

My name is Eric Ebersberger; I'm the Section Chief of the Water Use Section within the DNR's Bureau of Drinking Water & Groundwater. I appreciate the opportunity to offer comments on ASA1 to AB 679 on behalf of the Department of Natural Resources.

ASA1 to AB 679 affects high capacity well approvals. By way of background, a high capacity wells is a well that, together with all other wells on the same property, has a capacity of more than 100,000 gallons per day.

I have some brief comments regarding a few provisions of the Substitute Amendment.

#### 65-Day Review Period

ASA1 to AB 679 prescribes a 65 business day presumptive approval for high capacity wells. That is, the department must approve or deny the application within 65 business days of receipt of a complete application; and the failure to do so constitutes an approval. Currently, under Wisconsin Administrative Codes NR 820 and NR 812, the department is to approve wells within 65 business days of a complete application—but there is no presumptive approval provision. The department understands the need to adhere to reasonable timelines for reviewing applications, and would work to implement the provision as effectively as it has in other permitting contexts, such as Ch. 30 permitting.

#### Property Transfers

ASA1 to AB 679 also provides that high capacity well approvals may be transferred to persons to whom the surrounding land is sold without department review. Under Wisconsin Administrative Code NR 812, the new owner must obtain a new high capacity well approval before continuing to use the well. Although the department has been recording ownership transfers, the department has not been conducting new reviews of the previously approved wells. This provision makes it clear that practice will continue.

#### Limitation on Approval Conditions

ASA1 to AB 679 generally limits the conditions that the department may include in high capacity well approvals to conditions affecting location, depth, pumping capacity, depth of casing, and rate of flow. The department assumes that groundwater monitoring conditions would no longer be permitted.

#### Limitation on the Scope of Review

ASA1 to AB 679 appears to prevent the department, when reviewing high capacity well applications, from considering potential harm to waters of the state other than as explicitly provided for in section 281.34 of the statutes. That is, it appears that the bill would return the department to the more limited high capacity well reviews that were performed prior to the Supreme Court's decision in the *Lake Beulah* case.

Thank you. I am happy to answer any questions.



# Wisconsin Potato and Vegetable Growers Association Groundwater Task Force: Accomplishments 2012-2013

**Background:** The Wisconsin Potato and Vegetable Grower Association (WPVGA) Groundwater Task Force was formed in 2009 in response to growing concerns over the potential impact of irrigated agriculture, climate, urbanization, and other factors on the groundwater aquifer and surface waters of the Central Sands. The focus of the Task Force is to bring together resources and expertise to foster the sustainable use of water resources. The Task Force is chaired by Nick Somers (Plover River Farms) and Jeremie Pavelski (Heartland Farms).

## Task Force Goals:

- Be an advocate for responsible water use practices and informed, science-based public policy that will protect the Central Sands groundwater aquifer and its associated streams, lakes and wetlands.
- Promote and maintain a sustainable agricultural industry.
- Foster vibrant rural communities.



**Objective 1:** Consolidate and build on the extensive existing knowledge-base related to the hydrogeology of the Central Sands and the potential impacts of water use, drainage, climate and other factors on the groundwater aquifer and associated surface water bodies.



- Established a program to monitor groundwater elevations in privately owned irrigation wells both across the Central Sands and over time.
  - ✓ Sampling now in 2<sup>nd</sup> season with 473 samples in database.
  - ✓ Reports for trends in water elevation over time and land use overlays in development.
- Purchased and installed equipment to continuously monitor groundwater fluctuations in nested groups of wells placed in areas designated as high risk for surface water impacts (Little Plover, Long Lake, Pleasant Lake).
  - ✓ 20 wells installed in transects of priority areas. Data posted at [wisa.cals.wisc.edu/central\\_sands\\_water](http://wisa.cals.wisc.edu/central_sands_water)
  - WPVGA provided \$15,000 for purchase and \$15,000 for installation of wells.
- Commissioned a study of the hydrogeology of Long Lake by the UW-Extension Wisconsin Geological and Natural History Survey (WGNHS) to improve understanding of the formation of tunnel channel lakes and the impact of clay layers deposited in their formation on groundwater-surface water interaction.
  - ✓ WPVGA funded \$15,000 study with WGNHS. Masters degree study to be completed December 2013 (PI's: Bradbury and Bussan). PhD follow-up project now funded through NRCS (PI's: Potter and Bussan).
- Volunteered staff time to work with the DNR to monitor stream flow and lake levels (2013-14).
- Engaged independent hydrogeologist Charlie Andrews to assess strengths and weaknesses of ongoing Task Force activities and examine groundwater issues and solutions in other parts of the US that may be applicable to the Central Sands.
  - ✓ Andrews assisting in evaluation of potential approaches to increasing efficiency of water use. Funded by the WPVGA, \$25,000.



## Objective 2: Identify, implement and evaluate strategies to increase the efficiency of irrigation.



- Conducted a water management survey to establish a baseline of grower practices in irrigation and identify areas for potential improvement.
  - ✓ Survey completed by 30 growers in 2012.
- Commissioned, tested, and implemented new irrigation scheduling software.
  - ✓ WPVGA funded \$15,000 project (UW Biosystems Engineering, 2012) to develop new irrigation scheduling software.
  - ✓ WPVGA funding integration of scheduling into grower-friendly farm management software (projected \$10,000, 2013).
- Evaluated site-specific, precision irrigation based on variability of soil moisture holding capacities across fields.
  - ✓ Evaluated commercial sweet corn field in Adams, County, 2013.
- Conducted on-farm research on potential for deferred irrigation.
  - ✓ Demonstrated potential for water savings of one inch in field corn and three inches in soybean, both without negative yield impact.
- Conducted research on drip irrigation for high water use crops.
  - ✓ On-farm and experiment station research in 2011/2012 showed 15% reduction in water use on potatoes.
- Investigated the potential for re-designing the century old drainage system in the Central Sands to reduce water loss and increase recharge.
  - ✓ Assessment of drainage impacts currently in progress (WPVGA, \$5,000, 2013).

## Objective 3: Investigate evaporation from crops, natural landscapes and bare soil and its relationship to climate, irrigation, recharge, and fluctuations in groundwater.



- Investigated year-round water consumption of irrigated crops, natural vegetation, and bare soil.
  - ✓ Evaluation in progress on Portage County farm (Nelson Institute, 2013).
- Established a digital data-base that tracks land use across the Central Sands from 2003–present to identify changes in landscapes and potential relationships to water fluctuations.
  - ✓ Cropland data layers now available by watershed from 2003. Proposed map overlays of water elevation database (Objective 1, 2014).

## Objective 4: Communicate Task Force activities and accomplishments to the farming community, the citizens of the Central Sands, and the people of Wisconsin, and seek broad input from all concerned parties to determine potential solutions.



- In 2013, the Task Force continued to communicate activities and accomplishments to farmers and citizens of Wisconsin and seek input on potential solutions.
  - ✓ Assisted in development of a white paper outlining broad approaches to water management (PI's: Bussan, Colquhoun, Bradbury and Potter, 2013 (in review)).
  - ✓ Created a website to communicate water-related activities ([wisa.cals.wisc.edu/central\\_sands\\_water](http://wisa.cals.wisc.edu/central_sands_water)).
  - ✓ Conducted a tour for state NRCS staff. The tour focused on water issues and farming practices (July 2013).
  - ✓ Commissioned 30 blogs targeted at general audiences to educate on farming practices and water issues in Central Wisconsin (WPVGA, \$6000, 2013).

Funding Sources: The activities described in this report were funded through a combination of research grants and direct grower funding. We acknowledge the contributions of the following grants and organizations: WPVGA, MWFPFA, CALS Hatch, Wisconsin Institute for Sustainable Agriculture, Midwest SARE Program, UWEX, Wisconsin Geological and Natural History Survey, NRCS CIG program, SCRI Block Grant program, Wisconsin Groundwater Coordinating Council and Wisconsin DNR.

Testimony of Sandy Larson, Larson Acres, Inc  
In support of Assembly Bill 679  
January 30, 2014

Hello, my name is Sandy Larson. I am a 5th generation Wisconsin dairy farmer. I grew up and currently live in Evansville, Wisconsin and am an owner of Larson Acres' - a family owned and operated dairy farm. I am testifying today in support of Assembly Bill 679 on behalf of my family and Larson Acres.

We support AB 679 because it will restore regulatory certainty for my family business and all farmers who currently have permitted high capacity wells, and those who may seek a new well in the future. My family and dairy farmers across the state rely on DNR-permitted wells to water our cows and keep our facilities clean. Each time our family business has required a new or reconstructed high capacity well, we submitted an application form, and we understood WDNR reviewed the application and approved the well in accordance with the statutes and administrative rules that govern well permits. When the Supreme Court issued its decision in the Lake Beulah case, it effectively eliminated the certainty of the permitting process created by those statutes and rules. The court basically said that the statutes and rules only identify the minimum information and process required, and that DNR can require more information from an applicant and create new conditions on high capacity wells -- even if the requested information or new conditions are not included in or authorized by any statute or rule. In other words, I could submit a well application that could be subject to an approval standard or criteria that doesn't exist anywhere in any statute or rule, and it might be different than the approval standard or criteria that DNR uses to evaluate my neighbor's well. After the Lake Beulah case, the permit applicant is now uncertain of the process they may or may not have to go through and cross their fingers that a well application will be approved. Businesses that are regulated by WDNR, including dairy farmers, rely on the predictability that flows from the consistent implementation of statutes and rules to make very important and very expensive business decisions. When the statutes and rules are disregarded, or considered to be only the minimum required, businesses are left without the tools necessary to make informed risk assessments and business decisions. Of course I understand that a well application could be denied in certain circumstances, but if statutes and rules explain when a permit may be denied, at least I can evaluate those risks. When businesses cannot adequately evaluate their risks, they stop growing or may even find a different state to build or invest in.

As drafted and public noticed, AB 679 restores the regulatory certainty that existed since the legislature enacted the groundwater law in 2004. I understand the 2003-2004 legislative process included input from many stakeholders, including environmental groups, businesses and farmers. AB 679 will reaffirm the legislature's intent that the final product of that process be respected, and that regulated business can once again rely on statutes and rules for a consistent well permitting process.

Thank you.



Case Study/

## Irrigation Effects in the Northern Lake States: Wisconsin Central Sands Revisited

by George J. Kraft<sup>1</sup>, Katherine Clancy<sup>2</sup>, David J. Mechenich<sup>2</sup>, and Jessica Haucke<sup>2</sup>

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### Abstract

Irrigated agriculture has expanded greatly in the water-rich U.S. northern lake states during the past half century. Source water there is usually obtained from glacial aquifers strongly connected to surface waters, so irrigation has a potential to locally decrease base flows in streams and water levels in aquifers, lakes, and wetlands. During the nascent phase of the irrigation expansion, water availability was explored in works of some fame in the Wisconsin central sands by Weeks et al. (1965) on the Little Plover River and Weeks and Stangland (1971) on “headwater area” streams and lakes. Four decades later, and after irrigation has grown to a dominant landscape presence, we revisited irrigation effects on central sands hydrology. Irrigation effects have been substantial, on average decreasing base flows by a third or more in many stream headwaters and diminishing water levels by more than a meter in places. This explains why some surface waters have become flow and stage impaired, sometimes to the point of drying, with attendant losses of aquatic ecosystems. Irrigation exerts its effects by increasing evapotranspiration by an estimated 45 to 142 mm/year compared with pre-irrigated land cover. We conclude that irrigation water availability in the northern lake states and other regions with strong groundwater-surface water connections is tied to concerns for surface water health, requiring a focus on managing the upper few meters of aquifers on which surface waters depend rather than the depletability of an aquifer.

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### Introduction

Irrigated agriculture in the United States was once almost exclusive to the arid west, but has expanded greatly into the humid east during the past half century. With the expansion into differing settings have come differing sets of environmental challenges. Here we examine how groundwater-sourced irrigation affects environments exemplified by the northern Great Lake states (Minnesota, Michigan, and Wisconsin; Figure 1), particularly where shallow glacial aquifers are strongly connected to abundant local surface waters.

Irrigation development in the northern lake states grew from negligibility in the 1950s to 290,000 ha in 1978 to 567,000 ha in 2005 (Bajwa et al. 1992; USDA NASS 2009 and predecessors). Unlike the arid west, irrigation is not required for producing crops, but rather is “supplemental” (augments rainfall sufficient to grow a crop), increasing productivity and allowing the culture of high-water demanding crops by bridging periods when soil moisture would otherwise become limiting. Consequently, lake states irrigation is more common in areas with coarse soils having small water holding capacities. Western irrigation source water is often surface water, groundwater pumped from aquifers poorly connected with local recharge processes and local surface waters, and groundwater pumped from the valley aquifers of large rivers (USDA NASS 2009; Sargent et al. 2000; Kenny et al. 2009; Gutentag et al. 1984). In contrast, lake states source water is predominantly groundwater obtained from coarse glacial aquifers that are recharged locally and are connected strongly to local surface waters (USDA

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## **Invited Testimony related to AB 679 related to high capacity well approvals**

January 30 2014

George J. Kraft, PhD.

