“In the Matter of Two Potable Wells”

Contested Case Hearing Moves Wisconsin Toward Managing Cumulative Impacts

AWRA Wisconsin Section
March 5 & 6, 2015
Steve Gaffield, Dave Marshall, George Kraft & Frances Rowe
A Little History

• Since forever. High cap well approvals are almost automatic.
• 1999. Perrier!!
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- 2005. Little Plover dries.
A Little History

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- 2005. Little Plover dries.
- 2006. Long Lake dries.
Plainfield Lake, Waushara County
Huron Lake, Waushara County
Pine Lake, Waushara County
Pickerel Lake, Portage County
Wolf Lake – Portage County. Defunct swimming beach.
A Little History

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- 2005. Little Plover dries.
- 2006. Long Lake dries.
- 2009-12. Studies link dry-ups to pumping
Central Sands Drawdown

- Groundwater model
- Statistical analysis
A Little History

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- 2010-13. DNR: “We just don’t know.”
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- 2010-13. DNR: “We just don’t know.”
- 2011. Lake Beulah decision
“We conclude that ... the DNR has the authority and a general duty to consider whether a proposed high capacity well may harm waters of the state.”

- Wisconsin State Supreme Court
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- 2010-13. “We just don’t know.”
- 2011. Lake Beulah decision
- 2011. Richfield Dairy - two new HC wells near Pleasant Lake
Pleasant Lake to DNR:

Help! Our lake is already impacted by pumping!

Beulah says you have to consider our plight!!
“‘a’ means one well at a time; we cannot look at cumulative impacts.”

(Recall in Beulah:

“We conclude that … the DNR has the authority and a general duty to consider whether a proposed high capacity well may harm waters of the state.”)
A Little History

• (And a contested case is born!)

[Image of a lake and surrounding area]

[Image of a document from the State of Wisconsin Department of Natural Resources]

December 28, 2011

Peter McFarren
Andrea Bendi
One Orleans Court
Madison, WI 53799

Re: Petition for a Contested Case Hearing under section 227.42, Wis. Stats.

Dear Mr. McFarren and Ms. Bendi:

On December 2, 2011, the Wisconsin Department of Natural Resources (“DNR”) received a petition from you on behalf of the Pleasure Lake Management District seeking a contested case hearing under section 227.42, Wis. Stats. The petition was hand delivered and received at the Office of the Secretary of DNR on December 2. The hearing was requested regarding the conditional high capacity well approved for two private wells to be located in the Town of Richfield, Adams County, issued by DNR to Milk Source Holdings, LLC, on November 3, 2011.

Your petition for a hearing is granted with respect to, and the hearing shall be limited to, the following issues relating to the conditional high capacity well approved:

1. Whether DNR properly considered the environmental impact of the proposed high capacity wells on the waters of Pleasure Lake and other waters of the state, including the groundwater aquifer and nearby private wells, when DNR was presented with scientific evidence of potential harm to waters of the state.

2. Whether DNR correctly considered its expertise in water resources management, in its decision and its duty as trustee of public trust resources, when DNR determined that the proposed high capacity wells would not cause a significant adverse impact on the waters of the state and DNR granted the conditional approval to Milk Source Holdings, LLC.

3. Whether considering whether to condition or deny a proposed high capacity well approval, does DNR have legal authority to take into account cumulative impacts caused by existing discharges of groundwater and surface waters, or to DNR’s legal authority limited to considering only the potential adverse water-related impacts of the proposed high capacity well or wells for which an approval is being considered?

[Legal text continues]

[Image of the lake and surrounding area]
Pleasant Lake
Proposed Richfield Dairy

- 2.5 miles from lake
- 6270 animal units
- 2 high capacity wells totaling 72.5 MGD
- DNR approved wells
Contested Case Hearing

• Did DNR
  – Properly consider environmental impact of proposed wells?
  – Exercise its expertise water resource management and its duty as trustee of public trust resources?
  – Have legal authority to consider cumulative potential environmental impacts?
Testimony: Incremental Drawdown

• Incremental drawdown of Pleasant Lake of 1 – 5 inches predicted by models.
• Small but ecologically significant
• Especially in context of cumulative impacts
Cumulative Impacts

- 184 wells in model domain near Pleasant Lake
- 26 more approved / requested since modeling
- 14% increase in a few years

![Graph showing the number of Central Sands High Capacity Well Approvals over the years.](image)

![Map showing the location of wells near Pleasant Lake.](image)
Pleasant Lake Decline

Pleasant Lake Water Levels and Estimated Decline due to Pumping

Kraft, 2012
1.5 – 2.3 ft

SSPA, 2012
0.75 ft

Palmer Drought Severity Index for Central Wisconsin

Years
## Incremental vs. Cumulative Baseflow Reductions

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<tr>
<th>Headwater Stream</th>
<th>Headwater Flow (cfs) calculated by SSPA model</th>
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<td>No Irrigation Pumping</td>
<td>Pumping From Existing High Capacity Wells</td>
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<td>Little Roche-a-Cri (tributary)</td>
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<td>0.84</td>
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<td>Little Roche-a-Cri (headwater ditches)</td>
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Ecological Impacts:
Littoral Wetland Connectivity

Turtle Bay Pond

Banded Killifish
Chaffee Calcareous Fen and Spring Pond

Least darter
Northern Redbelly dace
Pirate perch (*Aphredoderus sayanus*)
State Special concern
Pleasant Lake Annual Mean Phosphorus Concentrations

$R^2 = 0.3173$
• “The potential for detrimental cumulative impacts is clear.”
• “The DNR possesses the authority to consider cumulative impacts to waters of the State caused by high capacity well pumping, climate, and other factors…”
• “…it is impossible to adequately consider … harm to the waters of the State without considering the direct and secondary detrimental impacts to said waters by known and reasonable expected cumulative impacts.”
• “… reduction of the total annual pumping maximum by approximately 27.1 percent…represents an appropriate balance between the rights of private parties…and the rights of the public…”
• “None of the parties are likely to be completely satisfied with this outcome.”
Future Groundwater Policy?

- High capacity well review process?
- Future legislation?
- Future litigation?
- Research contributions to balancing uses?
Acknowledgements

• Pleasant Lake Management District
• Family Farm Defenders
• Friends of Central Sands
• Individual petitioners

• Wisconsin DNR
• Wisconsin DHA
• Axley Law
• McGillivray Westerberg & Bender
• Other experts