

**Wisconsin Groundwater Coordinating Council**  
**Meeting minutes, August 27th, 2010**  
**Wisconsin Department of Natural Resources**  
**GEF II Building, 101 S. Webster St., Madison.**

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

**Others Present:** Ken Bradbury (WGNHS); Nancy Quirk (Waukesha Water Utility); Eric Ebersberger, Mike Lemcke, Dan Bauman, Steve Elmore, Dino Tsauris, and Jeff Helmuth (DNR).

**1) Introductions and General Business** – Introductions were made. Jill Jonas relayed that she will be representing the DNR at the next two GCC meetings. Jill also introduced Dan Baumann, Acting Water Division Deputy Administrator and West-Central Region's Water Leader. George Kraft suggested adding an agenda item on interagency collaboration. A motion by George Kraft and seconded by Jamie Robertson to approve the May 7<sup>th</sup>, 2010 meeting minutes passed unanimously. Jeff Helmuth noted that Jim Malone from the Government Accountability Board had contacted him regarding the GCC's responsibilities under the Contract Sunshine Act (Act). Although the Act relates to solicitations and procurements, Mr. Malone determined the Act does not apply to GCC.

**2) Agency Updates**

DHS – Chuck Warzecha reported:

- Considerable time was spent reviewing health information for standards proposed in Cycle 9 of the NR 140 groundwater standards setting process. The rule is now at the Legislature.
- Molybdenum is being found in private wells near the Oak Creek Power Plant site.
- Fluorescence dye (a groundwater tracer) is being evaluated for health impacts.
- Mark Werner is the new Health Hazard Evaluation Section Chief.

Governor's representative – George Kraft reported:

- The Groundwater Center's tool for displaying private well test results, geographically, is being beta-tested with nitrate data.

Commerce – Eric Scott – no update

WGNHS – Jamie Roberston reported:

- The Mapping Advisory Committee met earlier this week and approved WGNHS's proposed FY 2011 Wisconsin STATEMAP mapping projects for Sheboygan, Grant, and Fond du Lac Counties. Digitization of numerous published maps is also planned.
- U.S. Congressman Obey has submitted a "Northwest Wisconsin Groundwater Study" for consideration in Fiscal Year 2011 Appropriations. If approved, project awards total over \$1,000,000 to WGNHS for work including water table and glacial geology mapping and monitoring well installation. The project is designed to answer water budget questions and address water supply, climate change response, and forestry management issues. The project includes characterizing the groundwater resources in the Chequamegon and Nicolet National Forests.
- Geothermal data collection is being funded by the U.S. Dept of Energy and includes deep borings into the Wolf River Batholith.
- Mike Parson has been hired to update the Dane County groundwater flow model (a new 2-year position).

- Columbia County work includes the recently completed glacial geology map and bedrock geology mapping. A water table map and groundwater flow mapping will follow.
- Groundwater is becoming increasingly scarce in Taylor County where crystalline bedrock is close to the surface. Recent droughts have exacerbated groundwater quantity problems.
- Iowa County is being mapped. Deep coring is being carried out in Sheboygan County.

UW –WRI – Anders Andren reported:

- The Water Resources Institutes Act will soon expire. There have been questions from the House committee but reauthorization is moving forward.
- The WICCI Water Resources Working Group has finalized its section for Wisconsin’s first climate adaptation report. Release of the full report should be in early December.

DATCP – Lori Bowman reported:

- The Working Lands Program engages local governments to purchase agricultural conservation easements from willing landowners. Application forms were due June 1, 2010.
- Kathy Pielsticker continues to fulfill duties as both Division Administrator and Director of the Bureau of Land and Water.
- Implications of the 2009 court decision that vacated EPA’s 2007 rule exempting certain pesticide applications that are compliant with the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) from the permitting requirements of the Clean Water Act (CWA) are not clear. Both DNR and DATCP will be involved with its implementation.
- Plans are being laid to begin a new groundwater survey of rural private wells.

DNR – Jill Jonas reported:

- Bruce Baker was appointed as the Water Division Administrator.
- In June the Natural Resources Board (NRB) approved new phosphorus rules that set criteria and TMDL base limits. Those rules are now at the Legislature for consideration.
- Extensive new and revised safe drinking water rules are moving forward, including a requirement that all municipal systems disinfect. This specific requirement is a direct result of research by Mark Borchardt and others in the state. Additionally, a recent study in the Milwaukee area suggests a possible association between rainfall and pediatric emergency department visits for acute gastrointestinal illness (<http://www.ncbi.nlm.nih.gov/pubmed/20515725>).
- The Cycle 9 Groundwater Standards (15 new, 15 revised) have been provided to the Legislature for consideration.
- Eric Ebersberger gave an update new water use rules. The DNR is in the process of promulgating seven administrative rules to implement the Great Lakes Compact and associated statewide water use legislation. The NRB adopted the following three rules in August: Water Use Registration and Reporting; Water Use Fees; and Water Conservation and Water Use Efficiency. The NRB also authorized public hearings on the Water Use Permitting rule. Three additional rules are being drafted with a goal of requesting public hearing authorization from the Natural Resources Board still in 2010. These rules include Water Supply Service Area Planning, Water Loss and Consumptive Use, and Water Use Public Participation.
- The city of Waukesha has submitted an application to the department for a diversion of great lakes water.