Director, Hydrogeologist, and Professor

Center for Watershed Science and Education

University of Wisconsin – Extension / University of Wisconsin – Stevens Point

715-346-2984 [gkraft@uwsp.edu](mailto:gkraft@uwsp.edu)

Good afternoon, and thank you for all the work that you do.

I am appearing this morning for informational purposes only at the invitation of Rep. Danou.

I am also the director of the Center for Watershed Science and Education with the University of Wisconsin – Extension and the University of Wisconsin – Stevens Point. We are the folks who help your constituents ensure that they have safe drinking water from their private wells, help lake and stream groups with water quality concerns, and assist county conservation offices with water quality programs. I am also a professor of water resources and a licensed professional hydrologist. I was privileged to work with Sen. Kedzie and Rep. Johnsrud during the drafting of groundwater legislation in 2003, and to work with the Joint Groundwater Work Group in the 2010 legislature.

In recent years I have been doing substantial work on how unmanaged groundwater pumping is drying lakes, streams, and wetlands in Wisconsin, particularly the central sands region.

I'd like to make three points in the brief time we have.

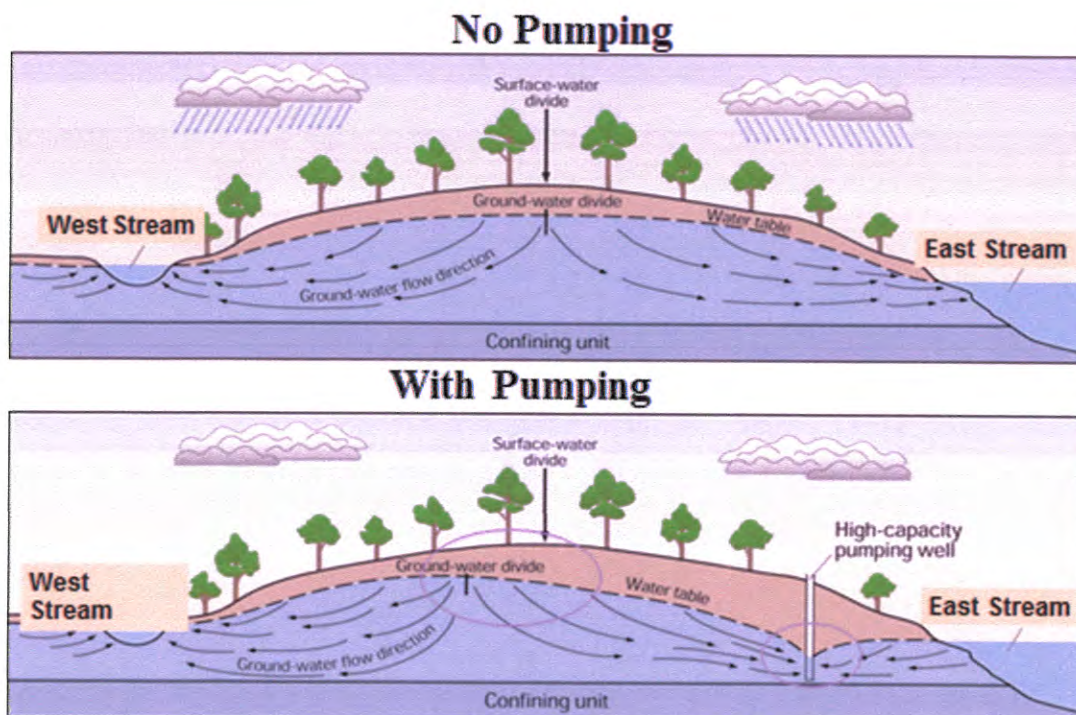
1. Groundwater, lakes, and streams are connected. Groundwater pumping affects water levels and lakes and streams. Too much pumping can dry them.
2. Pumping is already drying lakes, streams, and wetlands in parts of the state, most notably the central sands. Explanations like climate change, a long period of drought, killer trees, and the like don't hold water.
3. This bill rolls back very modest protections to lakes and streams to the provisions passed in 2004, which don't really protect any lake, stream, and wetland from the impacts of pumping. If it did, obviously we wouldn't be having the lake and stream drying we are experiencing today.



**1. Groundwater, lakes, and streams are connected. Groundwater pumping affects water levels and lakes and streams. Too much pumping can dry them.**

The cartoon below shows how groundwater works in a simple system that predominates much of Wisconsin. More complicated systems occur especially in the eastern part of the state, but the principles are largely the same.

Some of the rain on the earth's surface percolates through the soil, fills the aquifer, and becomes groundwater. Groundwater isn't stagnant, but rather moves from place higher on the landscape usually to streams where it discharges. Groundwater may travel a few feet to a few tens of miles in the aquifer before it discharges. If groundwater encounters a depression in the earth's surface, it fills it, creating lakes or wetlands.



When we pump groundwater, we always always always lower water levels somewhere, and divert water out of streams somewhere. When we pump a little, we have a small effect, when we pump a lot we have a large effect. One thing to keep in mind when looking at this cartoon, it really doesn't matter how thick the aquifer is, whether the aquifer is 20 feet or 100 feet thick, drying up the top few feet dries lakes and streams.



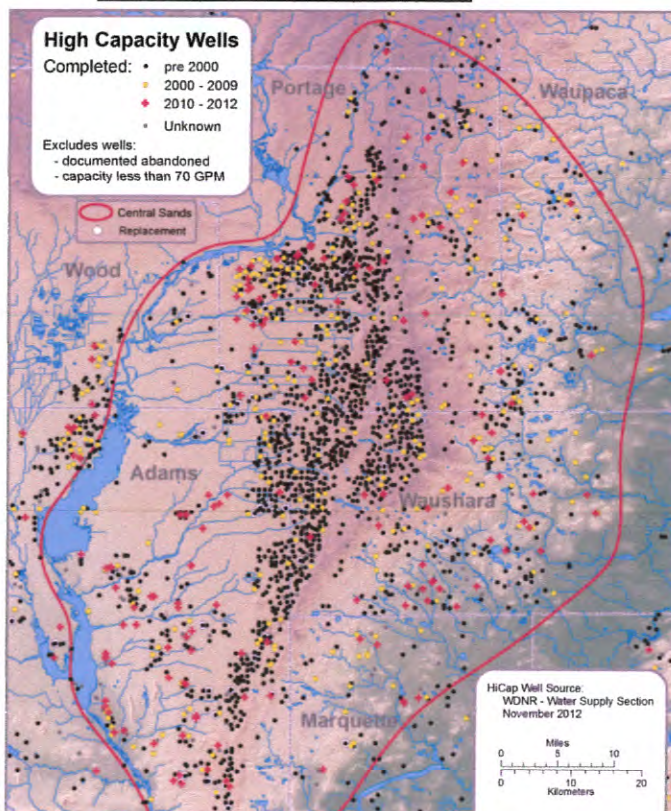
## 2. The central sands situation.

The central sands region of Wisconsin has the most prominent groundwater impacts because, (1) like in much of Wisconsin, lakes, streams, and groundwater are well connected and fed by groundwater, and (2) because of the huge amount of pumping that goes on in the central sands. Expect to see more central sands situations as huge new amounts of new unmanaged groundwater pumping go in around the state.

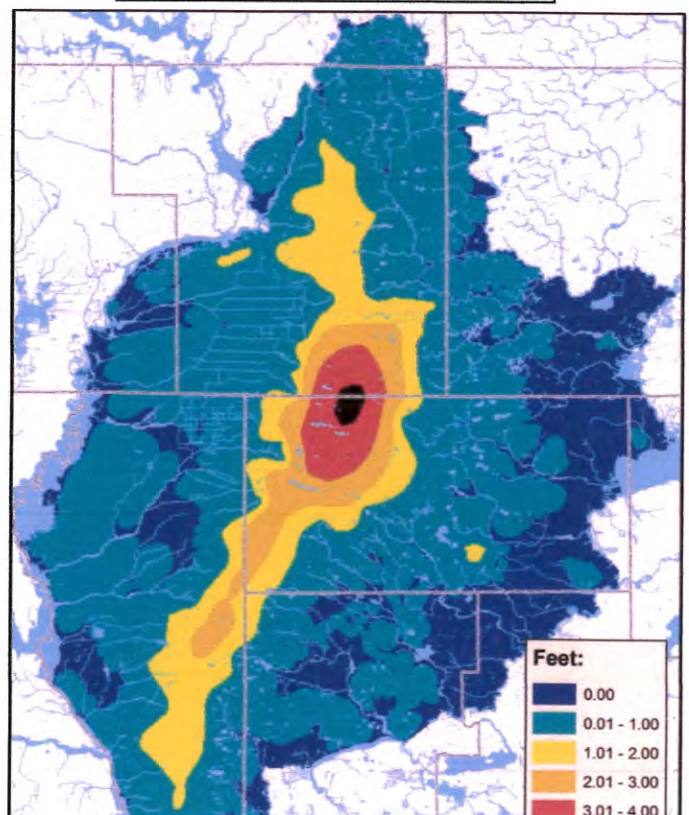
There are some 2000 high capacity wells in central Wisconsin that pump billions of gallons of water each year – 50 billion in 2011, and 80 billion in 2012. Pumping in just three of the central sands counties accounted for a third of all the water pumped in the state in 2012. Most of that water was used for irrigation. In 2012 an average of over a foot of water was pumped out of the ground and applied to each irrigated acre.

This pumping has had huge drying effects. Dozens of lakes and wetlands have had their water levels go down, and dozens of headwater streams are flow impacted. Some wetlands have become dry land, shallower lakes are turning into wetlands, deeper lakes are turning into shallower lakes with losses of navigability and habitat. The county beach at Wolf Lake has been unusable for getting close to a decade. Public hunting and fishing land, paid for by the license fees of sportsmen are losing value. Boat landings on lakes sit high and dry. This is not a one or two water body thing. It is widespread and increasing.

**High Capacity Wells in  
the Central Sands**

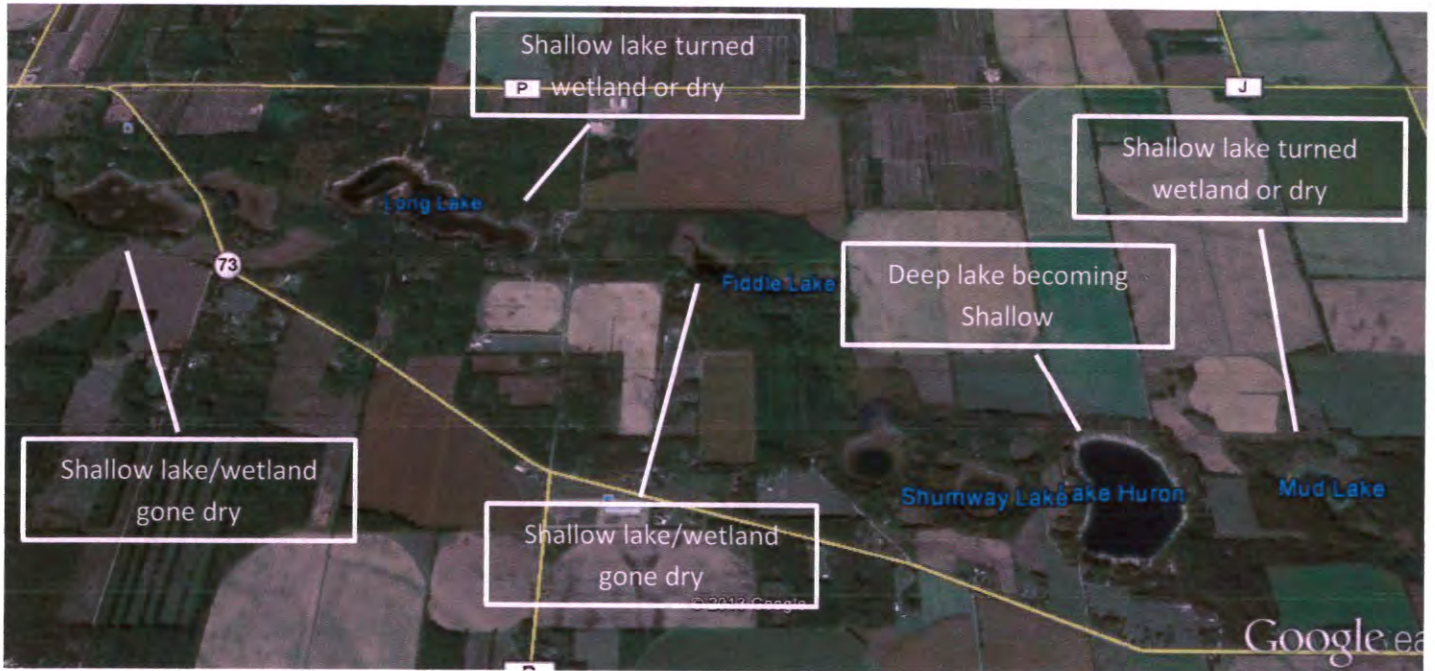


**"Average" Water Level  
Drawdowns due to Pumping**





**Just one example – the  
Plainfield lakes**



The science of these pumping impacts is well known. Studies in the central sands going back 50 years predicted this, and more recent studies have confirmed the predictions. Other causes like killer trees, magic clay layers, climate change, and drought have been found lacking. Supposed cures like new nozzles, irrigation scheduling, and damming streams have been looked at by hydrologists and found wanting.

