

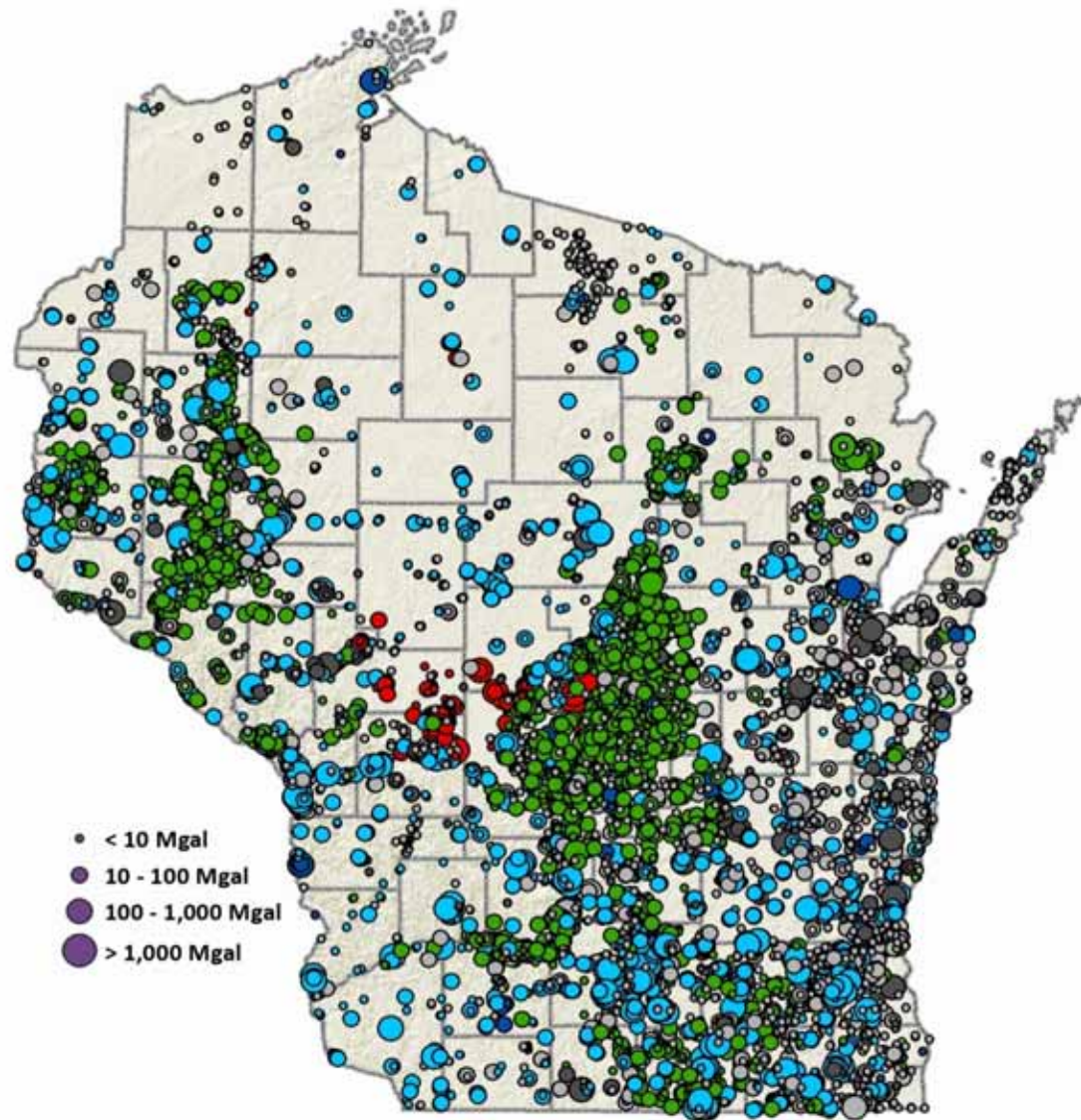


High Capacity Wells and Wisconsin Lakes

2015 Wisconsin Lakes
Partnership Convention

Stevens Point, WI
April 24, 2015

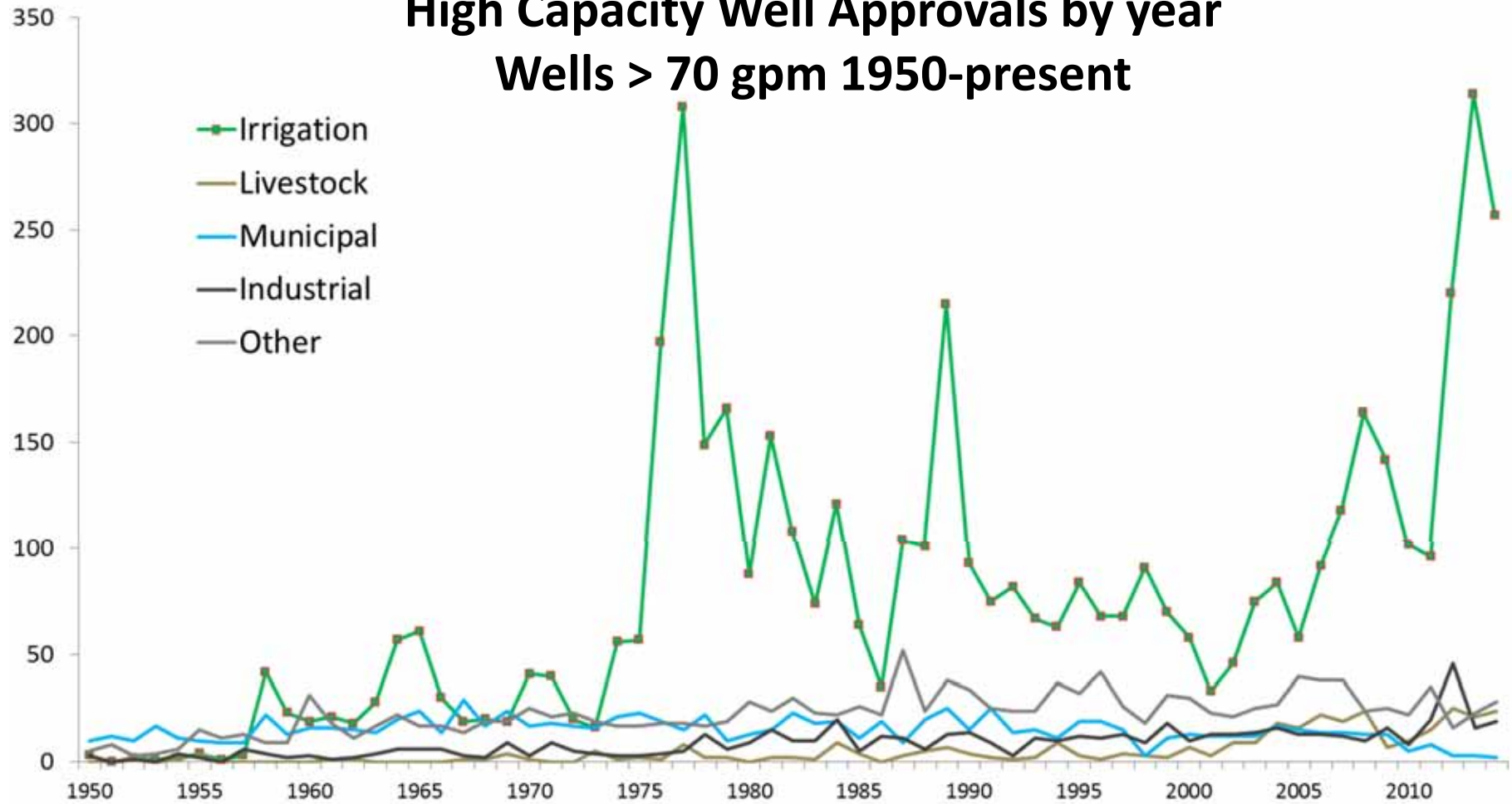
Eric Ebersberger,
Wisconsin DNR





High Capacity Well Approvals through time

High Capacity Well Approvals by year Wells > 70 gpm 1950-present





Water Withdrawals High Capacity Wells

Water Use	Less than 70 GPM	>= 70 GPM	Total
Aquaculture	31	100	131
Commercial	266	95	361
Domestic Use	1692	76	1768
Industrial	212	436	648
Food, Beverage, Dairy Processing	110	171	281
Irrigation (misc)	180	718	898
Agricultural Irrigation	48	3810	3858
Cranberry Irrigation	2	187	189
Golf Course Irrigation	78	339	417
Dairy Livestock	556	139	695
Non-Dairy Livestock	249	61	310
Other	477	316	793
Non-Municipal Public Water	1396	547	1943
Municipal Public Water	158	1460	1618
Total	5455	8455	13910



Groundwater Use and Management: High Capacity Well Regulation

High Capacity Well Reviews through time:

- Pre 2004
 - 2003 Wisconsin Act 310
 - The “Lake Beulah” decision
 - The “Richfield Dairy” decision



