

# Wisconsin Ground Water Association *Newsletter*



## PRESIDENT'S MESSAGE

Greetings and welcome to 2013! With the new year we have a new president. Some of you may remember me from my tenure in 2011. I am succeeding the very capable Paula Richardson who served as president last year. Ralph Smith, a hydrogeologist with the state of Wisconsin, is our president-elect, he will serve as president in 2014.

We are very excited to have new leadership to help the "seasoned veterans" at WGWA. Board members for 2013 include Mike Raimonde of the Foth Companies, Anna Fehling of Montgomery Associates Resource Solutions, Janis Kesy of the Foth Companies, and Jodie Peotter of ECCS Nationwide Mobile Laboratories. In addition to myself and Ralph Smith, other elected officers include Jeff Ramey of Pace Labs as the Secretary and Becky Caudill of Natural Resource Technology as our Treasurer. We are always looking for people to get involved, so please consider becoming a board member or officer for 2014. Any of the above folks can tell you what a worthwhile endeavor service can be.

We are looking forward to an interesting year with regard to water issues. Mining is being revisited in the state legislature, and with it come discussions about its effect on the waters of the state. Warm weather, heavy winter rains, and now significant quantities of snow, how will all of this affect lake levels and the groundwater table? Issues regarding Great Lakes water use by communities outside of the basin continue to make headlines. As I explained to my son this week, this is a municipal, county, state, federal and international issue. We will do our best to provide sources of factual information regarding the water issues of the year.

We have a call for papers out for the 2012 Annual Conference on April 12, 2012. We are very excited this year to have as our keynote speaker, Dr. Jon Jansen, the 2013 McElhiney Lecturer. Dr. Jansen's presentation is titled "Keeping the Pump Primed: Aquifer Sustainability." Please mark your calendars and plan to attend this event, it will be a great day of networking and knowledge exchange.

We hope to see you at the Annual Meeting, one of our upcoming luncheon lectures, or at the fall field trip (Whitewater Area in combination with the Association of Professional Geologists [AIPG]). Please support WGWA this year, and contact us if you have any ideas for topics you would like to know more about.

Jim Bannantine  
2013 President, WGWA

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### INTERESTING ARTICLES AND OTHER TIDBITS ON THE WEB

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# 2013 WGWA Officers & Committees



## 2013 BOARD MEMBERS

### President (2013)

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## GROUND WATER RELATED CONFERENCES, MEETINGS, EVENTS AND COURSES

- February 16, 2013—5th Annual Wisconsin Progressive Grassroots Festival (featuring mining and other issues), Wisconsin Heights High School, 10173 State Highway 14, Mazomanie, WI. Suggested \$14 donation. [Additional Information Here.](#)
- April 21, 2013—WGWA Annual Meeting in Waukesha, Wisconsin.
- April 28-May 2, 2013—NGWA Summit 2013, The National and International Conference on Groundwater in San Antonio, Texas. Includes opportunities for short courses. [Details Here.](#)
- May 8-10, 2013—Water Management for Mining at St. Andrew's Club & Conference Centre, Toronto, Ontario. For information call (818) 888-4444 or [Click Here.](#)
- June 4-5, 2013—ITRC's 2-day LNAPL Classroom Training in Springfield, IL. [Details Here.](#)
- August 26-27, 2013—2nd International Conference on Hydrology & Ground Water Expo (Hydrology-2013) in Raleigh, NC. [Details Here.](#)

## UPCOMING WEBINARS

- ITRC's LNAPL Part 1: An Improved Understanding of LNAPL Behavior in the Subsurface (February 28, 2013—[Details Here](#))
- ITRC's LNAPL Part 2: LNAPL Characterization and Recoverability (March 7, 2013—[Details Here](#))
- ITRC's LNAPL Part 3: Evaluating LNAPL Remedial Technologies for Achieving Project Goals (March 14, 2013—[Details Here](#))
- ITRC's Project Risk Management for Site Remediation (April 16, 2013—[Details Here](#))
- ITRC's Green and Sustainable Remediation Webinar (April 23, 2013—[Details Here](#))

# WGWA Annual Meeting

## Save the Date & Call for Abstracts



### SAVE THE DATE! WGWA Annual Meeting

**Date:** Friday, April 12, 2013  
**Place:** Marriot Milwaukee West Hotel in Waukesha, WI

**Featuring:** Keynote Speaker, John Jansen

**Presenting:** The McElhiney Lecture Series in Water Well Technology

John Jansen, Ph.D., PG, a principal and senior hydrogeologist for Cardno ENTRIX is the 2013 McElhiney Lecturer. He works on a wide variety of groundwater projects around the country, specializing in high-capacity wells and groundwater resource management. Formerly a partner in a Denver-based water rights company and the chief geoscientist for an international drilling company, he has broad experience in well construction and maintenance, as well as water rights issues. He is presenting Keeping the Pump Primed: Aquifer Sustainability.



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### *Annual Membership Meeting Call for Abstracts*

***Abstracts are requested by March 1, 2013***

The Wisconsin Ground Water Association (WGWA) is soliciting abstracts for papers and posters to be presented at our annual WGWA meeting. Oral and poster sessions are intended to address both surface water and groundwater issues in Wisconsin. Suggested topics include:

- Water Supply Issues
- Water Quality Issues
- Watershed Management
- Reports of Ongoing Research
- Other topics of interest

#### **Presentations**

Speakers will present a 20-minute talk followed by 10 minutes for questions from the audience.

#### **Posters**

One session will be devoted to viewing posters, so you won't have to decide whether to hear the talks or see the posters!

#### **STUDENTS!**

We are interested in having both undergraduate and graduate student presentations, and will be presenting cash rewards for the best student presentations and posters!