**3. Effects of AB 679.**

The effect of AB 679 is to undo the modest protections for surface waters and private wells that were gained in the Beulah case through the state constitution and state Supreme Court in a unanimous decision. Without going into too many details, it goes back to a strict statutory approval scheme passed in 2003 Act 310. I worked through the legislative process with Sen. Kedzie, Rep. Johnsrud, and their staffs. It was recognized that the legislation and the statutory changes would accomplish little, but was a “first good step.” So the legislation offers no protections to 99% of lakes, any wetland, and 87% of streams. And the protections offered to even “protected” streams are easily circumvented, so no water body is truly protected.

The problem is we never figured out the second good step. So here we sit in 2014 debating whether to withdraw modest protections, and by any anyone’s definition, they are modest, and

return to a standard where anyone can pump any amount of groundwater and individually or with other pumpers dry up any lake or stream in the state.

I understand you have a tough choice to make. Some of you may honestly believe that pumping water for agriculture and other uses takes precedence over lakes and streams. As one Senator I know said, I'm sorry about this, but lakes are collateral damage. Others are troubled and think about the pumping economy vs the economy of lakes and fishing and tourism, or the values of property on lakes, or the property tax dollars generated around lakes.

Good luck! But may I let you know that Wisconsin has in Extension, the rest of the University, and in the private sector some of the finest hydrologists in the world ready to assist you in your decision making. If you want, come on out for a tour of the pumping impacted region and see for yourself the dry wetlands, shrunken lakes, and dry boat landings.

I thank you for your invitation to address you today.





**Testimony of Amber Meyer Smith, Director of Government Relations  
AB 679  
Assembly Committee on Environment and Forestry  
January 30, 2014**

Clean Wisconsin is a non-profit environmental advocacy group focused on clean water, clean air and clean energy issues. We were founded forty three years ago as Wisconsin's Environmental Decade and have thousands of members around the state.

I am speaking today in opposition to AB 679 because it jeopardizes DNR's ability to adequately protect Wisconsin's groundwater resource. In 2004, the Groundwater Protection Act (Act 310) put into place a good first step in groundwater protection in Wisconsin based on recommendations developed after careful analysis and debate among a group of diverse stakeholders. It was a great positive step forward to be sure, but was acknowledged by everyone involved to only be the first step towards sustainable groundwater management. I would have hoped we could be here talking about how to take that next step forward but unfortunately AB 679 and its amendment are a step backward for protecting our lakes and rivers from overpumping.

Clean Wisconsin supported Act 310. However, because Act 310 was only a first step, it left many of Wisconsin's groundwater problems unaddressed. In fact, the 2007 Groundwater Advisory Council's report to the Legislature unanimously recommended that as a next step, the state develop "water management legislation" and a "comprehensive statewide water management policy" for the long-term management of our water resources. That unanimous recommendation of the GAC (which included representatives from agriculture, municipalities, environmentalists, well drillers, regulators and industrial interests) should not be taken lightly. As you can imagine it was not a group that agreed on a lot, but they unanimously recommended that the State develop water management legislation and policy to:

- *balance competing water uses, including environmental protection;*
- *rely on sound science and the principles of adaptive management;*
- *encourage efficient water use while discouraging waste;*
- *provide for coordination among state and local government agencies; and*
- *seek to ensure adequate water supplies for future generations*

Instead of implementing the recommendations of the GAC, AB 679 locks the first step in groundwater protection in place as the only step, stagnating progress on this issue instead of moving forward.

Now it is ten years since Act 310 passed, and Wisconsin's problems with groundwater are only getting worse. Lakes and rivers are still drying up, private wells are being impacted, and people are concerned about their access to water. **There are 40% more high-capacity well applications in Wisconsin than just two years ago, and the trend is not slowing.** Since 2011, the DNR has approved nearly 750,000,000 additional gallons per day of groundwater withdrawals. The potential cumulative effects of this pumping are vast, and by now the stories of lakes and rivers drying up in central Wisconsin are well known. Problems exist in other areas too; Waukesha, Madison and Green Bay have all faced groundwater shortages in the last 10 years.

The central sands area of Wisconsin has certainly become the poster child for groundwater quantity issues. One third of the 288 billion gallons of groundwater withdrawn annually in Wisconsin comes from the central sands –

which covers just 5% of the state's area. The Little Plover River has dried up, and some residents are watching their once-lakefront properties dry up on other lakes in central Wisconsin. The frac sand mining boom in western Wisconsin has raised new concerns about cumulative impacts of high capacity wells. In one known instance a frac sand mine operation ended up digging a new well for a farmer after his ran dry. Groundwater is a finite resource that must be protected against overuse.

Since the 2004 law was passed, holes in the policy have led to challenges in resource management for DNR. These holes have led to multiple legal actions, the most significant of those being a 2011 unanimous Wisconsin Supreme Court decision that declared it to be DNR's minimum duty under the Public Trust Doctrine to consider impacts of groundwater on surface waters of the state. Since that decision, DNR looks more broadly at the impacts of a high capacity well permit on surrounding waterbodies. There are additional legal actions making their way through the courts right now concerning DNR's duty to look at cumulative impacts and DNR's authority to impose conditions on high capacity well permits. Because there have been no next steps from the Legislature for groundwater protection, neighbors and farmers alike are taking their cases to the courts.

Meanwhile, legislative action has only further stripped citizens of their legal rights to protect our water resources, with the budget language passed last year that prevents neighbors from bringing a case against the DNR if they fail to consider cumulative impacts in the permitting process. And now AB 679 seeks to limit DNR authority to proactively address the water resource management challenges that our state currently faces.

As amended AB 679 essentially undoes the Lake Beulah Supreme Court decision, saying DNR CANNOT consider any waterbodies in their environmental review that are outside of those identified in the 2004 law as having 1) 95% water loss, 2) significant impact on a spring, 3) located in a groundwater protection area. This will leave a significant portion of waterways unprotected. AB 679 seeks to remove DNR authority to conduct this type of constitutionally mandated analysis on groundwater withdrawals. This bill will leave people with few options to prevent impacts to their own lakefront property.

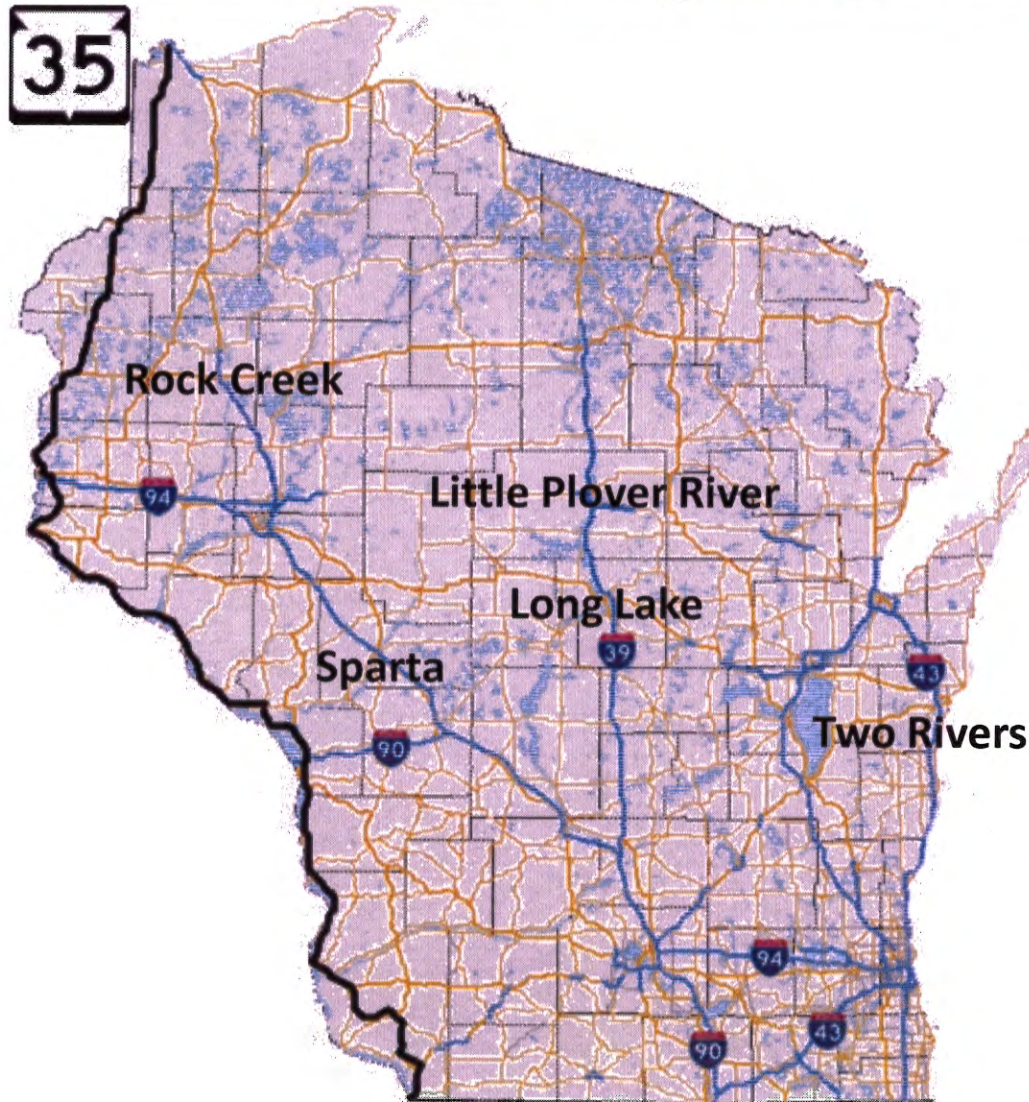
Another concern with AB 679 is the creation of permanent water use permits that run with the land. This is at the very least a new approach to water management in Wisconsin, one that basically assigns water resources to existing well owners at the expense of neighbors or new wells. Under that provision, new industry coming in may not have the same access to the groundwater resource that others enjoy. It also means that as more problems are discovered with groundwater quantity, those permits can never really be altered – a private right to that groundwater is basically guaranteed. Besides being administratively unrealistic and burdensome, it directly interferes with DNR's use of sound principles of science and groundwater management to prevent groundwater management problems from occurring in the first place.

Also troubling is that AB 679 also takes away the flexibility DNR has to work with an applicant to apply conditions to a permit that will help balance property rights for lakefront homeowners, farmers, and people with private drinking wells. Common sense permit conditions like monitoring a well's impact and preventing significant adverse impacts would no longer be allowed under this bill. The bill also puts a strain on resources at DNR that are already stretched thin. The 65 day presumptive approval will be difficult to meet with the increased volume of permits.

For these reasons we respectfully ask that you oppose AB 679 today.