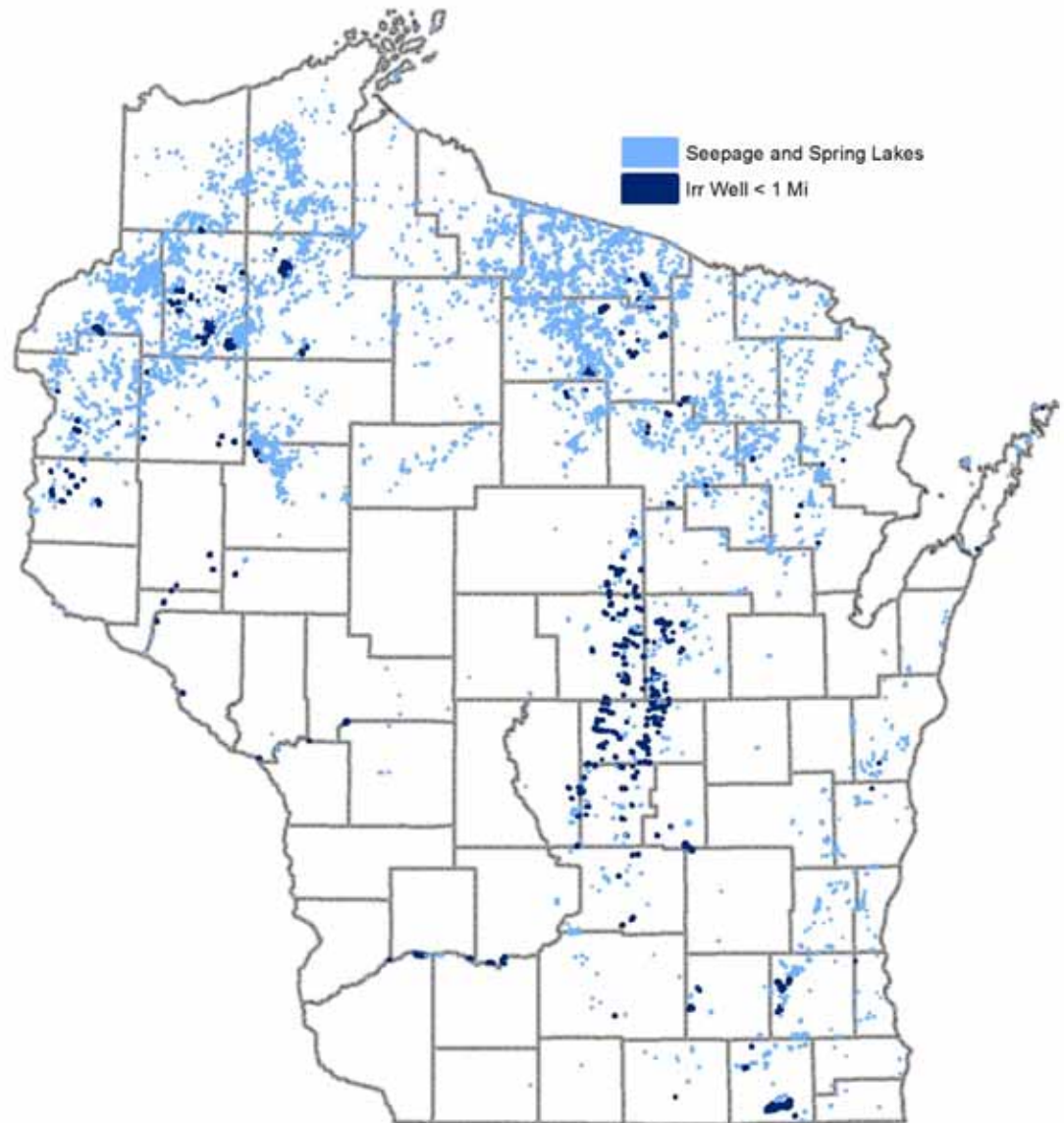
Groundwater Use and Management: High Capacity Well Regulation

"Significant adverse environmental impact" means alteration of groundwater levels, groundwater discharge, surface water levels, surface water discharge, groundwater temperature, surface water temperature, groundwater chemistry, surface water chemistry, or other factors to the extent such alterations cause significant degradation of environmental quality including biological and ecological aspects of the affected water resource.