Submit your abstract to:

WGWA Treasurer Becky Caudill

email: [rcaudill@naturalrt.com](mailto:rcaudill@naturalrt.com)

address: Natural Resource Technology, 23713 W Paul Road, STE D, Pewaukee, WI, 53072

fax: 262-523-9001

# Wisconsin Water Use

## 2011 Withdrawal Summary

By Robert Smail | Wisconsin Department of Natural Resources

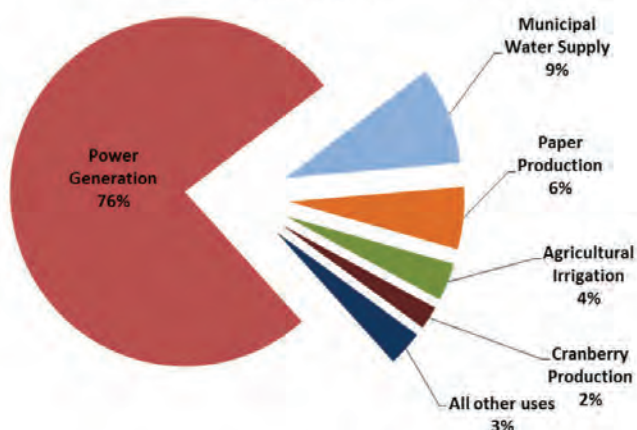


*Editor's note: The following is the condensed version of the 2011 Withdrawal Summary. The detailed version and additional information can be found at <http://dnr.wi.gov/topic/WaterUse/WithdrawalSummary.html>.*

**Water supply systems in Wisconsin** capable of withdrawing 100,000 gallons per day are required to register and report withdrawals. For 2011, reported withdrawals exceeded 2.155 trillion gallons of water from over 12,500 wells, ponds, streams, rivers and lakes.

### 2011 Withdrawals by Use

Total Withdrawals = 2.156 Trillion Gallons

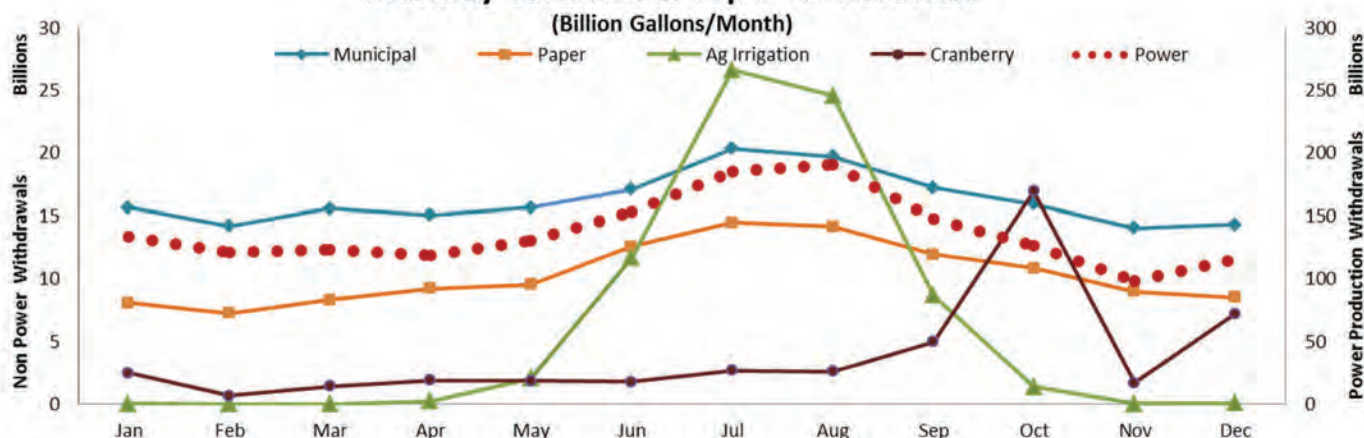


**Withdrawals** occur when someone takes water from a surface or groundwater source making it unavailable for other purposes. The impact of a withdrawal on the resource or to other potential withdrawers depends on a number of factors. Monitoring water withdrawals by sector, source type and location will allow us to estimate the scale and impact of water use in Wisconsin and promote sustainable water use.

**Seasonal Variation** affects how and when water is withdrawn. Monthly withdrawals varied greatly throughout 2011 and followed temperatures and precipitation. For instance:

- Summer heat drives municipal water demand as well as cooling water demand for power and paper production.
- Agricultural irrigation peaks in July and August when crops typically require the most water.
- Cranberry growing requires the largest withdrawals in fall for harvest flooding and in early winter for frost protection.

### Monthly Variation in Top 5 Withdrawals



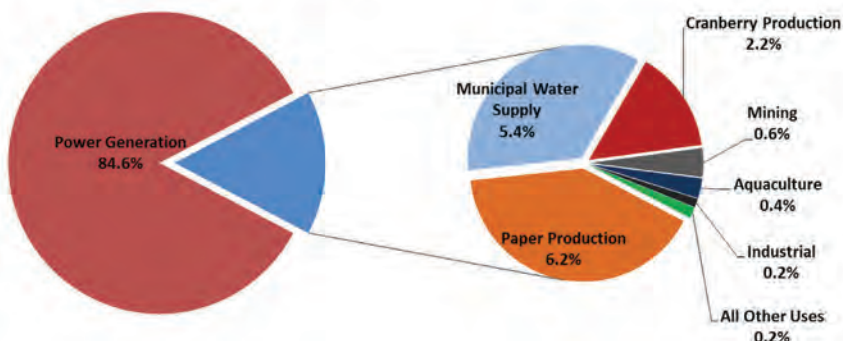
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# Wisconsin Water Use 2011 Withdrawal Summary

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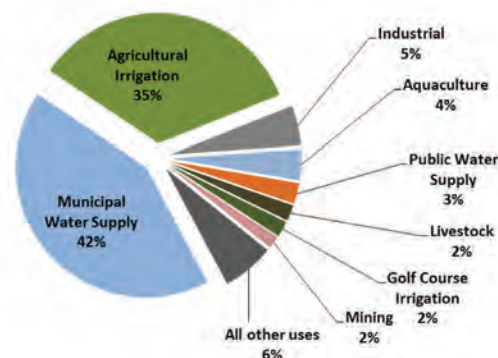
## 2011 Surface Water Withdrawals 1.9 trillion gallons statewide



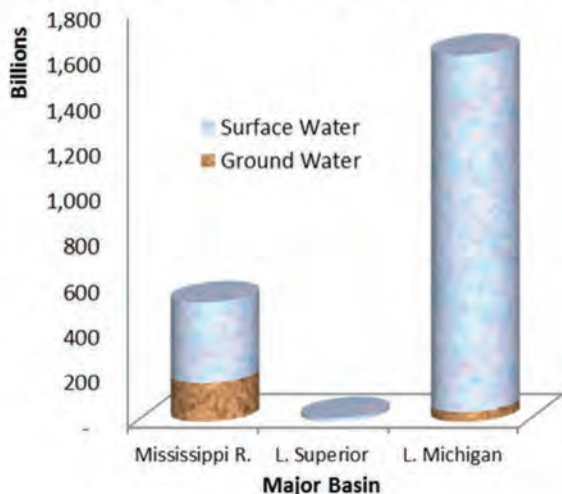
- Surface water withdrawals totaled 1.942 trillion gallons from 826 sources.
- The largest volume of water withdrawn in the state (1.6 trillion gallons) was used by power production facilities for non-contact cooling. These facilities are concentrated along Lake Michigan and the Wisconsin and Mississippi Rivers.
- Many surface water withdrawals are used and discharged near their point of withdrawal so that there is relatively little loss of water from the original source.