# Instances of high-capacity well impacts on neighboring wells and water bodies



## Rock Creek (Dunn County)

Well owners experiencing drops in water levels in areas with new high-cap wells

## Little Plover River (Portage County)

The Little Plover River has been named one of America's most endangered streams due to diminished water levels

## Long Lake (Waushara County)

Lakefront property values have dropped precipitously due to receding water levels

## Sparta (Monroe County)

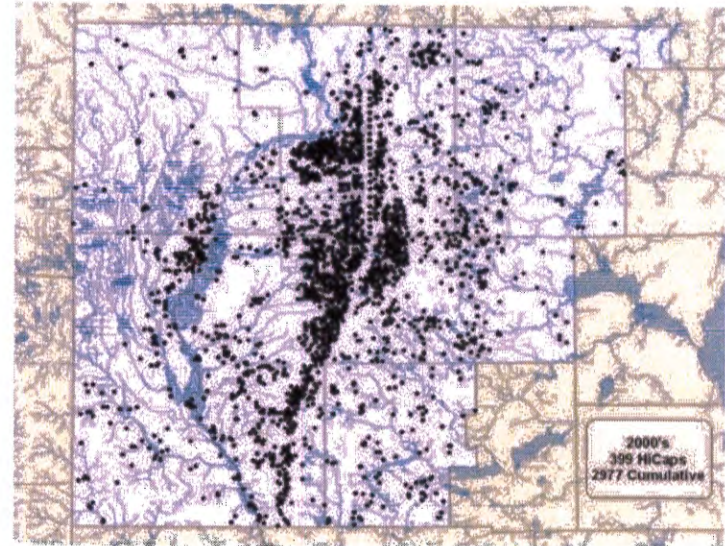
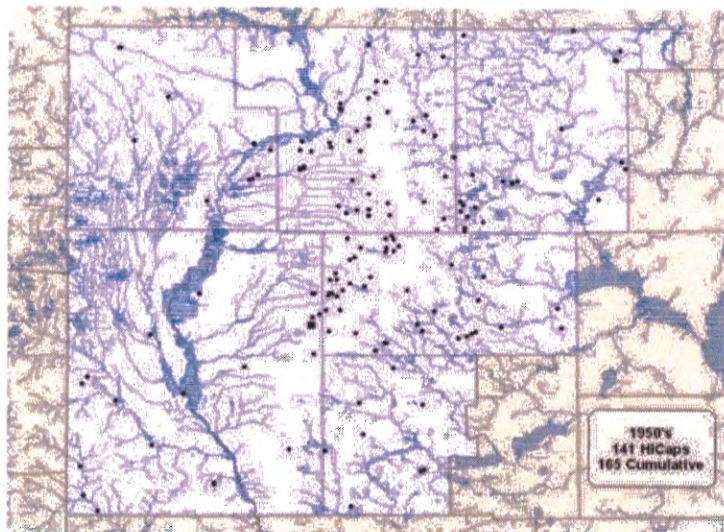
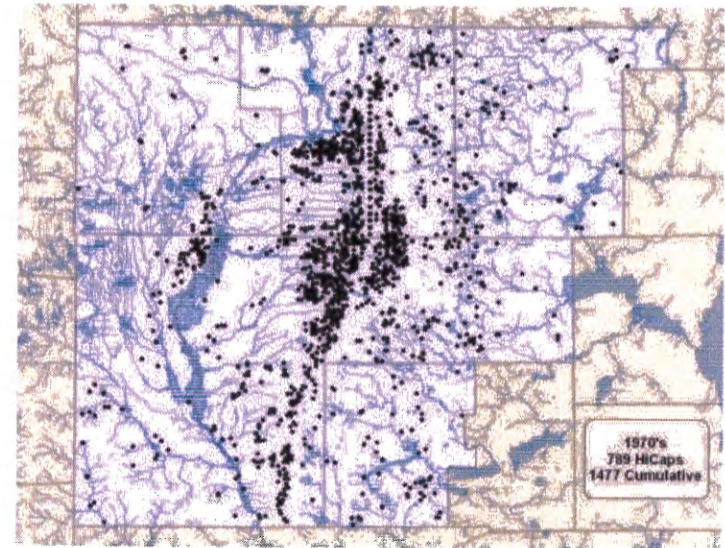
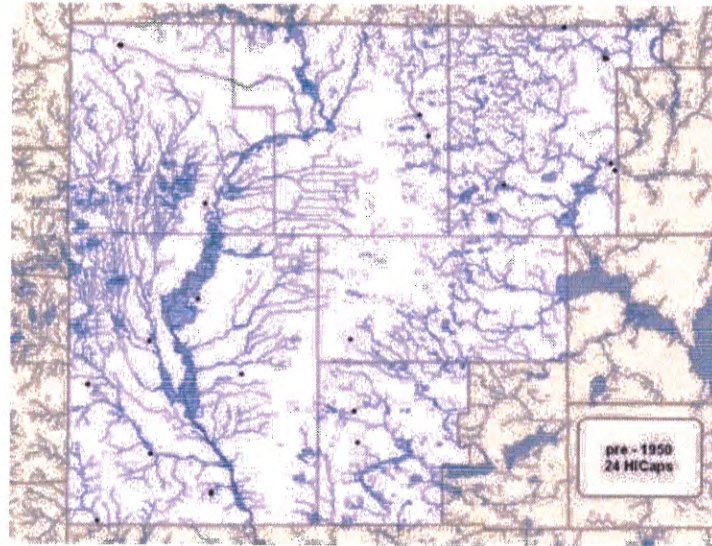
the well on the Jorgenson dairy farm in Sparta went dry when the adjacent U.S. Silica mine began running its high-capacity well

## Two Rivers (Manitowoc County)

The depletion of over a dozen neighboring wells precipitated a lawsuit against Wilfert Farms, a commercial carrot grower



# Growth in High Capacity Wells in the Central Sands







January 30, 2014

Representative Jeffrey Mursau  
Assembly Committee on Environment and Forestry  
Room 113 West  
State Capitol

### Testimony regarding AB679

Representative Mursau and members of the Committee'

The River Alliance of Wisconsin is sitting before you today as an organization that has protected and restored Wisconsin rivers for over two decades. We have also been deeply engaged in finding reasonable science-based solutions to managing the conflicts around groundwater usage and protection of surface waters. In 2003 we drafted a proposal in partnership with the Potato and Vegetable Growers and worked closely with all the stakeholders in the creation of the Groundwater Protection Act of 2004.

We supported the signing of Act 310 in 2004 as an important *first step* by the state to affirm that groundwater is undeniably linked to surface water and that unsustainable groundwater pumping can harm rivers, lakes and wetlands. This law, however, only requires consideration of impacts to rivers and lakes in very limited circumstances.

This is why we are deeply concerned about AB679. The intent of the bill is not to move us forward in responsible groundwater management but to lock us in to 2004, when 99% of lakes, 92% of rivers and 100% of wetlands had no protection whatsoever from being sucked dry by excessive groundwater pumping.

AB679 would:

- Reverse a unanimous Wisconsin Supreme Court decision **that affirmed the constitutional authority and duty of the DNR “to consider whether a proposed high capacity well may harm waters of the state”**;
- Give DNR 60 days to make a decision on a high-capacity well permit or that permit is automatically granted;
- Limit the ability of the DNR to ask for reasonable conditions like monitoring when issuing a well permit in a vulnerable area;

- Pin a water withdrawal permit to a property for ever, essentially making that water a property right.

In the 10 years that have passed since 310, the problem of excessive groundwater pumping has exploded. Between 2008 and 2014, 2900 more wells capable of pumping 100,000 gallons per day or more have cropped up on the landscape.

And while the heart of the conflict lies in the Central Sands area, it's by no means limited to the Central Sands and a few dry lakes:

- Private drinking water wells in the Fox Valley have been running dry with the increase in irrigation wells in the surrounding area;
- Excessive groundwater use in areas of eastern Wisconsin: Brown County on down to Waukesha demonstrate how naturally-occurring toxins like radium and arsenic have been drawn into public drinking water supplies as groundwater levels have dropped;
- In western Wisconsin, the rapid increase in high capacity wells in frac sand country are starting to dry up both drinking water and agricultural wells in Trempeleau and Chippewa counties.

It's hard to appreciate how fast and furious the growth of high capacity wells has been in the state so I attach to these comments DNR's analysis as a visual reference.

Rolling back the ability of DNR to reasonably balance these uses and to protect people from their tap running dry or the lake or river in their backyard disappearing is irresponsible: it will result in either more high capacity well permits being rejected outright (because conditions to monitor cannot be imposed, for example) or more permits being granted with known harm to rivers, lakes and private wells. This bill will create more problems than solutions.

**We strongly urge that this bill be opposed and not sent to the floor for an assembly vote. Our residents and our natural resources deserve better than this.**

Sincerely,

A handwritten signature in black ink, appearing to be 'H. Sarakinos', written in a cursive style.

Helen Sarakinos  
Policy Director

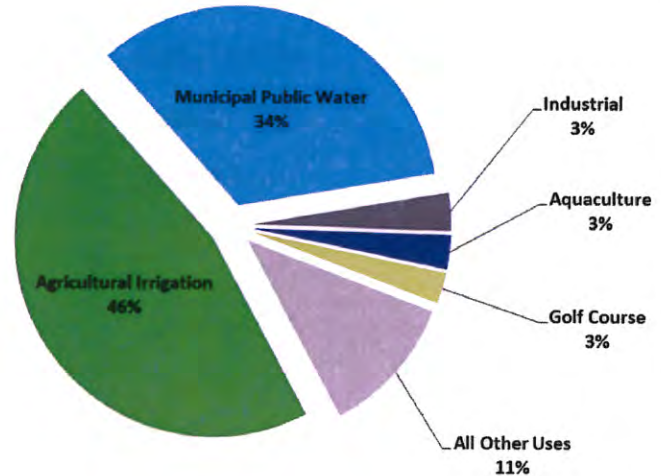




# Groundwater Use in Wisconsin: 2012 Withdrawals

292,303,941,228 groundwater gallons from 13,000 sources in in 2012, up 37% from 2011.

- Agricultural Irrigation surpassed municipal public water in 2012 due to the drought.
- Could cover the land area of Wisconsin with ¼ inch of water.
- Enough water to fill Lambeau Field over 600 times.



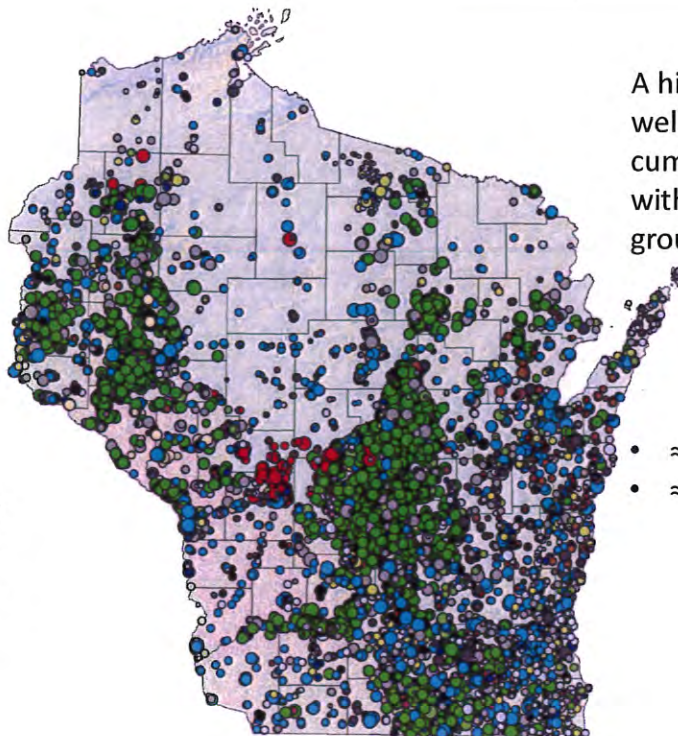
≈800,000 additional non-hicap wells statewide serving homes, farms and businesses withdraw roughly 50-75 billion gallons per year.



# Wisconsin Groundwater Withdrawals: High Capacity Wells by Use

- ≤ 20 GPM
- 21-69 GPM
- 70 - 500 GPM
- 501 - 1000 GPM
- >1000 GPM

- Aquaculture
- Agricultural Irrigation
- Golf Course Irrigation
- Cranberry Production
- Other Irrigation
- Livestock
- Industrial
- Municipal Water Supply
- Non-Muni Public Water
- Industrial Sand Mining
- Non-Metallic Mining
- All Other Uses



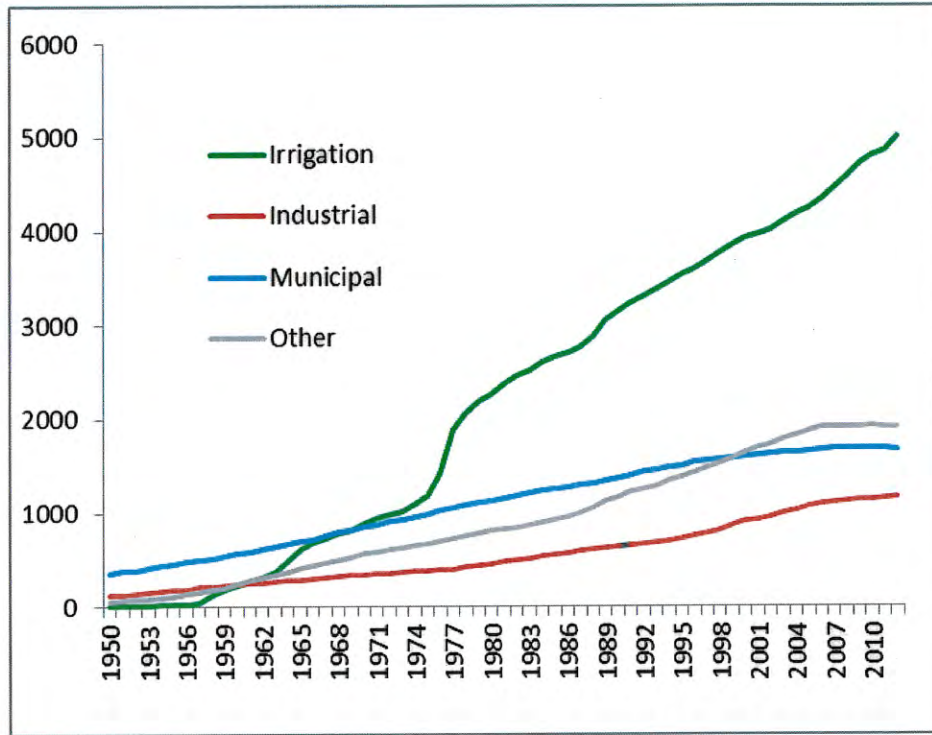
A high capacity well is any well on a property with the cumulative capacity to withdraw 100,000 gpd of groundwater.