**3) Technical Presentation: Groundwater, Streams, Lakes and Pumping in the Central Sands** – George Kraft gave an update on work done by himself, Dave Mechenich, Jessica Hauke and Katherine Clancy on DNR-funded data compilation, statistical analysis, and flow modeling completed to better

understand surface and groundwater quantity concerns in the Central Sands. A historic context was provided including the introduction of irrigation technology in the 50's, studies indicating the potential for quantity problems, the many-fold increase in high-capacity well numbers from the 60's to the present, and record low lake levels and flow in the Little Plover River since 2005. Findings include:

- Weather conditions in 2000-2008 can't account for the severely depressed water levels and streamflows in areas with high densities of high capacity wells. Water levels in areas with few high capacity wells from 2000-2005 were close to average, and lower than average but not at rare nor record lows in 2006-8. Water is "missing".
- Lakes levels in areas with many high capacity wells showed substantial declines that cannot be accounted for by weather, in the range of 1.5 and 3.6 feet, depending on the lake's location.
- Recharge reduction due to irrigation explains missing water (averaging ~ 2" in Waushara County and averaging 5.5" in Little Plover River area.
- Declines of around four feet or more in water levels by pumping are possible.
- There is approximately 4.5 cu.ft/s of "missing flow" in the Little Plover River.
- Pumping impacts on streamflows are most severe in stream headwaters, where common flow reductions of 20-50% are possible.

**4) Technical Presentation: Human viruses as tracers of wastewater pathways into deep municipal wells** – Ken Bradbury reported on DNR-funded research completed by himself, Mark Borchardt, Madeline Gotkowitz, Randy Hunt and several others over the past few years.

- 15 different serotypes of viruses were found in wells, sewage, and lake water
- Almost all serotypes found in well water were also detected in sewage influent.
- More serotypes were found in wells than in surface water.
- The presence of mostly identical serotypes in wells, lakes, and sewage suggests very rapid transport from the surface to groundwater. (serotypes vary seasonally and annually, and so correlation between surface and subsurface serotypes would be unexpected if transport times from the surface to groundwater exceed many months.)
- Some of the viruses found were non viable.
- 2nd year of study strengthened the temporal coincidence between serotypes present in sewage influent and serotypes present in groundwater
- Shallow well casings and older age correlated to higher virus concentrations; well depth did not.
- Age of groundwater (by tritium) was a good predictor of potential for virus presence.

There was discussion of the size and charge characteristics which led to Anders Andren commenting that viruses may not be free-floating but associated with colloids which would presumably affect transport characteristics. Jill Jonas thanked Ken Bradbury and mentioned that this work and others led to a proposed requirement for disinfection at all municipal water systems and has had a national impact on drinking water policy. There was subsequent discussion of sewer leakage and water main pressure variations.

**5) Consideration of 2010 GCC Report to the Legislature** – Jeff Helmuth reported that only a few non-substantive changes had been made since Draft 2. Key differences from last year's report include the new on-line format, streamlined and more accessible recommendations, and the use of Internet links for supporting materials. In addition, Wisconsin Digital Archives provides a means to fulfill statutory obligations with electronic formats and eliminates the need to provide hard copies to the state reference and loan document depositories. Motion by Eric Scott and seconded by Chuck Warzecha that the report be approved. The report was unanimously approved. [Report available at: <http://dnr.wi.gov/org/water/dwg/gcc/rtl/gccreport2010.htm>]

**6) Subcommittee Activities Reports** – Jeff Helmuth reported on two subcommittee meetings.

Education - Carolyn Betz is working with Sam Sibley (UW Engineering) on the Pathogens fact sheet.  
Monitoring and Data Management – meeting focused on water use.

- Discussion on water use components in Rock and Dane Counties.
- Project proposed for Fox (IL) Water Smart funding.

**7) Joint Solicitation** – Anders Andren reported that the WRI plans to release the call for proposals for the Groundwater Research & Monitoring Program in late September with a due date for proposals in early November. The WICCI Water Resources Working Group will again review the UWS priorities and offer comments. The working group will have a conference call on September 1 for this discussion. Those comments will be forwarded to GRAC followed by a 1-week opportunity to address comments and make revisions to the priorities.

The UW-WRI will again devote approximately \$75K research funds from USGS (104B funds) to support proposals on climate-related water resources issues. This follows the path used last year which resulted in funding of two one-year projects (by Loheide and Wu). Multi-year proposals maybe accepted in this year's call. The call for these proposals will be a part of the Joint Solicitation again.

Requests have been sent for final reports for all projects ending June 30, 2010. Final reports for 7 UWS-funded projects are due by September 30, 2010. The full reports will be posted on the WRI web site.

Wisconsin received funding for one of six projects funded through the USGS's 104G national competition. The three-year proposal "Implications of Climate Change and Biofuel Development for Great Lakes Regional Water Quality and Quantity," is led by Anita Thompson, UW-Madison

**8) Inter-Agency Collaboration on Groundwater Issues** – George Kraft and Jamie Robertson voiced concerns that the Wisconsin groundwater community was not as connected as it once was. Lori Bowman stated reasons it is sometimes difficult to have the certain representatives at the table. Chuck Warzecha suggested the need for more focus within the GCC. Anders Andren suggested that the GCC put together a brief, one page, strategic plan for each year. Jill Jonas suggested GCC members consider ideas/needs for discussion at the next meeting.

**Adjourn and Next Meeting** –. The meeting was adjourned at 12:15. The next meeting will be on November 12<sup>th</sup> at DOT. Agenda item suggestions include a joint solicitation update and an overview of the USGS WaterSmart program.

Respectfully submitted by Jeff Helmuth