- Groundwater withdrawals totaled 213 billion gallons from 11,754 wells.
- Municipal water supply comprises the largest withdrawal (90 billion gallons) of groundwater in Wisconsin. They are typically owned by cities and deliver water for residential, commercial, institutional and industrial uses.
- Agricultural irrigation is the second largest use of groundwater in the state and necessary for growing many high value vegetable crops.

## 2011 Groundwater Withdrawals 213 billion gallons statewide



## Withdrawals by Basin and Source



- Wisconsin water withdrawers rely much more heavily on surface water in the Great Lakes Basin than in the Mississippi River Basin.
- Despite Lake Superior being the largest freshwater lake in the world (by surface area) Wisconsin makes very few surface water withdrawals from it.

For more information regarding the Water Use Reporting program or to request more specific information on withdrawals, please visit our website or contact Water Use Program staff  
[dnr.wi.gov](http://dnr.wi.gov) keyword "**Water Withdrawal Reporting**"  
[DNRWaterUseRegistration@Wisconsin.gov](mailto:DNRWaterUseRegistration@Wisconsin.gov)

There has been much flurry in the legislature over a mining bill that may make Wisconsin more attractive to mining companies. My message to the Governor not to sacrifice key environmental protections on January 30<sup>th</sup> got the response “We are fortunate to have a number of desirable mineral deposits that will no doubt attract mining companies. I am confident we can realize significant economic benefits from such an industry while at the same time protecting our wonderful natural resources.” The more we understand about the underpinnings of the proposed mining region in Ashland and Iron Counties, the more we can protect that most “wonderful” natural resource – groundwater. To that end, I have reprinted here from USGS publication HA-731 the stratigraphic cross section that I compiled. The proposed mine site is shown below from a Journal Sentinel article written by James B. Nelson on July 2, 2011.



Cross section O-O' runs from the Apostle Islands right through Mellen, a few miles from the proposed mine site ([click here for Province 4](#)). It continues south as far as Phillips in Price County ([click here for Province 3](#)). The bedrock over this entire area of northern Wisconsin is Precambrian in age. North of Mellen, the uppermost bedrock consists of volcanic and sedimentary rocks of the Keewawan Supergroup. These rocks are underlain (sometimes at great depth) by the Precambrian basement complex until we look south of Mellen. From

Mellen south the bedrock surface is comprised of the Precambrian basement complex. The prospective mine site might lead one to think that iron ore concentration might have something to do with the boundary of the Precambrian basement complex and the Keewawan Supergroup.

Of course even if the bottom of the Keewawan Supergroup were everywhere a good source of iron ore, it would have to be near the surface of the earth to be economically mineable. Seeking the contact then between basement complex and Keewawan Supergroup would be a viable method of prospecting, except that in some places it is overlain by hundreds of feet of unconsolidated deposits. Unconsolidated deposits in this area consist of Pleistocene glacial deposits that may get up to 400 feet thick (Trotta and Cotter, 1973). Bedrock mining companies sometimes refer to these deposits as glacial overburden, representing the magnitude of material that must be removed (a burden) to reach the desired bedrock surface.

Our cross section O-O' ([click here for north part of section](#)) ([click here for south part of section](#)) shows that the glacial overburden (shown in yellow) thins to absence near Mellen, thus providing near perfect mining access. Other factors, of course, affect the economics of mining here. One of these is the metamorphism of the iron formation and this “affects the success of concentration of the iron ore by industrial methods now in use” (Schmidt, 1980, p. 4)

The various patterns shown on section O-O' indicate the general lithology of the Precambrian rock (and imply degree of metamorphism). [Click here for lithology key](#). The random dashed pattern indicating granitic rocks seen near Mellen is named the Mellen Intrusive Complex (WDNR, 2011). According to Klewin, Olmsted, and Siefert (1989, p. C-1) “The Mellen Complex includes several layered basic and related intrusions emplaced near the base of the Keweenaw volcanic pile. So far as has been determined the volcanics in the Mellen area are Lower Keweenaw nearly conformably overlying the older Proterozoic

*(Continued on page 7)*



units of the Gogebic Iron Range. The lower contact of the complex is slightly discordant cutting to lower stratigraphic levels westward, beveling across the entire Proterozoic to Archean gneisses." The Archean gneisses referred to above are visible on the portion of section O-O' south of Mellen and are indicated by the squiggly-line pattern.

To understand the relationship between the iron ore and the Mellen Complex one needs a more detailed study than that provided by section O-O'. A study is needed which breaks out specific members of the Keewanawan Supergroup. In fact according to Marsden (1978, p. 5), "the iron ore in this area is magnetite taconite that occurs in the Ironwood iron formation. The magnetite taconite reserves are the largest in Wisconsin and one of the more important undeveloped iron ore reserves of the United States". A recent study (Cannon et al, 2007) looks in more detail at the Keewanawan Supergroup, using age dating of samples and whole rock analyses. This study includes in Figure 2 (page 5) a detailed section outlining these relationships, though the exact trace of the section was not published ([click here for Figure 2 section](#)).

Let's talk about the groundwater resource in these Provinces. It is not a problem for a driller to find water here and it may be enough to support a municipal supply if the unconsolidated deposits are thick and extensive. Yields are much lower from the Precambrian bedrock, however. If you must rely on a bedrock well in these Provinces, you count yourself lucky to get a steady 10 gpm supply. Usually there is no option to drill deeper should your well become contaminated. The southern half of Ashland County (which includes Mellen and the proposed mine site) is especially prone to contamination reaching the water table (UW-Extension and USGS, 2007).