Water Withdrawals and Lake Impacts

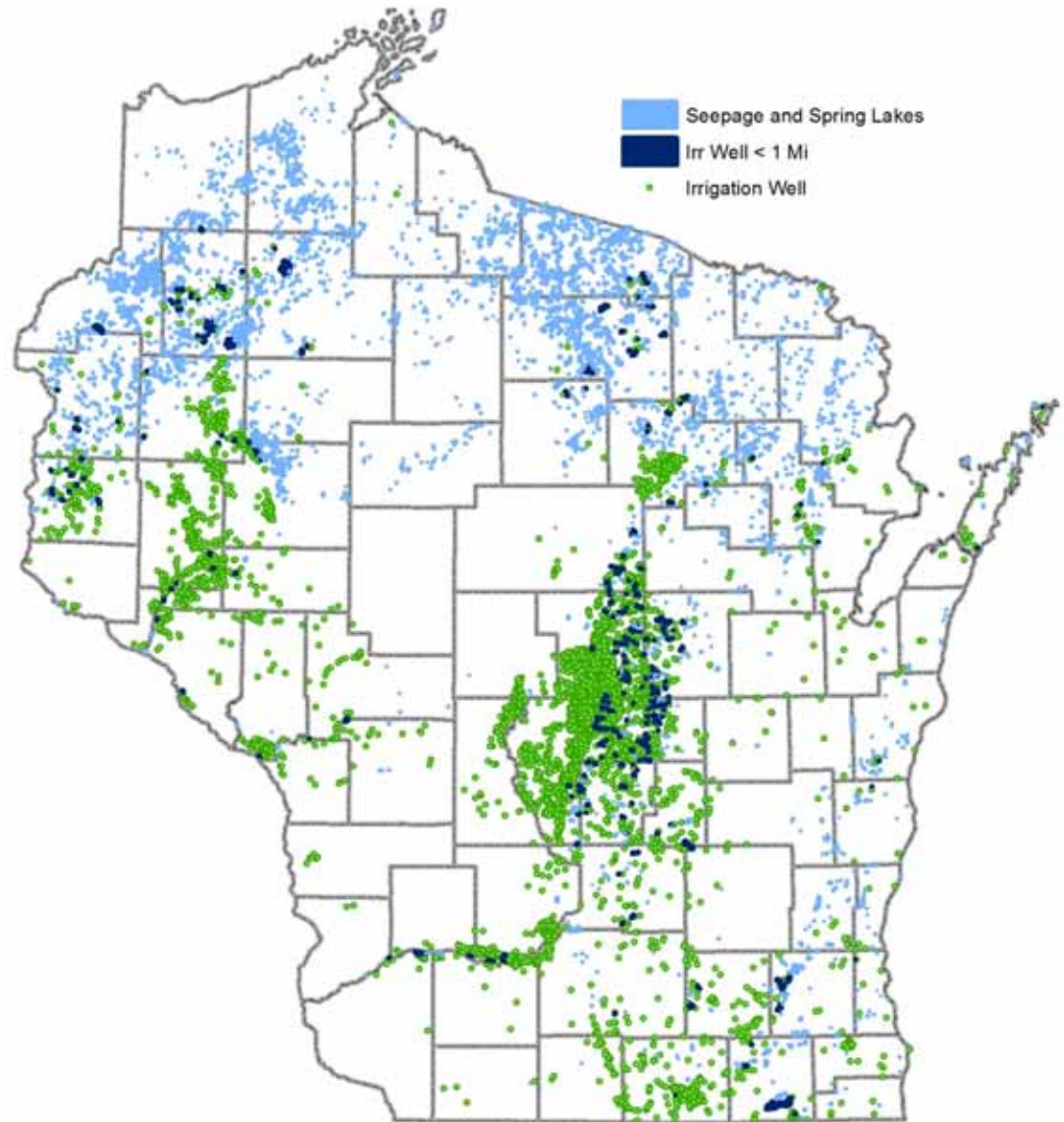
- 4207 Seepage and Spring Lakes in Wisconsin
- 374 are currently within 1 mile of an irrigation well





Water Withdrawals and Lake Impacts

- > 4,500 Irrigation Wells in Wisconsin
- ½ are located in the Central Sands where most were installed by early 1980s
- Recent approvals have been disproportionately in the NW and South Central





Water Withdrawals and Lake Impacts

High Capacity Well Reviews for Lake Impacts:

- Local geology and hydrogeology
 - morphology & bathymetry
 - historic water levels
 - water quality
 - fishery & other biological aspects of the lake
-
- Evaluating alteration of surface area, depth, and volume and distribution of affected shoreline;
 - How will a change to the lake's water budget affect fish habitat and water quality?



Groundwater Use and Management in Wisconsin

Thank You

For more information, contact

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