyganCountyEDC.com

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Please provide your comments on the Draft EIS (please use the back of the sheet if necessary):

~~Positive benefits outweigh~~

This is a good project

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