Now I'd like you to take a second look at the O-O' cross section and note the smaller section beneath the "Geology" labeled "Dissolved-Solids Concentration". On the northern half of section O-O' (Province IV), dissolved-solids concentrations in water from the shallow aquifers (glacial deposits and the uppermost bedrock) range from less than 100 to over 300 milligrams per liter ([click here for north part of section](#)). Lines of equal dissolved-solids concentration through bedrock aquifers in the hydrogeologic sections are conjectural because of the

unexplained local concentration differences and the lack of hydrologic data for these aquifers. On the southern half of section O-O' (Province III), a range of dissolved-solids concentrations is given (100 to 200 milligrams per liter in unconsolidated material) where lines of equal concentration cannot be shown ([click here for south part of section](#)). Though this data is basic, it can be used as a baseline from which to measure any changes resulting from future mining.

### **References:**

Cannon, W.F., LaBerge, G.L., Klasner, J.S., and Schulz, K.J., 2007, The Gogebic Iron Range – A Sample of the Northern Margin of the Penokean Fold and Thrust Belt: U.S. Geological Survey Professional Paper 1730, 44 p.

Kammerer, P.A., Trotta, L.C., Krabbenhoft, D.P., and Lidwin, R.A., 1998, Geology, ground-water flow, and dissolved-solids concentrations in ground water along hydrogeologic sections through Wisconsin aquifers: U.S. Geological Survey Hydrologic Investigations Atlas HA 731, 4 plates.

Klewin, K.W., Olmsted, J.F., and Siefert, K.E., 1989, Trip 3: Mellen Complex, Wisconsin in INSTITUTE ON LAKE SUPERIOR GEOLOGY PROCEEDINGS VOLUME 35 Part 2. Field Trip Guidebook

Marsden, R.W., 1978, Iron Ore Reserves of Wisconsin, U.S. Bureau of Mines report, 28 p.

Schmidt, Robert Gordon, 1980, The Marquette Range Supergroup in the Gogebic Iron District, Michigan and Wisconsin : United States Geological Survey Bulletin 1460, 32 p.

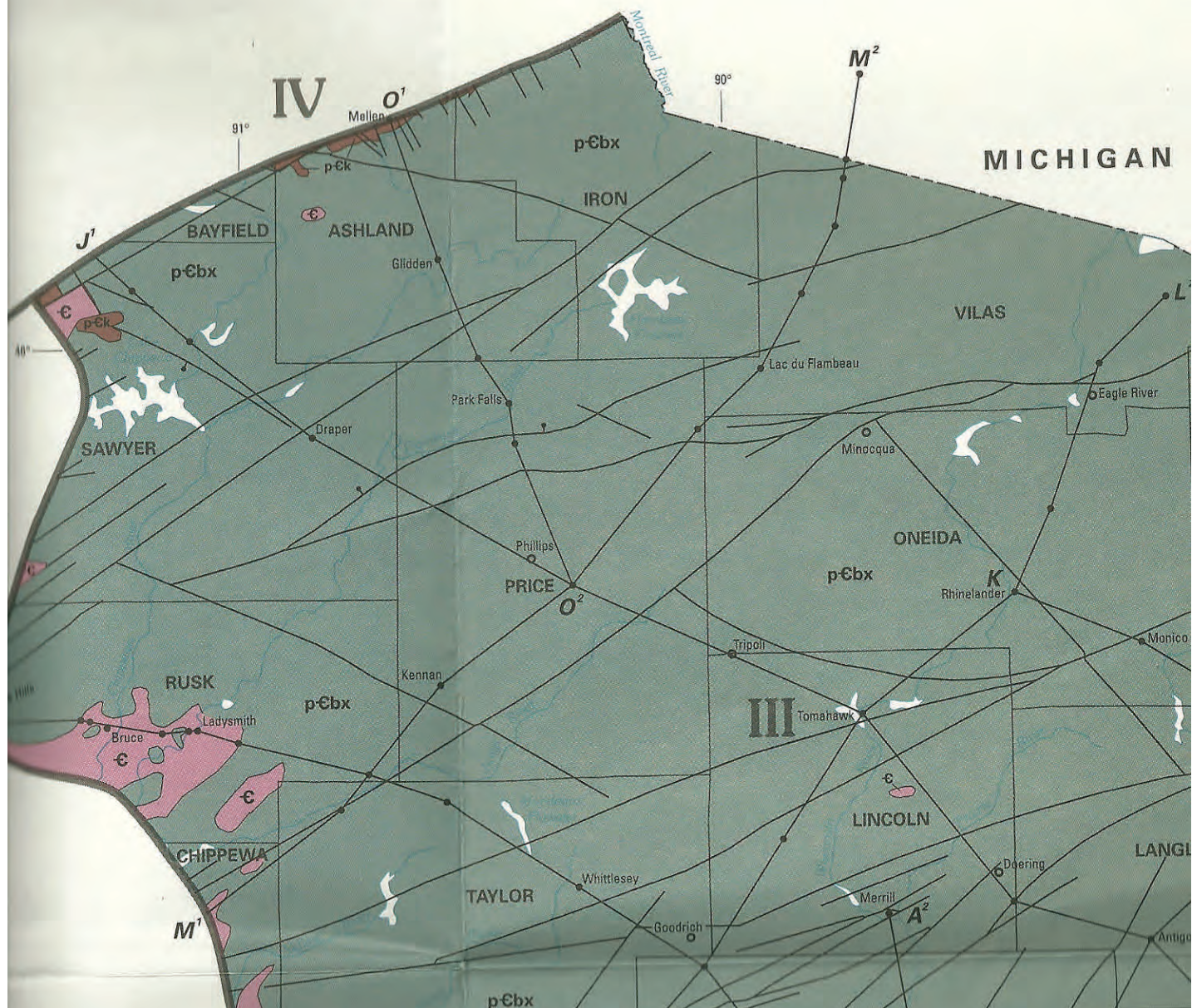
Trotta, L.C., and Cotter, R.D., 1973, Depth to bedrock in Wisconsin: Wisconsin Geol. And Nat. History Survey Map, Scale 1:1,000,000.

