Wisconsin Ground Water Association Newsletter

WGWA

President's Message

The Wisconsin Ground Water Association enters its 22nd year with energetic members participating at the regional, committee, and board levels. As detailed in this newsletter, we have many new faces on the board and committees, and our first board meeting on January 25 was fruitful with ideas to invigorate our organization.

Our spring conference is tentatively set for Friday, April 7, 2006 in Wisconsin Dells. Boyd Possin, President-Elect, is busy planning the conference and will issue a conference flyer once we have finalized the speakers and location. I look forward to seeing you at the conference!

We're experiencing a recent influx of members interested in participating at the area, committee, and board levels, thank you! I am particularly encouraged by the presence of two college students at the recent Southeast Area meeting. Diverse involvement will ensure the continued vitality of our organization. The WGWA board and committees ask for your input on why WGWA membership is valuable, where WGWA may expand involvement to achieve our primary objectives, and suggestions to improve WGWA membership communications. A sample of items on the 2006 board agenda, in addition to our spring conference and fall field trip, include:

- Exploring format and delivery changes to our newsletter,
- Publishing an updated WGWA brochure
- Refreshing our web site with a calendar page, slated for the end of the 2nd quarter, for publication of interdisciplinary conferences, seminars, and training opportunities.

Your feedback is vital, so please contact board members with your comments and suggestions.
WGWA is supporting the 2006 Wisconsin Groundwater Guardian Annual Groundwater Festival, scheduled for Thursday, April 27, 2006 at the Mani-

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INSIDE THIS ISSUE:

The newsletter is published four times per year. If you have any suggestions or submissions, please contact us at: Wisconsin Ground Water Association, c/o Lee Trotta, 18905 #D Wilderness Court, Brookfield, WI 53045. Email: wgwainfo@wgwa.org; Web site: http://www.wgwa.org. The deadline for submissions to the 2nd quarter of 2006 newsletter is May 15, 2006.

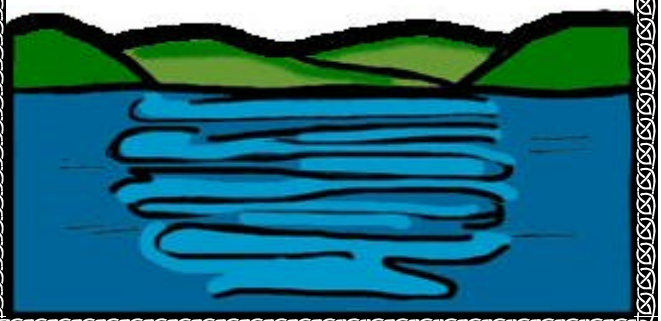
(Continued from page 1)

towoc County Expo. The groundwater festival educates over 500 students each year with the purpose to "… enhance the ability and motivation of Wisconsin 5th and 6th grade students, their teachers, and the general public to understand and take responsible action regarding environmental issues affecting groundwater and energy". I speak from personal experience as a volunteer in previous years; this festival is worth investing a volunteer day. Many WGWA members have volunteered in past years. Each year, over 150 volunteers are needed; I encourage you to participate this year. Contact Jen Kingsley at jkingsle@uwsp.edu and explore the festival schedule at http://www.uwsp.edu/cnr/gwguardian/wigg/fest06.htm.

WGWA is our organization, our personal participation increases WGWA's ability to attain and surpass it's objectives of promoting the understanding of ground water, providing information forums, disseminating information regarding ground water resources, and promote professional awareness and technical skills.

Becky Caudill
WGWA President

An acre-foot of water is enough to flood the infield at Miller Park to a depth of 5.4 feet



The 4th Annual Groundwater Festival is well under way!

The Annual Groundwater Festival is a one-day, fun-filled event for 5th and 6th grade students and their teachers to gather together and learn about Wisconsin's groundwater resources. The purpose of the festival is to enhance the ability and motivation of students and their teachers to understand and take responsible action regarding environmental issues affecting groundwater and water resources. With over 2/3 of Wisconsin residents relying on groundwater, protection and conservation of our groundwater resources is important for our state's future.

