

Wisconsin Groundwater Coordinating Council
Minutes from meeting held February 19th, 2010
Board Room, Department of Agriculture, Trade & Consumer Protection
2811 Agriculture Drive, Madison.

Members Present: Todd Ambs (DNR); James Robertson (WGNHS); George Kraft (Governor's Representative), Henry Anderson (DHS); Anders Andren (UW-System); Lori Bowman for Kathy Pielsticker (DATCP) and Eric Scott for Berni Mattsson (Commerce).

Others Present: Dave Hart (WGNHS); Jason Lowery and Sara Walling (DATCP); Ed Morse (WRWA); Michael Lemcke, Larry Lynch, and Jeff Helmuth (DNR);

1) Introductions and General Business – The meeting began at 10:00 AM. The November 13th, 2009 meeting minutes were approved.

2) Technical Presentation: Drawdown in the Northeast Groundwater Management Area (Brown, Outagamie, and Calumet Counties) – Dave Hart reported on work done by himself, John Luczaj and Julie Maas in 2008-2009 characterizing lower aquifer drawdown centered on Brown County. The region has experienced drawdowns greater than 400 feet with a significant portion of Brown County showing drawdowns greater than 150 feet in the confined aquifer. This is one of the larger cones of depression studied. Wisconsin groundwater quantity legislation, 2003 Act 310, designated areas with drawdowns greater than 150 feet as Groundwater Management Areas to receive special attention. However, no analysis of the drawdowns or pumping rates in this area had been conducted in nearly 10 years. And now with eight communities in the northeastern GMA switching from groundwater to surface water an opportunity exists to observe changes in water levels due to the decreased pumping rates.

Historic water level and pumping data were used to make maps of drawdown cones and tables with associated pumping rates. Improved hydrostratigraphy from other studies in the area and downhole geophysical logging, flow measurements, and packer testing enabled improved geologic interpretations and understanding of the hydrogeology and flow system. The switch from groundwater to surface water by the eight municipalities was used to estimate a vertical conductivity of the confining layer.

Since the recent municipal switch from groundwater to surface water, water levels in the deep sandstone aquifer have increased more than 100 ft around the central portion of the main cone of depression. Although the rate of water level increase has slowed, water levels are still slowly rising and in some places exceed the land surface (e.g. Howard's well #3 has begun to flow). A smaller portion of the cone of depression in the northeastern GMA, located to the south and centered on the Fox Cities area near the north end of Lake Winnebago has not shown any change in water levels because it is located too far from the change in pumping. Analyzing recovery curves from central Brown County wells resulted in horizontal conductivity (Kh) values of the deep aquifer that ranged from 2.7 to 19.1 feet per day. Vertical conductivity (Kv) values of the confining unit ranged from 2.8×10^{-7} to 2.3×10^{-3} feet per day. Well and borehole logging showed the importance of high conductivity, both vertical fractures and horizontal high K zones, in the sandstone aquifer.

Dave noted that we now have two instances of aquifer recovery in this area; in 1957 (when Green Bay switched to surface water) and the one from 2005-2007. Both have shown that if the aquifer is over-pumped, the mineralized zone of the St. Peter Sandstone may become dewatered and might act as a source of arsenic. Also, if the pumping rate is too low, many wells open to the deep sandstone aquifer may begin to flow, creating a need to deal with the excess water.

Todd Ambs noted that the 150-foot drawdown level would likely stay the same in new groundwater

legislation being considered and asked if the NE GMA would continue to meet that criterion under the current pumping regime. Dave thought it would but it would be close, one or two additional large high-capacity wells would have to stop pumping for drawdown to be less than 150'. The area with the drawdowns greater than 150' has only around 4 mgd pumping now.

3) Education Subcommittee Report – Dave Hart reported for Kevin Masarik that the Subcommittee had met on November 18th to address the following on-going projects:

- Water reuse and conservation fact sheet - Kevin Masarik has completed this fact sheet and it is available at: <http://learningstore.uwex.edu/On-site-Water-Reuse-Systems-Using-Water-to-Its-Full-Potential-P1362C62.aspx>
- The WGNHS karst handout is completed and available at: <http://www.uwex.edu/wgnhs/pdfs/karst.pdf>
- Work is continuing on the WRI Groundwater fact sheet on Pathogens.

Members of the subcommittee played key roles in the three groundwater teacher workshops held in January and are participating in Groundwater Awareness Week activities.

4) DNR Water Division Work Reduction – Todd Ambs reported that the Water Division was implementing a workload reduction plan to better focus on required core work for the Division. Vacant positions, furloughs and budget cuts make the reductions necessary to better align priority workload to the existing workforce in the Water Division. Furthermore, budget prospects for next year include 10-25% cuts which may necessitate further reductions. Lori Bowman agreed that the state budget situation was not looking good. If cuts are coming agencies may have to cut entire programs.

Todd described some of the program cuts that are laid-out in the Water Division 19-page work reduction plan. Overall, the Drinking Water and Groundwater Program was reduced by 10 FTE, the Fisheries Management Program by 11.5 FTE and the Watershed Management Program by 23.7 FTE. Some groundwater-related cuts include reducing staff hours for wellhead protection by one-half; and reducing GCC support by one-half.