UW-Extension, and U.S. Geological Survey, 2007, Protecting Wisconsin's Groundwater Through Comprehensive Planning – Ashland County <http://wi.water.usgs.gov/gwcomp/find/ashland/index.html>

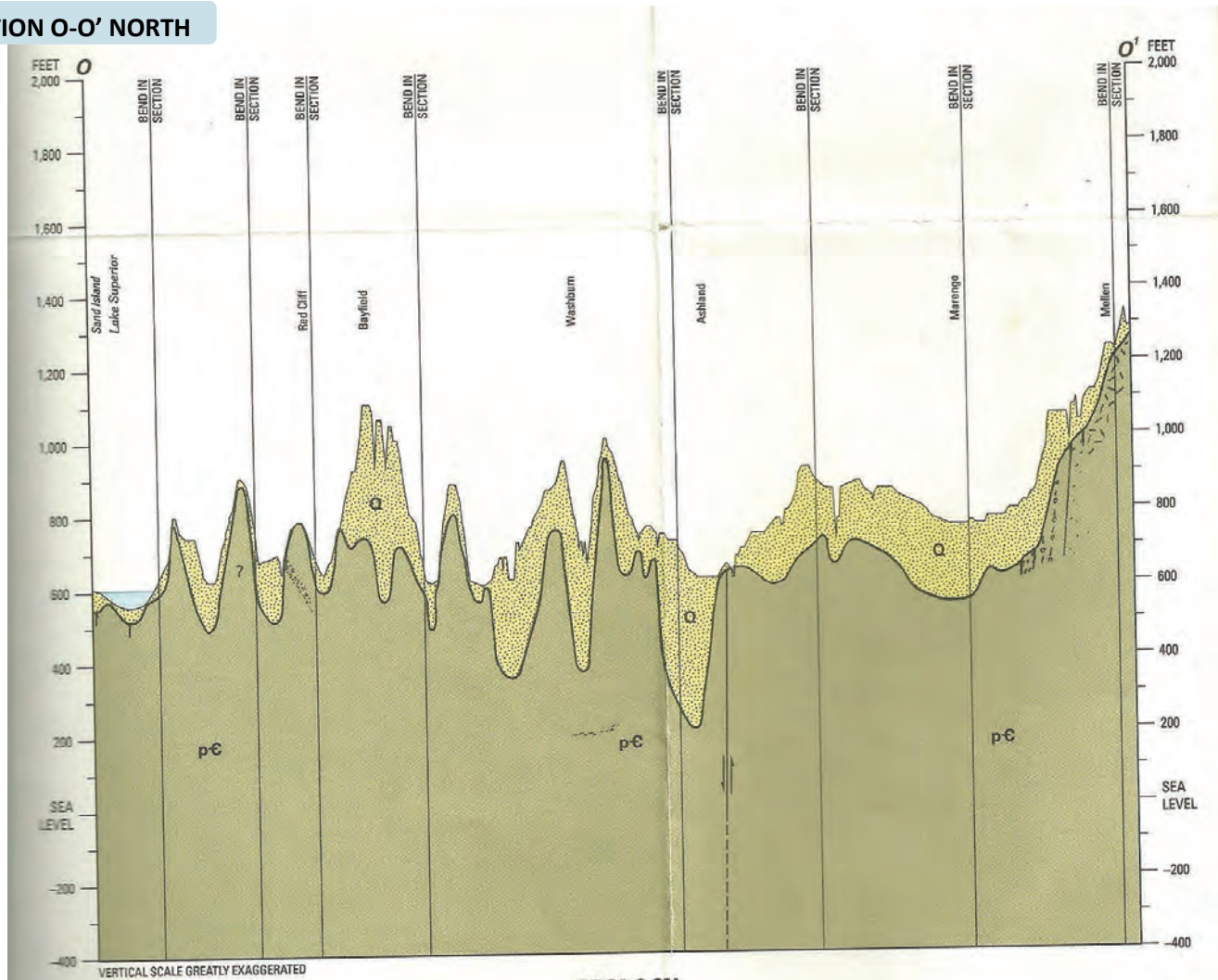
WDNR, 2011, Bedrock Geology : Ecological Landscapes of Wisconsin Handbook - 1805.1, Map S-13 Scale: 1:2,750,000

The figure consists of a main geologic map of the Superior, Minnesota, area and an inset map of Wisconsin counties. The main map shows the St. Louis River, Lake Superior, and various geological units labeled with codes like p-Cb, p-Ck, p-Co, p-Cbx, and Roman numerals I, III, IV. It also shows towns like Duluth, Superior, Washburn, and Ashland. The inset map shows Wisconsin counties, with Roman numerals I, III, and IV indicating specific regions. Three scales are provided: a scale for the geologic map and hydrogeologic sections showing dissolved solids concentrations (0 to 50 miles/km), a scale for the hydrogeologic sections showing geology (0 to 30 miles/km), and a scale for the Wisconsin counties map (0 to 60 miles/km).