- ≈ 8000 ≥70 gpm
- ≈ 4000 <70 gpm



# Wisconsin Groundwater Withdrawals

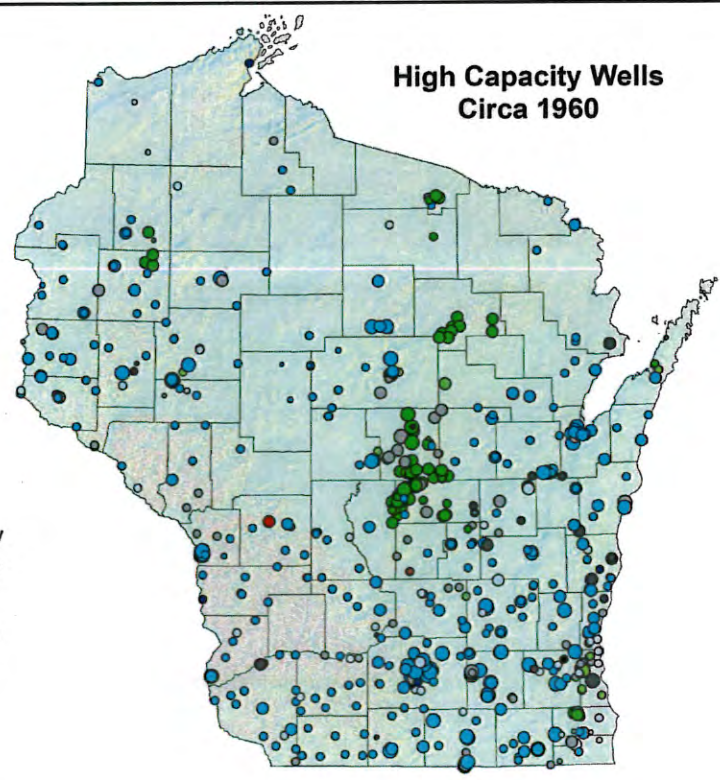
## Growth in High Capacity Wells



# Wisconsin Groundwater Withdrawals

## Growth in High Capacity Wells

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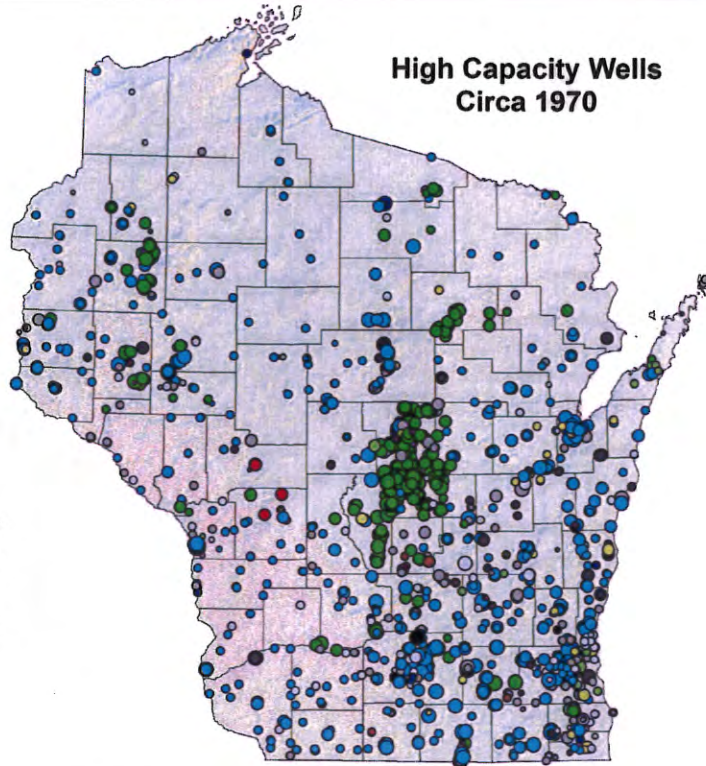


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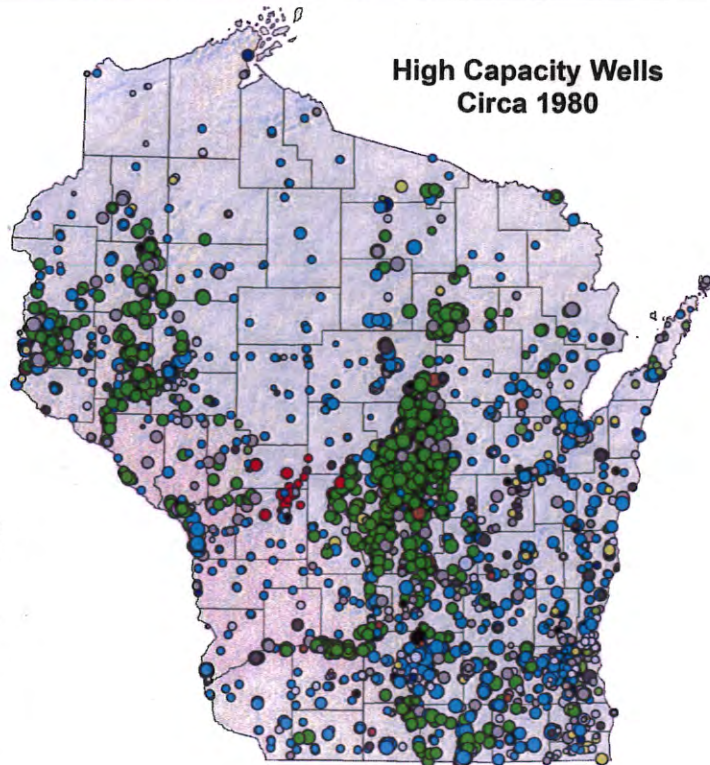


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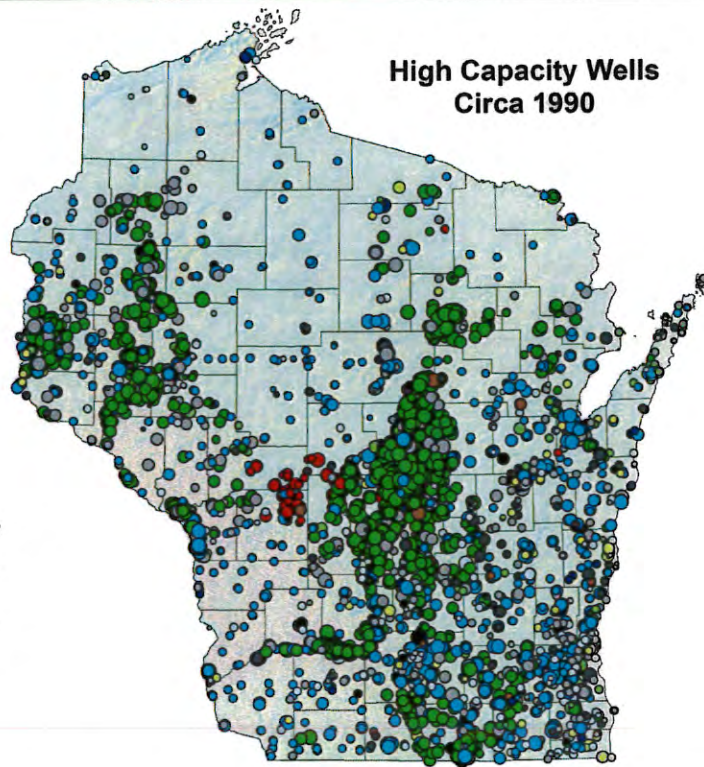


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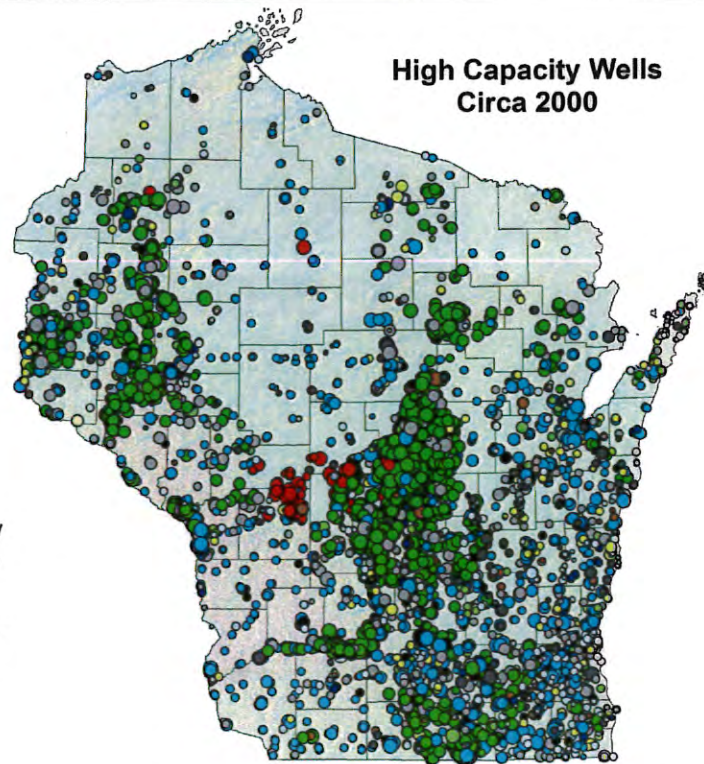


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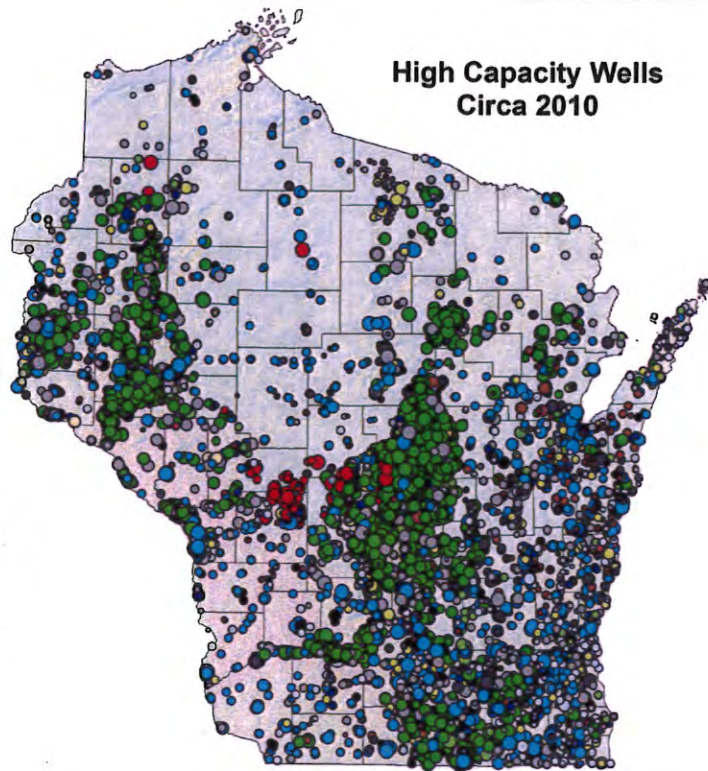