Significant DNR GCC support work reduction has already been achieved by the WRI taking on joint solicitation workload formerly done at DNR. Additional work reduction will be accomplished by limiting DNR staff support (i.e. scheduling and attending meetings, writing agendas and minutes) to only one meeting per year for each of the four subcommittees. Because of frozen vacancies there will be fewer other DNR staff involved in GCC subcommittees as well. Jamie Robertson and others expressed concern over the lessened DNR support. Todd acknowledged that he was confident that the GCC would continue to be effective.

5) Update on FY 11 Joint Solicitation – Anders Andren reported that there were 12 proposals submitted in response to the FY 11 Joint Solicitation request for proposals. Funds requested for FY 11 totaled \$327,497. Two UWS projects will carry-over from the current fiscal year leaving approximately \$155,000 available to fund new projects. In addition WRI is allocating approximately \$70,000 of USGS 104b funds towards climate- related water resources projects this year through a separate call for proposals (included in the joint solicitation). Two projects have been selected for 104b funding - one related to evapotranspiration in the Lake Superior Basin and the other related to smaller lakes. The project period is March 1, 2010 to February 28, 2011. The USGS funding is in the last year of a five-year funding cycle so these projects will have no overhead costs associated with them. The hope for this funding use is to act as a pilot for future years of climate-related water resources funding.

6) Agency Updates

DHS – Henry Anderson reported that DHS staff are developing responses to public comments to provide to the DNR on Chapter NR 140 revisions by the end of March.

Commerce – Eric Scott reported that Commerce is dealing with more budget difficulties.

DATCP – Lori Bowman reported:

- In addition to her administrative duties, Kathy Pielsticker is currently assuming Director duties for the Bureau of Land and Water. The former Director, Dave Jelinski, recently took a position as Director of Governmental Affairs with the Dairy Business Association. Lori will be handling GCC duties for DATCP while Kathy has this additional responsibility.
- DATCP has been providing information to Legislators on the extensive regulatory framework for atrazine and use of the herbicide in Wisconsin.
- DATCP staff are working with Ken Bradbury (WGNHS) on a groundwater monitoring project at the Arlington Agricultural Research Station.

Governor's Representative – George Kraft reported that the Central Sands Area still has dry lakes and streams and individuals with many perspectives on the problems. George's research team is continuing data collection and modeling to characterize the problem and test potential solutions. George is working with WGNHS to publish the results of the last few years of work.

UWS – Anders Andren reported that the National Water Resources Center funding authorization is running out at the end of the year but the current budget bill proposes more funding than was requested. There are more federal funding opportunities than usual.

WGNHS – Jamie Robertson reported:

- Work on pathogens, especially viruses, is expanding at WGNHS.
- Mark Borchardt, infectious disease specialist at Marshfield Clinic Research Foundation, is moving to a new environmental microbiology lab that will be funded by the USDA-Agricultural Research Service and USGS. The new lab will be in Marshfield.
- The Survey is exploring an assessment of groundwater resources in the northwestern part of the state – an area previously receiving little attention.
- Educational efforts on shallow fractured carbonate bedrock have culminated in a fact sheet on the Internet: <http://www.uwex.edu/wgnhs/pdfs/karst.pdf>
- Work with the Federal Department of Energy are focusing on assessing the potential for geothermal energy in Wisconsin. There may be economically feasible potential in some intrusive igneous formations such as Wolf River Batholith.

DNR – Todd Ambs reported:

- The State-EPA Nutrient Innovations Task Group is looking at the surface water –groundwater connection with phosphorus and nitrogen. Jill Jonas is the WDNR representative.
- Polluted runoff is the Water Division's #1 challenge. Proposed revisions to NR 151 (Runoff Management) are out for public hearing. The revisions establish specific phosphorus indices on fields. DNR is moving towards a numeric standard for P in surface water bodies. If DNR doesn't set one, EPA will. A proposal may go to the Legislature by the end of August. Lori Bowman added that DATCP was working on implementing the statewide ban on P in landscape fertilizer. Anders Andren noted that there was no noticeable change in P levels in the Great Lakes over the last 10 years.

7) Legislative Groundwater Workgroup – Todd Ambs reported that it was likely that legislation would be proposed by Senator Mark Miller and Representative Black in the near future. [Note: On March 4th the Wisconsin Legislative Council summarized the draft bill f LRB-4094/1 at: <http://www.thewheelerreport.com/releases/mar10/mar8/0308blacklegcouncilmemo.pdf>] Todd

noted a provision for the GCC to help provide science-based answers related to designating Groundwater Management Areas. Henry Anderson and George Kraft raised concerns that becoming too involved in the policy-making would politicize the GCC. Todd said his understanding of the GCC's role was that it would determine whether the science is accurate and would not make policy decisions.

8) Adjourn and Next Meeting – The meeting was adjourned at 12:10. The next meeting will be on May 7th at WGNHS

Respectfully submitted by Jeff Helmuth