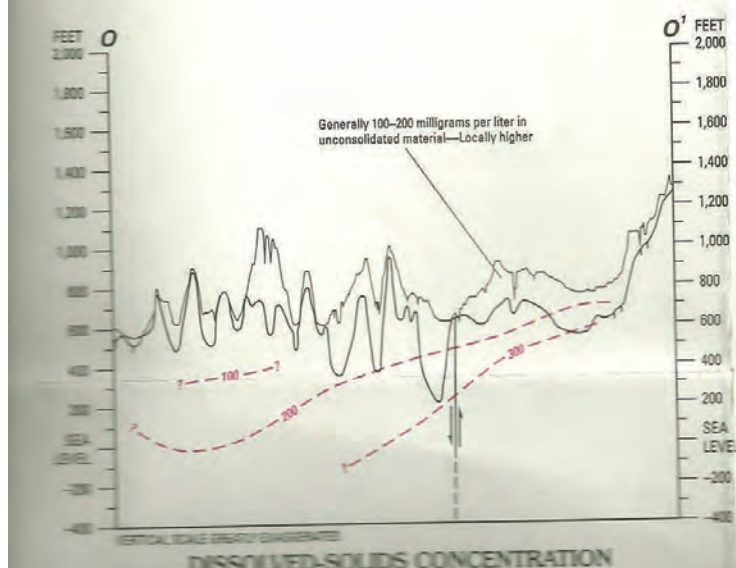
## PROVIDENCE 3



## SECTION O-O' NORTH



GEOLOGY

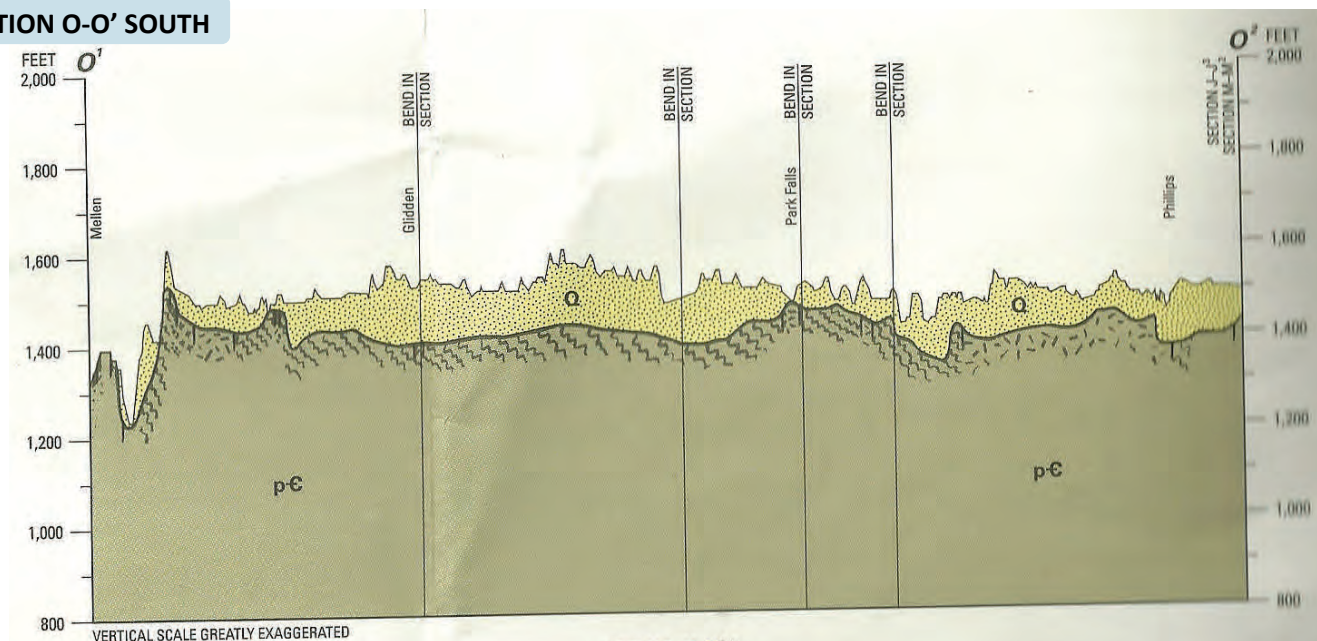


# Stratigraphy Corner

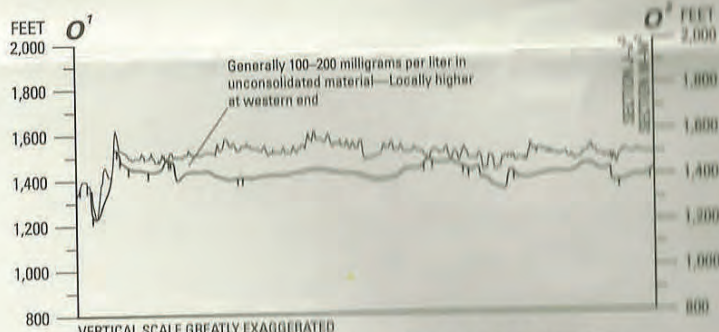
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## SECTION O-O' SOUTH



## GEOLOGY



## DISSOLVED-SOLIDS CONCENTRATION

## LITHOLOGY KEY

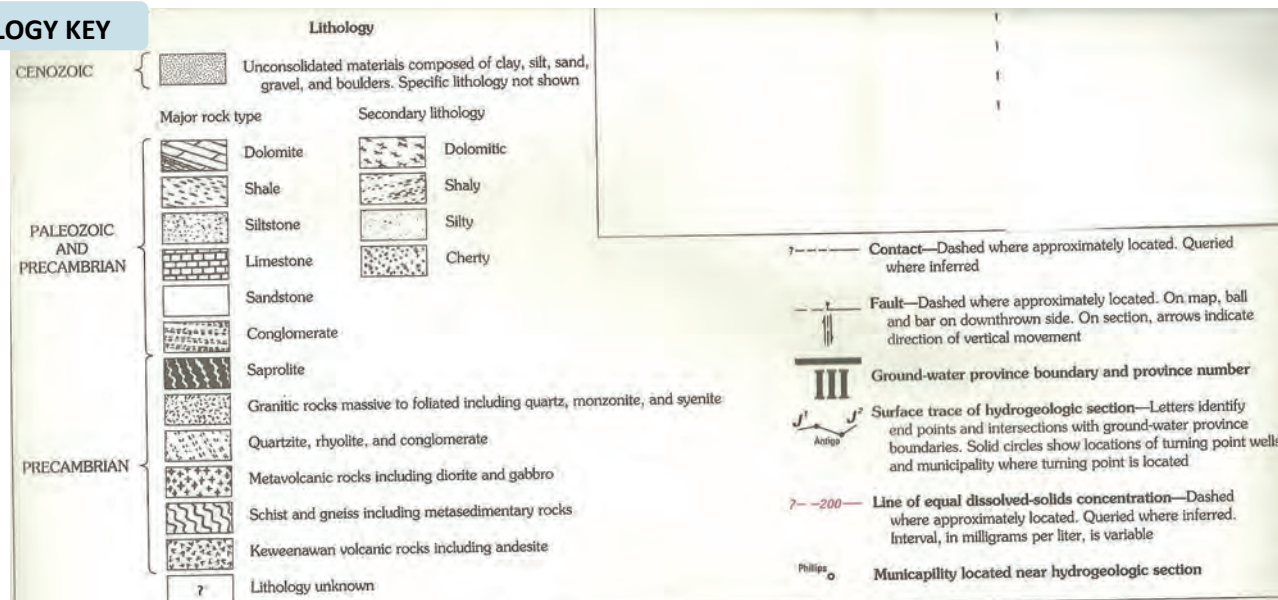
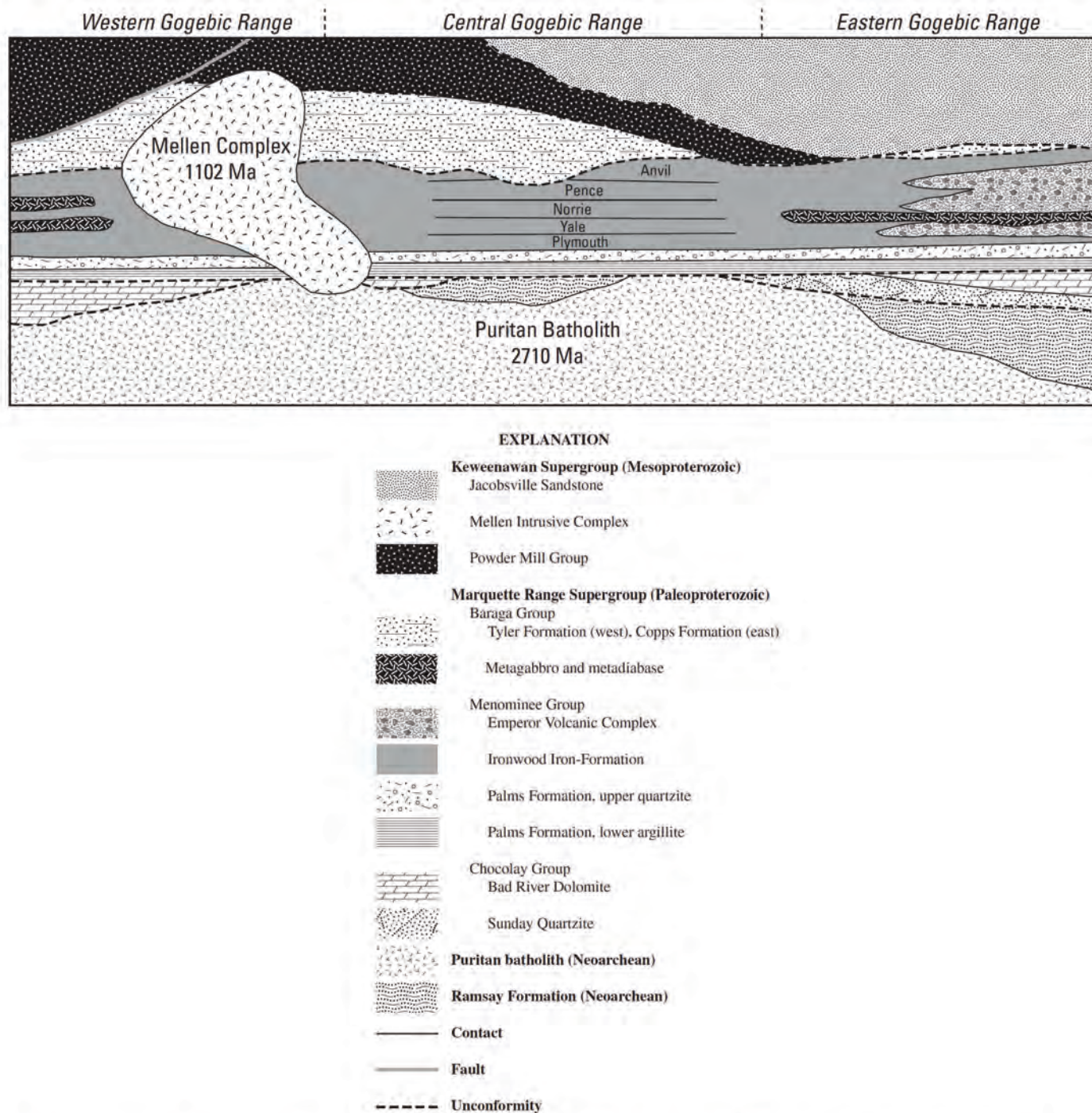