# Wisconsin Groundwater Withdrawals

## Growth in High Capacity Wells

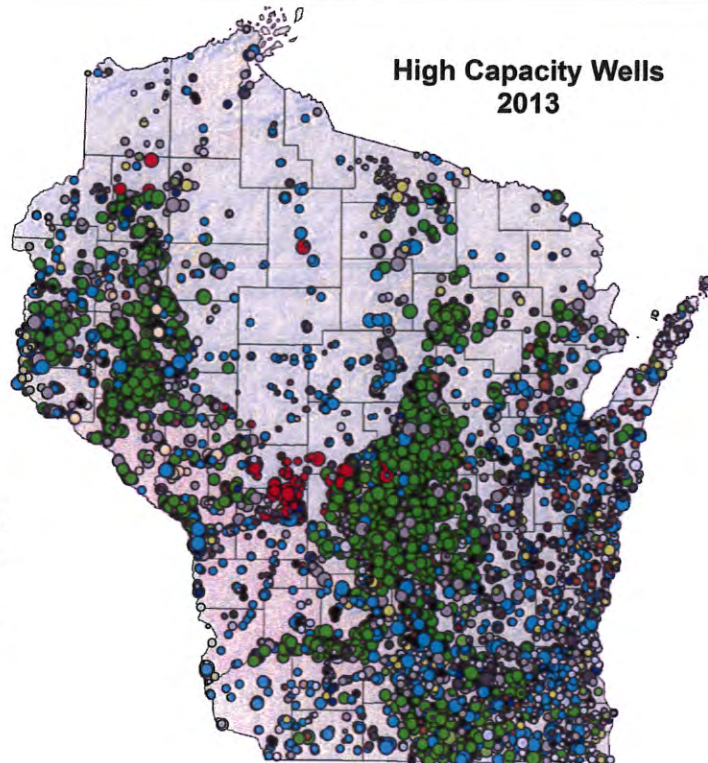
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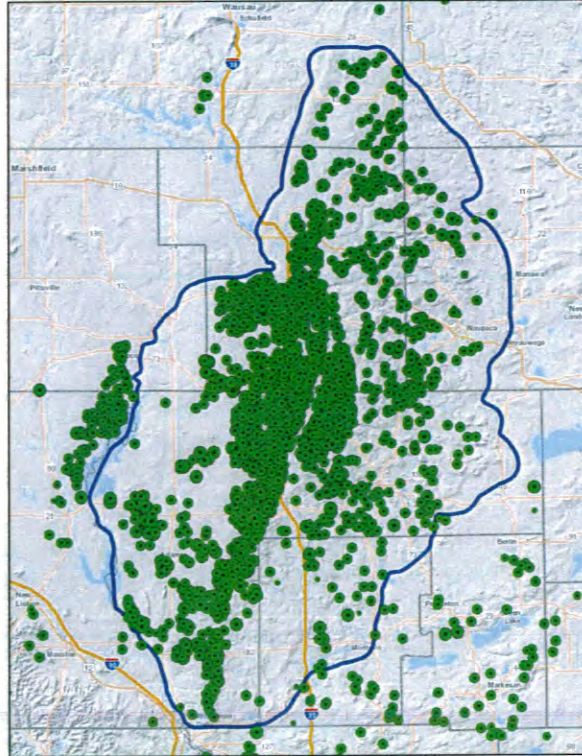




## Central Sands Strategic Analysis: Understanding Withdrawals in the Central Sands

Densest location of irrigated agriculture in Wisconsin... half of all irrigation wells.

Densest irrigation is at the edge of the terminal moraine... but there is room to expand.



Total groundwater irrigation withdrawals in 2012 in the CWSGA were 86 billion gallons . This was up from 46 bGal in 2011.



**Testimony In Support of AB 679 - Thursday, January 30, 2014**

Dear Chairman Mursau and Members of the Assembly Natural Resources Committee:

On behalf of the Dairy Business Association (DBA), I ask that you support AB 679 and restore regulatory certainty to the high capacity well permit program.

DBA represents milk producers, processors, dairy professionals and associated vendors in Wisconsin. Our goal is to ensure Wisconsin's title as "America's Dairy Land" by developing and growing the state's dairy industry and related infrastructure. Our mission statement is simple: "Keeping the Cows in Wisconsin."

Since the Wisconsin Supreme Court issued its decision in *Lake Beulah Management District v. DNR* (2011 WI 54) (*Lake Beulah*), dairy farmers and other business owners across Wisconsin have been subject to substantial regulatory uncertainty with respect to the high capacity well permitting program administered by the Wisconsin Department of Natural Resources (WDNR). Despite the significant efforts by stakeholders and bipartisan legislators from across the state to develop a predictable well permitting program in 2003 Wisconsin Act 310, the Wisconsin Supreme Court found the groundwater statute, codified at Wis. Stat. § 281.34, does not sufficiently define the extent of WDNR's regulatory authority over high capacity wells. Absent sufficient limiting language within the statute, the Court found the statute should be read as the minimum of WDNR's regulatory authority. After the *Lake Beulah* decision was issued, Senator Kedzie introduced Senate Bill 302, the Senate companion to AB 679, "as a response to the Court's decision both to expressly limit the authority of the DNR in regards to its review and regulation of high capacity wells, and reaffirm the legislative intent of 2003 Wisconsin 310." DBA supports AB 679 because it effectively reaffirms the authority of WDNR, as the numerous stakeholders and bipartisan legislators intended in Act 310, and because it will restore regulatory certainty to the high capacity well permitting program.

In addition to reaffirming the legislature's stated intent for WDNR authority on high capacity wells, AB 679 is consistent with 2011 Wisconsin Act 21 (Act 21) and supports the Governor's intent to prevent agencies from exceeding their legislatively granted authority. Act 21 expressly prohibits all agencies, including WDNR, from implementing or enforcing standards or requirements that have not been explicitly authorized by the legislature. The language in AB 679 clearly articulates the explicit grants and limits of WDNR authority over high capacity well permits and eliminates ambiguity created by the *Lake Beulah* decision.

Wisconsin's dairy farmers need regulatory certainty to continue to invest in this state. As a direct result of the uncertainty caused by WDNR's implementation of the *Lake Beulah* decision, Wisconsin has already lost significant agricultural investment dollars, and it stands to lose more if the regulatory uncertainty is not quickly resolved. The legislature has an opportunity with AB 679 to help restore certainty to farmers and other businesses that may seek high capacity wells, and help keep Wisconsin's dairy industry a thriving economic asset of this state. We ask you to support AB 679.

Thank you for giving DBA the opportunity to comment on AB 679. I would be happy to answer any questions or provide additional information.

Sincerely,  
Laurie Fischer  
Dairy Business Association

**WISCONSIN WILDLIFE FEDERATION'S**  
**"FORESTS, PARKS & RECREATION COMMITTEE"**  
1540 West James Street – Suite 500, Columbus, Wisconsin 53925

January 29, 2014

Subject: AB-679 relating to High Capacity Wells & Current Groundwater Issues.

Representative Mursau and members of Wisconsin Environment & Forestry Committee, the Wisconsin Wildlife Federation represents some 186 Sporting Club Affiliates to include 16 statewide organizations and the thousands of outdoors enthusiasts who enjoy and put a very high value on our state's natural resources. While our various affiliates are primarily interested in hunting, fishing, trapping and the like; we are also keenly aware of our environment which supports all forms of wildlife, waterfowl, fisheries, etc.

Therefore, we again wish to go on-record **in opposing AB-679**. Our primary concerns are pretty straight forward in that (1) we do not want to see a further weakening of our groundwater laws and the rules that provide for strong scientific and long-term thinking. (2) We do not want to see the Lake Beulah decision bypassed in the process and we do want to have the cumulative affects of high capacity wells evaluated within a strong permitting process. (3) Given the high volume of work involved with groundwater permitting, we do not see "automatic permits being issued within a specific timeframe (65 days or other) as being realistic.

Again, we appreciate the opportunity to weigh in on this very important subject and look forward to continuing to work with your committee to come up with a Best-Practices Type Policy that will be a benefit to the natural resources that we both need and enjoy.



Jerry Knuth, Chairman

WiWF's Forests, Parks & Recreation Committee  
Cell # (715)-340-5414 or [knuth0628@sbcglobal.net](mailto:knuth0628@sbcglobal.net)

CC: John Wagner, President – WiWF  
George Meyer, Executive Director – WiWF  
Ralph Fritsch, Chair – WiWF Wildlife Committee



## Testimony related to Assembly Bill 679 related to high capacity well approvals

January 30, 2014

Kenneth R. Bradbury, PhD.  
Hydrogeologist and Assistant Director,  
Wisconsin Geological and Natural History Survey,  
Professor, University of Wisconsin-Extension  
608-263-7921  
[krbradbu@wisc.edu](mailto:krbradbu@wisc.edu)

Good Afternoon:

Representative Clark requested that I appear before your committee to offer testimony about proposed bill AB679 related to high capacity well approvals.

I am a professional hydrogeologist with over 30 years of experience in Wisconsin groundwater issues. I am here for information only and am not taking a position on this bill.

The Wisconsin Geological and Natural History Survey (<http://wisconsingeologicalsurvey.org/>) conducts research on and evaluation of Wisconsin's water, rocks, and minerals throughout the state, including the state's groundwater resources. The Survey is ready to assist your committee's deliberations with technical support as needed. We understand these resources and continually develop and compile groundwater data from across the state and make this information available to the public. We also develop analytical tools and models to help assess groundwater systems across the state.

I offer several thoughts that I hope will be useful in your deliberations.

1. The geology of Wisconsin varies widely across the state, and our groundwater resources vary accordingly. For example, I am sure your committee is aware that the hydrogeologic setting in Waukesha County, where the main aquifer is a deep, confined sandstone, is far different than in the central sands region, where a shallow, unconfined aquifer occurs. For this reason, our state regulators need to have flexibility in developing well approval policies tailored for specific hydrogeologic settings. I believe one-size-fits-all policies are not very workable given Wisconsin's varied geology.
2. The bill refers to groundwater protection areas. As currently defined in state statute, groundwater protection areas are arbitrary areas within 1200 feet of trout streams or other outstanding resource waters. This 1200-ft criterion is not necessarily protective for surface-water resources because in many cases the hydraulic effects of high-capacity wells can extend far beyond 1200 feet.

3. I have been told that the central sands area is the nexus of the reason for AB679, especially as it relates to high capacity irrigation wells. In this part of the state the water table is generally shallow, and groundwater and surface water are very directly connected, and in fact should be considered as a single resource. To my knowledge, Wisconsin's scientific groundwater community is in agreement that the many irrigation wells in central Wisconsin are having an impact on groundwater levels, lake levels and streamflows in some parts of this region. The problem in this region is not any particular well, because the impact of each individual well is rather small. Instead, the problem is the cumulative impact of hundreds of wells in the same region. Wisconsin needs to develop a policy for managing water resources in this region, and statewide, that goes beyond looking at one well at a time. Hydrogeologists can use modern computer simulations for evaluating well siting and impacts to support this kind of decision making.

I hope these thoughts are useful to the Committee. I would be pleased to respond to any questions you have today or in the future.

Thank you.



January 30, 2014

Representative Jeffrey Mursau  
Chair, Assembly Committee on Environment and Forestry  
Room 113 West  
State Capitol  
Madison, WI 53708

RE: **Support for AB 679 as Amended by ASA1 - High Capacity Well Legislation**

Dear Chairman Mursau and Members of the Assembly Committee on Environment and Forestry:

On behalf of my clients, the Wisconsin Potato & Vegetable Growers Association, the Wisconsin State Cranberry Growers Association, the Wisconsin Pork Association and the Wisconsin Cattlemen's Association, I ask you to **support AB 679** and clarify Wisconsin's high capacity well permitting program for Wisconsin's farmers.

The intent of AB679 / SB 302 is to *reaffirm* the 2004 groundwater law (2003 Act 310). In order to do so, the legislation must respond to the Supreme Court's decision in *Lake Beulah* and clarify the Legislature's intent to explicitly define the DNR's authority to review high capacity wells as stated in Wis Stat. § 281.34. This legislation does that.

**Supports the needs of Wisconsin farmers.** Wisconsin farmers strongly support the passage of this legislation this session. We need the Legislature to **restore regulatory certainty** to the high capacity well permitting program. As such, we ask that you provide us with a system that defines: (1) the review process that will be applied to applications for a new high capacity well; (2) identifies wells that will get a heightened environmental review; and established identifiable standards of review that will be applied to wells that need to be replaced or repaired. **It is critical that this legislation clarify DNR's authority to review well applications.**

**Environmental review clarified.** In 2004, the legislature identified a set of well applications that needed a more thorough environmental review. The *Lake Beulah* Court determined that the 2004 statute did not effectively limit the DNR's authority to conduct an environmental review to only those wells.

One of the goals of this legislation is to clarify that DNR must conduct a full environmental review of certain new withdrawals identified by the Legislature as particularly

Representative Jeffrey Mursau  
January 30, 2014  
Page 2

environmentally sensitive. Those same new withdrawals were deemed by the legislature under the 2003 Act to demand a more stringent review. AB 679 preserves that framework and requires environmental review for wells in a groundwater protection area (GPA wells), water bottling wells and wells near a spring. The bill accomplishes this through new definitions of “proposed high capacity well,” “existing high capacity well,” reconstruct.”