FIGURE 2 FROM THE CANNON REPORT



**Figure 2.** Schematic stratigraphic section along approximately 150 km of the Gogebic iron range illustrating the stratigraphic relationships within the Menominee Group, and the relation of the Menominee Group to other stratigraphic sequences in the region. The base of the Menominee Group is used as a horizontal datum. Five members of the Ironwood Iron-Formation are shown in the central Gogebic iron range.

# President Obama Appoints Jean Bahr as Member, Nuclear Waste Technical Review Board

Reprinted in part from Press Release, September 21, 2012  
The White House, Office of the Press Secretary



WASHINGTON, DC – Today, President Barack Obama announced his intent to nominate the following individuals to key Administration posts:

- **Alan F. Estevez** –Principal Deputy Under Secretary of Defense for **Acquisition, Technology, and Logistics**, Department of Defense
- **Vincent G. Logan** –Special Trustee for American Indians, Department of the Interior
- **Olga Viso**–Member, National Council on the Arts
- **Marilyn A. Brown**–Member, Board of Directors of the Tennessee Valley Authority
- **V. Lynn Evans**– Member, Board of Directors of the Tennessee Valley Authority
- **Michael McWherter** – Member, Board of Directors of the Tennessee Valley Authority
- **Joe H. Ritch**– Member, Board of Directors of the Tennessee Valley Authority

President Obama also announced his intent to appoint the following individuals to key Administration posts:

- **Jean Bahr**– Member, Nuclear Waste Technical Review Board
- **Steven M. Becker**– Member, Nuclear Waste Technical Review Board
- **Susan L. Brantley**– Member, Nuclear Waste Technical Review Board
- **Efi Foufoula-Georgiou**– Member, Nuclear Waste Technical Review Board
- **Gerald S. Frankel**– Member, Nuclear Waste Technical Review Board
- **Kenneth Lee Peddicord**– Member, Nuclear Waste Technical Review Board
- **Paul J. Turinsky**– Member, Nuclear Waste Technical Review Board
- **Mary Lou Zoback**– Member, Nuclear Waste Technical Review Board

**President Obama** said, “I am confident that these outstanding men and women will greatly serve the American people in their new roles and I look forward to working with them in the months and years to come.”

## **Dr. Jean Bahr, Appointee for Member, Nuclear Waste Technical Review Board**

Dr. Jean Bahr is a professor in the Department of Geoscience at the University of Wisconsin – Madison. She has been a professor at the University of Wisconsin since 1987, serving as Chair of the Department from 2005 to 2008. From 1984 to 1986, Dr. Bahr served as a hydrologist for the United States Geological Survey. Prior to that, Dr. Bahr served from 1980 to 1985 as a research assistant at Stanford University and from 1976 to 1980, she was a geologist for Wahler Associates in Palo Alto, CA. She was President of the Geological Society of America from 2009 to 2010, was a member of the National Research Council’s Board on Radioactive Waste Management from 1992 to 1997, and Faculty Co-Director for the Women in Science and Engineering Residential Learning Community at the University of Wisconsin - Madison from 2003 to 2005. Dr. Bahr received a B.A. in Geology and Geophysics from Yale University and an M.S. and Ph.D. in Applied Earth Sciences (Hydrogeology) from Stanford University.