**Efficient review process for reconstructed and replacement wells.** Repairing or replacing existing wells, when done within the original parameters of the approved wells, does not create the potential for a new impact to the resource. In this bill, the Legislature clearly directs the DNR that replacement wells drilled in substantially the same location (within 75 feet of current well), drilled to substantially the same depth and same pumping rates *may not trigger new conditions, modifications, or environmental review*. Nonetheless, the most up-to-date building codes and standards must be applied to the construction of a replacement well.

In addition, if the replacement well is moved so that it is subsequently located in a groundwater protection area or is determined to impact a spring, this provision does not apply, and instead, the replacement well would be subject to the higher standard of environmental review that is applied to new withdrawals.

Similarly, the full environmental review process need not apply to reconstructed wells, as those wells do not constitute any new withdrawal of groundwater. Rather, they are the repair of an already permitted well. Accordingly, the bill authors make it clear that these existing well owners will be protected when they need to repair a well. Under the bill, a person seeking to reconstruct an existing well must receive approval from the DNR, however the DNR may not impose conditions in an approval for the reconstruction of an existing high capacity well other than those relating to location, depth, pumping capacity, and rate of flow.

**Established timeline for DNR application review.** Currently, it is our understanding that the DNR is working on high capacity well permit applications that were filed in the spring of 2013. This timeline is very problematic for farming decisions. This legislation aims to correct this by clarifying DNR’s authority and by establishing timelines for permit application review. Under the bill, within 65 business days from the date on which DNR receives a complete application for approval for construction of a proposed high capacity well, or for reconstruction or replacement of an existing high capacity well, the DNR must approve or deny the application. If DNR denies the application, the denial must include the reasons for the denial. If DNR fails to approve or deny the application within the deadline established, then the application is considered approved.



Representative Jeffrey Mursau  
January 30, 2014  
Page 3

**Succession planning & value of agricultural investments are preserved through the clarification of the change in ownership provisions (transfer of well approvals).** Under current law, if you transfer your property, which contains a high capacity well, that transfer triggers a new well approval. Under AB 679, changing ownership DOES NOT trigger a new well approval. The well can be transferred with the property. No new conditions, modifications, or environmental review may be applied to wells based solely on the condition the wells are changing ownership. There is no fee to transfer ownership, however, the owner must notify the DNR on a form prescribed by the department.

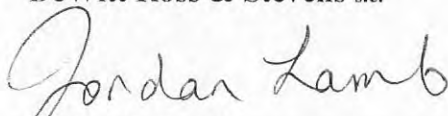
This is critical both for farmers who want to sell or pass their farms on to their children and for agricultural lenders who are making lending decisions based on the value of the farm as an *irrigated* farm. As such, the ability for the wells to be transferred with the land is imperative.

**Legislation does not impose limits on public rights.** Nothing in this legislation changes or effects the DNR's authority to bring an action against a well owner for possible infringement of public rights relating to a navigable water using their authority under current Wis. Stat. § 30.03. DNR has always had this authority and they retain that authority under this legislation.

Thank you for your consideration of this critical issue for Wisconsin farmers. If you have any questions, please contact me at (608) 252-9358 or [jkl@dewittross.com](mailto:jkl@dewittross.com).

Very truly yours,

**DeWitt Ross & Stevens s.c.**



Jordan K. Lamb

JKL:jkl

cc. Duane Maatz, Wisconsin Potato & Vegetable Growers Association  
Tom Lochner, Wisconsin State Cranberry Growers Association  
Terry Quam, Wisconsin Cattlemen's Association  
Mike Wehler, Wisconsin Pork Association

# WMC

WISCONSIN MANUFACTURERS  
& COMMERCE

To: Members, Assembly Committee on Environment and Forestry  
From: Eric Bott, Director of Environmental and Energy Policy, Wisconsin  
Manufacturers & Commerce  
Date: January 30, 2014  
Re: Support for Assembly Bill 679

Wisconsin Manufacturers & Commerce (WMC) supports Substitute Amendment 1 to Assembly Bill 679. This legislation is needed as result of the Wisconsin Supreme Court's decision, *Lake Beulah Management District v. Wisconsin Dept. of Natural Resources*,<sup>1</sup> where the Court ignored the plain meaning of the existing high capacity well statutes (Wis. Stat. §§ 281.34 and 281.35) and greatly expanded the authority of the Department of Natural Resources (DNR) to impose permit conditions never envisioned by the Wisconsin Legislature. Substitute Amendment 1 restores the high capacity law as originally enacted by the Legislature.

There is a great deal of urgency to passing AB 679 driven by negative economic impact the current state of uncertainty is having on job creation and business in Wisconsin. Shortly after the verdict was issued in *Lake Beulah*, the largest grower in the state announced that it would be ceasing investment in Wisconsin until the issues addressed in this bill are resolved. Earlier this month Wisconsin's largest dairy announced that it would be investing \$30 to \$35 million in Michigan. Wisconsin is bleeding jobs and economic development due to the uncertain state of the law post *Lake Beulah*. AB 679 is a necessary and much needed means of healing those wounds.

Before providing a more in-depth discussion of the bill, it is important to provide a history of the current law, and to explain how the Supreme Court ignored the Legislature in the *Lake Beulah* decision.

## **I. Legislative History of Wisconsin's High Capacity Well Statutes**

Prior to 1985, the only standard applicable to high capacity well permits was what is now in Wis. Stat. § 281.34(5)(a), which is a general standard that protected other public utility wells. Since 1985, the Wisconsin Legislature has expanded the law twice.

### **A. 1985 Wisconsin Act 60 – Expansion of DNR's Permitting Authority for High Capacity Wells Involving Water Withdrawals over 2 Million Gallons Per Day**

In 1985, the Wisconsin Legislature expanded the DNR's regulatory authority by requiring the agency to perform an environmental review before granting a high capacity well permit that results in water loss of 2 million gallons per day (gpd) or more. That provision is now found in Wis. Stat. § 281.35(d), and contains seven criteria the DNR must consider before issuing the permit.

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<sup>1</sup> 2011 WI 54.



## **B. 2003 Wisconsin Act 310 – Wisconsin Legislature Again Expands the High Capacity Well Statutes to Include Wells between 100,000 gpd and 2 Million gpd**

In 2003, the Wisconsin Legislature enacted Act 310,<sup>2</sup> which once again expanded the high capacity well statutes. This legislation was carefully drafted and included input from numerous stakeholders during the legislative process.

Specifically, Act 310 expanded the existing high capacity well law by providing for environmental review of high capacity wells in three specific areas: 1) a well located in a groundwater protection area; 2) a well with a water loss of more than 95 percent of the amount of water withdrawn; and 3) a well that may have a significant environmental impact on a spring.

Act 310 was limited in scope and did not give DNR unfettered authority to regulate high capacity wells. Moreover, the new law expressly provided the specific standards and procedures for the DNR to follow when reviewing a high capacity well approval application.

Act 310 also created a Groundwater Advisory Committee to provide a report to the Legislature in 2007 to recommend whether additional legislative changes were necessary to DNR's permitting authority. In the 2007 report to the Legislature, one proposal was to expand DNR's authority to review all wells affecting all surface waters. However, that proposal was defeated. Once again during the 2009-10 legislative session, a bill was introduced (Senate Bill 620) which sought to again expand groundwater regulations, but that bill was also rejected.

As evidenced by the significant legislative history involving the current high capacity well statutes, much thought and attention went into the specific standards and procedures, and the limited scope of the DNR's authority. The two attempts to include DNR permit authority regarding groundwater and surface waters were explicitly excluded by the Legislature. However, as will be explained below, the Wisconsin Supreme Court ignored the plain language of the statutes and expanded the DNR's regulatory.

### **II. Wisconsin Supreme Court Ignored the High Capacity Wells Statute and Greatly Expanded DNR's Authority in *Lake Beulah Mgmt. Dist. v. DNR***

Despite the Wisconsin Legislature's exhaustive legislative history in setting the specific standards and procedures for the regulation of high capacity wells, the Wisconsin Supreme Court in *Lake Beulah* completely ignored the plain language in Wis. Stat. § 281.34 and by judicial fiat expanded DNR's regulatory authority beyond what was ever envisioned by the Legislature.

*Lake Beulah* involved an approval by the Village of East Troy for a permit to construct a high capacity well. The well fell within the current statutes because it had the potential to withdraw 1,440,000 gallons per day. The DNR approved the permit based on the specific criteria contained in the statute.

The DNR's approval was challenged by the Lake Beulah Management District, which opposed the residential development that the high capacity well was planned to serve. The Lake District's argument was that regardless of the specific criteria set forth in the high capacity well statutes,

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<sup>2</sup> <http://docs.legis.wisconsin.gov/2003/related/acts/310>

the DNR had the authority and the *obligation* to deny the permit based on the agency's general duties and powers provisions and the public trust doctrine under Wis. Stat. §§ 281.11 and 281.12.

The Court agreed with the Lake District and concluded that through the statutes describing DNR's general duties and powers, the "legislature has delegated the State's public trust doctrine to the DNR in the context of its regulation of high capacity wells and their potential effect on navigable waters such as Lake Beulah."

The Court's decision is troubling for many reasons. Most significantly, the Court greatly expanded the nebulous public trust doctrine and ignored the specific statutory provisions enacted by the Legislature in order to give DNR nearly unfettered authority to deny or impose onerous permit conditions on a landowner seeking a high capacity well.

### **III. Assembly Bill 679 Is Necessary to Restore the High Capacity Well Statutes As a Result of the *Lake Beulah* Decision**

Assembly Bill 679 is necessary to restore the law to where it was prior to the Court's *Lake Beulah* decision. Specifically, Section 17 of Substitute Amendment 1 overturns the Supreme Court's decision by providing that the DNR may not rely on the general duties and powers provisions under Wis. Stat. §§ 281.11 and 281.12 to deny a permit or to impose conditions that are not specified by law.

In addition, Substitute Amendment 1 provides that if the DNR had approved a high capacity well prior to the Court's *Lake Beulah* decision (July 6, 2011) and has subsequently added new or more restrictive conditions to the approval, the agency must remove those new conditions at the owner's request (unless the law requires those conditions to be included).

These portions of the bill are imperative in restoring the status quo ante and preventing the DNR from imposing unlawful conditions on legitimate high capacity well permit applications. These changes are vital given the uncertainty and added costs the *Lake Beulah* decision has had for permit applicants. By passing Substitute Amendment 1 to AB 679, the Legislature will improve Wisconsin's economy and add badly needed jobs.

### **IV. Other Modifications to the Existing High Capacity Well Statutes**

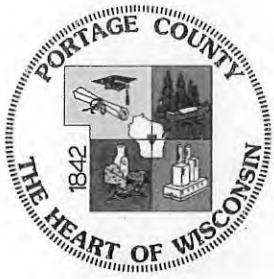
In addition, Substitute Amendment 1 to AB 679 streamlines the permit application process by requiring the DNR to approve or deny an application for a new high capacity well, or for reconstruction or replacement of an existing high capacity well within 65 business days from the date the completed application is filed with the agency. The legislation also requires DNR to include a reason for the denial of the application if the agency denies the permit application. If the DNR fails to approve or deny the application within 65 business days, the application is considered approved.

Finally, the legislation protects current and future landowners with high capacity wells by providing that the owner may transfer the prior approval for the well to the person who purchases the property without having to seek further approval from the DNR or having to pay a fee.



## **V. Conclusion**

AB 679 restores Wisconsin's high capacity well law back to where it was when the Legislature carefully crafted the specific standards and procedures in 2003 Act 310. Therefore, WMC respectfully requests that the Assembly Committee on Environment and Forestry recommend passage of Substitute Amendment 1 to AB 679.



## PLANNING AND ZONING DEPARTMENT

1462 STRONGS AVENUE, STEVENS POINT, WI 54481 • PHONE: 715-346-1334 • FAX: 715-346-1677

DATE: January 30, 2014  
TO: Wisconsin Assembly Forestry and the Environment Committee  
FROM: Raymond C. Schmidt, Water Quality Specialist  
RE: Assembly Bill 679, Substitute Amendment 1, Public Hearing Testimony

Portage County doesn't view high capacity wells as being inherently objectionable, anymore than semi trailer trucks are. They are each necessary parts of our local and state economy, and properly managed can be beneficial, or at least not detrimental to our society as a whole. We don't allow trucks to be driven as fast as the operators want to, for overall transportation system safety and efficiency. High capacity wells can be pumped at whatever volumes the operators pumping equipment and the wells allow, and this has led to water resource depletion and conflict.

Except for agricultural irrigation wells, most high capacity wells are used year round on a predictable schedule. The pumping of high capacity irrigation wells necessary during the growing season for some crops, takes billions of gallons from the groundwater in Portage County, and affects the surface waters as well as groundwater. Pumping is variable depending on crops planted and weather patterns, but is based only on the demand of the crop that has been planted and not on other considerations. This leads to long term groundwater depletion in some areas of Portage County as we have observed in United States Geological Survey groundwater monitoring wells measured since the 1950s.

Our farmers can plan their cropping patterns and crop densities to require less irrigation water to supplement precipitation received. They have the ability to manage water volumes needed over a several year rotation. It is not that they will not be able to grow crops at all, but balance in water use with all other water needs will require better planning and management by agricultural high capacity well operators. The current pattern of agricultural pumping, as though the resource is unlimited, has led to conflicts with other sectors of society. These conflicts will continue to worsen as lakes and streams disappear, tax base shrinks, and parks and other recreational opportunities diminish. This will negatively affect the economy of the entire State, and must be taken into account.

In addition, this bill is premature. The State is currently funding the Little Plover River basin study, to be completed in a little over a year, to help determine management strategies for balancing water use among competing economic and environmental interests. The DNR recently announced research of the water resources of the entire Central Sands basin to be completed in 2015. This basic research should be allowed to guide our water laws.

The approach established by the Wisconsin Supreme Court in the Lake Buelah case should be maintained and strengthened through better communication with all water users. The Portage County Board of Supervisors recently passed a resolution (attached) requesting more consideration of cumulative impacts on all users when permitting high capacity wells. No water users should be allowed unlimited access to the resources we all share, anymore than anyone can use our transportation system without consideration for the safety of other users. We're all in this together.



RESOLUTION NO. 238-2012-2014

RE: WISCONSIN DEPARTMENT OF NATURAL RESOURCES (DNR) HIGH CAPACITY WELL (HCW)  
REVIEW RECOMMENDATIONS

TO THE HONORABLE CHAIRMAN AND MEMBERS OF THE PORTAGE COUNTY BOARD OF SUPERVISORS:

WHEREAS, the Wisconsin DNR is responsible for the evaluation and permitting of HCW; and

WHEREAS, the current process of evaluation and permitting HCW only gives special consideration to Classes 1, 2, and 3 Trout Streams and Exceptional Water Resources within 1200 feet of the proposed HCW's location; and

WHEREAS, in the current process, the Wisconsin DNR does not conduct an independent evaluation of the environmental impacts of a HCW, but overly depends on the representations of the permit applicant; and

WHEREAS, empirical data has established a connection between ground and surface waters; and

WHEREAS, demand for groundwater usage continues to increase, particularly in Portage County in the Central Sands area; and

WHEREAS, in 2011, the Wisconsin Supreme Court ruled in Lake Beulah v. DNR that the Wisconsin DNR has the authority and duty under the Public Trust Doctrine to consider the environmental impact of HCW on Wisconsin waters when considering a permit for a HCW; and

WHEREAS, the current evaluation and permitting process used by the DNR for HCW does not adequately monitor or regulate HCW in a manner sufficient to prevent unnecessary negative stress on Wisconsin's surface and ground waters

FISCAL NOTE: There are no fiscal obligations for the County associated with this resolution.

NOW, THEREFORE, BE IT RESOLVED, that the Portage County Board of Supervisors does enact and ordain as follows: to recommend that the Wisconsin DNR should revise and adopt new criteria, guided by the Wisconsin Supreme Court decision in Lake Beulah v. DNR, to more completely evaluate the environmental impacts of HCW, (including, but not limited to, the likely impacts on watersheds and nearby surface and ground waters) and to promote sustainable and responsible water management.

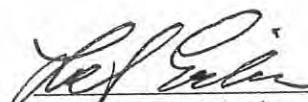
BE IT FURTHER RESOLVED that the Wisconsin DNR should make an independent evaluation that includes the predicted effects of pumping from nearby existing HCW on Wisconsin surface and ground waters, when considering any new HCW application.

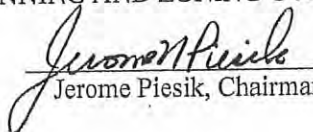
BE IT FURTHER AND FINALLY RESOLVED that a copy of this Resolution be sent to the Governor of Wisconsin, the Secretary of Wisconsin Department of Natural Resources, and all Portage County members of the state legislature as well as the Wisconsin Counties Association.

Dated this 17<sup>th</sup> day of December 2013.

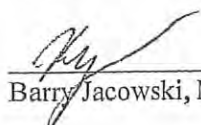
Respectfully submitted,

PLANNING AND ZONING COMMITTEE

  
Leif Erickson, Member

  
Jerome Piesik, Chairman

  
Marion Bud Flood, Member

  
Barry Jacowski, Member

  
Stan Potocki, Member

## STUDIES & REPORTS LINKING WATER LEVELS, STREAMFLOWS, AND PUMPING IN THE CENTRAL SANDS

----- Just the studies that can fit on one page! -----

**Sustaining Central Sands Water Resources.** Kniffen, M.B., K. Potter, AJ Bussan, J. Colquhoun, and K. Bradbury. Expected in February 2014. UW-Madison.

This literature review examines the dried lakes and streams and low groundwater level issue in central Wisconsin, possible causes of these conditions, and concludes that groundwater pumping is the only rational cause. Weather along should be making water levels higher.

**Climate-induced changes in biome distribution, NPP, and hydrology in the Upper Midwest U.S.: A Case Study for Potential Vegetation.** M.M. Motew, and C. J. Kucharik of UW-Madison. 2013. Journal of Geophysical Research: Biogeosciences 118(1): 248–64. <http://doi.wiley.com/10.1002/jgrg.20025> (June 10, 2013).

A study that looks at how climate has changed over recent decades, and shows that a changing climate in the central sands region ought to be making lakes higher and streams flow more robustly under native vegetation. The implication is that dry lakes and streams cannot be explained by anything other than groundwater pumping.

**Irrigation effects in the northern lake states – Wisconsin central sands revisited.** 2012. Kraft, G.J., D.J. Mechenich, K. Clancy, and J. Haucke. Ground Water Journal 50:308-318.

A comprehensive study in an international scientific journal that revisits the 1970s predictions that without groundwater management, lakes and streams in the central sand would go dry. This study showed that the dry lakes and streams in central Wisconsin were directly related to groundwater pumping.

**Groundwater Pumping Effects on Groundwater Levels, Lake Levels, and Streamflows in the Wisconsin Central Sands.** 2010. Kraft, G.J. and D.J. Mechenich. 2010. Report to the Wisconsin Department of Natural Resources. UW-Stevens Point and UW-Extension.

A peer-reviewed scientific investigation funded by DNR that related the causes of dry lakes and streams to groundwater pumping through statistical analysis and groundwater flow modeling.

**Knowledge development for groundwater withdrawal around the Little Plover River, Portage County, Wisconsin.** 2009. Clancy, K., G.J. Kraft, and D.J. Mechenich. UW-Stevens Point and UW-Extension.

A peer-reviewed scientific investigation funded by DNR that related the causes of Little Plover River low flows and dry-ups to pumping and found that weather cannot be blamed as the cause.

**Effects of irrigation on streamflow in the Central Sand Plain of Wisconsin.** 1971, Weeks, E.P. and H.G. Stangland. 1971. U.S. Geological Survey Open-File Report.

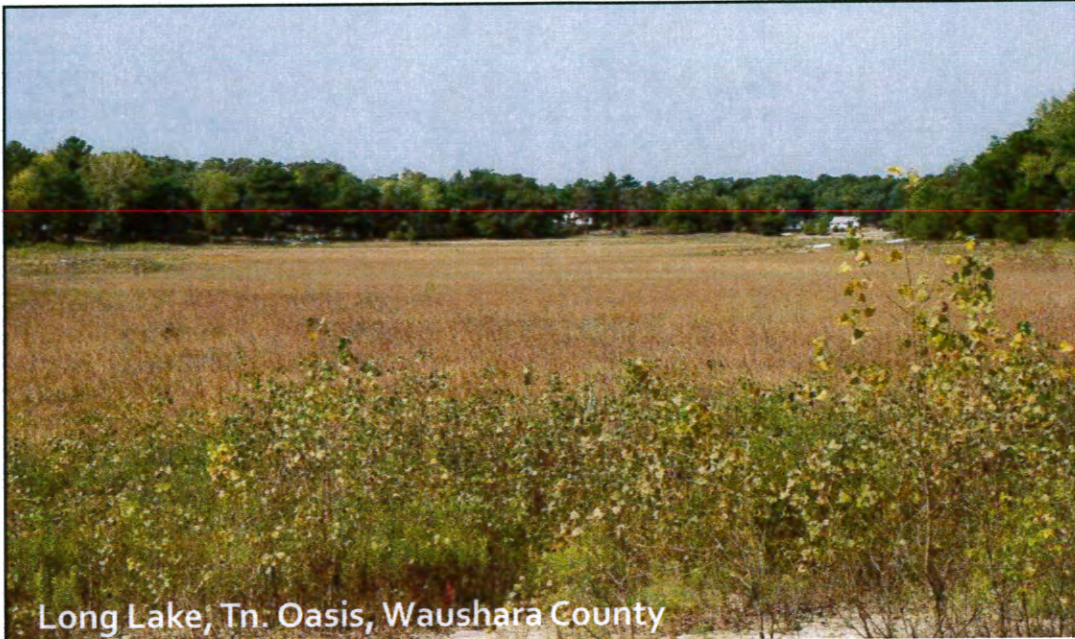
The grand-daddy of research that predicted that pumping, if unmanaged, would dry lakes and streams.

**Hydrology of the Little Plover River Basin Portage County, Wisconsin and the Effects of Water Resource Development Weeks** 1965. Weeks, E.P., D.W. Ericson, and C.L.R. Jr. Holt. . Geological Survey Water Supply Paper 1811.

The classic paper that showed how pumping, groundwater, and streams are connected.







### Long Lake, Tn. Oasis, Waushara County

This former trophy bass lake never dried in anyone's memory. It used to be up to 14 feet deep. It now has about 3 feet of water, in it at the deep spot, not enough to support waterskiing and fish.



### Pickarel Lake, Portage County

This is the view from the boat landing, now 100 feet from water. The lake now winterkills regularly, and the camp for indigent children (at left) is losing its water front.





## Wolf Lake, SW Portage County

This used to be a county beach where hundred would recreate on weekends. Water levels are too low for swimming and the county has lost use of its park since 2003.



## Stoltenberg Cr., Portage Co

This trout stream west of Nelsonville gets shorter and shorter every year as more irrigation wells go in. And it dries in whole reaches as well.





## Little Plover, Portage County

The Little Plover River, a class I trout stream. It dried in sections every year from 2005-2009 due to pumping. It flowed below "healthy levels" (public rights flow) 80% of the time in 2012 and 2013.



## Huron Lake, Waushara County

Huron Lake near Plainfield. Note where the trees and docks are showing where water levels used to be. This lake supports the cottages of visitors from out of the area who support the tourist economy and tax base. The cottages around this lake supply the same amount of property tax as 40,000 acres of ag land.





Trib of Tennile Creek, Adams County

Formerly robust stream stretches of trout waters are now regularly going dry during irrigation season. 2013 photo.



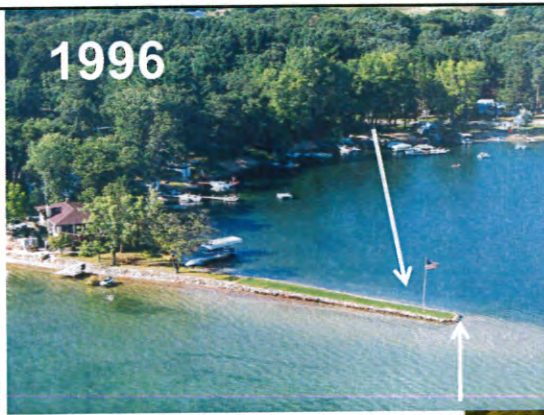
Pine Lake, Waushara County

Near Hancock. Note that the dock is high and dry. The weather has gotten wetter, pumping is the only cause..



Patrick Lake, Adams County

Note tree line where water levels were historically.



1996

The American flag on sand point in 1996 and 2013.

The Flag didn't move, the water went down.

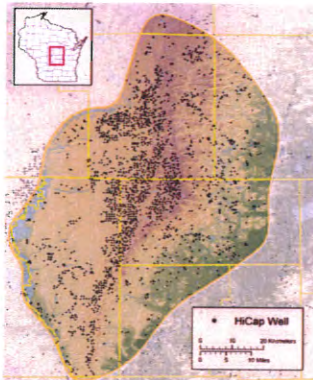


2013

Pleasant Lake,  
Waushara  
County



# Average Water Level Declines from Pumping in the central sands



**LW**  
**Extension**  
University of Wisconsin-Extension