## **Seasons Greetings from Snow-Bound Madison, Wisconsin**

Since our last update, Luke Tweddale (speed skater and son of WGWA member John Tweddale) has been training and finishing up his Astronomy class at Madison Area Technical College. MATC's newspaper, The Clarion, recently interviewed the whole family and ran a [nice profile on Luke](#) and his speed skating journey. Those inspired to donate to the speed skating effort should visit the [Luke Tweddale Olympic Dream website](#).

# Call for Papers—Hydrogeology & Ground Water Expo

August 26-27, 2013  
Raleigh, North Carolina



With the great success of Hydrology-2012, OMICS Group is delighted to invite you to be a speaker at the upcoming 2nd International Conference on Hydrology & Ground Water (Hydrology-2013) during August 26-27, 2013, in Raleigh, North Carolina.

Hydrology-2013 will focus on An Exhaustive Review of the Current State of Hydrologic Practice. The scientific program paves a way to gather visionaries through the research talks, presentations and put forward many through provoking strategies in Hydrology & Ground Water.

All accepted abstracts will be published in the respective OMICS Group Journals. Each abstract will receive a DOI provided by Cross Ref.

Hydrology-2013 solicits papers on:

- Hydrology, Hydrogeology
- Hydrobiology, Hydroclimate
- Modeling of Watershed Systems
- Aquatic and Marine Ecosystems
- Water Pollution, Water Quality
- Geosciences and Geophysics
- Waste Water Treatment
- Hydrometeorology
- Benefits

For more details and submission of abstract, please click [here](#).

## ***Get Yourself Published!***

We are looking for articles for future editions of the WGWA newsletter. Articles should be 1 to 8 pages in length and can include photographs and graphics. Articles should be generally technical in nature focusing on groundwater or environmental topics, but not commercial or political.

To submit an article for publication, contact:

Lee Trotta, Editor [ltrotta53072@yahoo.com](mailto:ltrotta53072@yahoo.com)

## **INTERESTING ARTICLES AND OTHER TIDBITS ON THE WEB**

- Did you attend the public hearing for the Mining Bill held in January? [Read the 200+ page bill here.](#)
- Check out what's involved with a high capacity well permit in the Central Sands area. Do you think it is time to fund a USGS study on multiple well interference there? [Read the Richfield Dairy High Capacity Well Supplemental Environmental Assessment Here.](#)
- Hidden Waters of Africa. [Read More Here.](#)
- Scientists are up in arms over a recent study suggesting that life emerged on land 100 million years earlier than previously thought. [Do you agree?](#)
- Asteroid may have killed dinosaurs quicker than scientists thought. [Read More Here.](#)
- We have an update from north-central Wisconsin on the state of Taylor County's groundwater from Steve Oberle. There is much interesting water quality data from a county where well yields are the State's lowest. [Read the full report here.](#)

# WGWA Board Meeting Notes

February 4, 2013



Attended: Jim Bannantine, Mike Raimonde, Janis Kesy, Ralph Smith, Paula Richardson, Anna Fehling, Jeff Ramey

## Board Member Introductions

### Joint AIPG/WGWA Field trip:

- Past field trip had a budget with all costs factored in to create a break-even point that was used to establish a registration fee.
- The \$1,000 fee request suggested by Christine Lilek is not customary.
- Ralph Smith to follow up with Christine on fee.
- Becky Caudill will evaluate our financials in regards to the \$1,000 fee.

### WGWA Annual Meeting:

- Date set for April 12<sup>th</sup>, call for abstracts has been released, venue is the Milwaukee Marriot West, Keynote Speaker is John Jansen (Aquifer Sustainability).
- The board has been asked to reach out to educational contacts to solicit more speakers.
- Jim Bannantine has reached out to Terry Evenson at DNR regarding speakers.
- Topics can be general groundwater topics or possibly vapor intrusion.
- Paula Richardson will follow up with Aaron Schneider on getting keynote speaker added to website.
- Jeff Ramey will follow up with Jim Drought about abstracts with his students.
- Registration fee for annual meeting needs to be set based on the length of the meeting (1/2, ¾ or full day depending on the number of speakers).

### Sand Model:

- WGWA currently owns 2 sand models that are available to membership to use.
- Kathi Ried currently has one of them and it is in disrepair.
- The cost to repair the sand model is ~\$450 (UWSP) or replace is ~\$750.
- Jim Bannantine will reach out to Kathi Ried about doing a presentation at the annual conference to bring awareness about the sand model and promote future use.
- Both sand models are currently being used on a limited basis.

### Future Plans and Direction for 2013:

- Jeff Ramey will contact political and DNR contacts about doing a luncheon meeting or speaker content for the annual meeting on possible new mining legislation and effects on groundwater.
- Discussed attendance challenges when having meetings outside of the Milwaukee or Madison areas.
- Currently, we have open regional coordinator positions in NW and NE Wisconsin.
- Jim Bannantine will contact an attorney about mining topic.
- First luncheon meeting is tentatively scheduled for June.
- Website can have multiple users who can make updates. If you'd like to update the website, contact Becky Caudill for access.
- Jeff Ramey will review content on the website and provide Aaron Schneider with changes.
- Beck Caudill will send out the membership list to the board.

Conclusion – Next meeting will be initiated by Jim Bannantine in approximately 4-6 weeks.

# WGWA Treasurer's Report

2012 WGWA Treasurer Summary



|                                                                         | Income | Expenses   | Total      |
|-------------------------------------------------------------------------|--------|------------|------------|
| <b>Beginning Balance 01/01/2012</b>                                     |        |            | \$6,596.03 |
| 2012 NGWA Membership \$                                                 | -      | \$ 275.00  |            |
| 2012 Membership Renewal \$3,910.00                                      | \$     | -          |            |
| 2012 Conference, Luncheon, and Event Expenses \$                        | -      | \$9,882.61 |            |
| 2012 Conference, Luncheon, and Event Registration & Sponsors \$9,147.14 | \$     | -          |            |
| Copper Conferencing \$                                                  | -      | \$ 446.44  |            |
| Bank and Credit Card Set-up, Services, Fees, Checks \$                  | -      | \$1,991.50 |            |
| Shipping, Supplies, General Expenses \$                                 | -      | \$ 120.03  |            |
| State Annual Report Filing Fee \$                                       | -      | \$ 20.00   |            |
| Web Site Upgrade, Web Hosting, & Related Services \$                    | -      | \$4,560.95 |            |
| <b>Ending Balance 12/31/2012</b>                                        |        |            | \$2,356.64 |