This year's festival will be held on April 27, 2006 at the Manitowoc County Expo Center in Manitowoc, Wisconsin.

A group of dedicated volunteers from the Center for Watershed Science and Education, UW-Extension, Wisconsin DNR, Brown County, Calumet County, Kewaunee County, Wisconsin Maritime Museum and the Groundwater Guardian program have been working for months to make this festival a reality.

They are pleased to announce that currently 620 students from 9 different schools are officially registered for the festival! These students represent Kewaunee, Calumet, Brown, Fond du Lac, Door, and Manitowoc counties. These students will be rotating through hands-on activities the day of the festival, learning about all aspects of groundwater, including a special section on Karst Topography.

We encourage you to stop by and view the festival at the Manitowoc Expo Center if you are interested! It is a unique opportunity to see students, teachers, professionals, and citizens all working together to learn more about one of Wisconsin's most precious resources: groundwater.

For more information contact:
Jen Kingsley
Coordinator, Wisconsin Groundwater Guardians
E mail: jkingsle@uwsp.edu
Phone: 715-346-2722

Calendar of Upcoming Groundwater events

What: Internet Tools for Natural Resources: Local Government Web Cast Series
When: Tuesdays, January - April 2006, 10:30 AM - Noon
Contact: dnr.wi.gov/org/es/science/landuse/CompTools/local.htm

- Internet Tools for Finding Natural Resources Data and Soils Information - January 24, 2006
- Internet Mapping Tools for Water Resources - February 28, 2006
- Internet Mapping Tools for Land and Biological Resources - March 28, 2006
- Internet Modeling Tools for Predicting Impacts of Land Use Change on Runoff - April 25, 2006

What: Troubled Waters: Managing and Restoring Southern Wisconsin's Lake
When: Saturday February 18, 2006
Where: Waukesha County Technical College Pewaukee Campus
Contact: Early-bird registration (by February 3): $30 after February 3rd: $35 Registrations close February 10th, youth scholarships available www.wisconsinlakes.org/events/Southern06.htm

What: Aldo Leopold Weekend
When: March 3
Contact: To check for activities go to www.aldoleopold.org/newsite/weekend.htm

What: 2006 Clean Rivers, Clean Lakes Conference
When: March 2, 2006
Contact: Sponsored by the Southeastern Wisconsin Regional Planning Commission (SEWRPC) and MMSD, Italian Community Center, Milwaukee

What: 2006 Tri-State Forest Stewardship Conference
When: Saturday, March 11, 8:00 am-5:00 pm
Where: Sinsinawa Mound Center, Sinsinawa, WI
Contact: For more information, contact Peggy Compton, UW-Extension Basin Educator at 608-342-1633, or email peggy.compton@ces.uwex.edu

What: Conservation in Common- Actions and Strategies to Protect Your River, Parks and Trails
When: March 31-April 1
Where: Camp Matawa (Northern Kettle Moraine State Forest) and on April 28-29 at the Holiday Acres Resort (Rhinelander)
Contact: River Alliance for more information www.wisconsinrivers.org

What: Clean Boats Clean Water Workshop: Workshop on developing a watercraft inspection program to educate boaters about invasive species
When: May 13, 8:30 - Noon
Where: Rock Lake (north end shelter), hosted by the Cambridge High School Ecology Club
Contact: mbridge.k12.wi.usegrunden@cambridge.k12.wi.us

Note from the Membership Director - If you haven't yet paid your membership dues for 2006, you're late! Membership runs on a calendar year basis (January to December). Please get your payment in as soon as possible.

Great Lakes Accord Could Ease Pressure on Southeastern Wisconsin Groundwater Supplies

It has been four years in the making, but in December the Great Lakes moved one step closer to being protected from large outside diversions. On December 13th, 2005 at the Pfister Hotel in Milwaukee, Governor Doyle along with Ohio Gov. Bob Taft and Ontario Premier Dalton McGuinty signed an accord to protect the Great Lakes. Other State and Provincial leaders have pledged to sign it as well. Work towards this began four years ago when the leaders of the eight states and two provinces bordering the Great Lakes signed an agreement to develop a legal framework to protect the Lakes from outside diversions. The past four years have consisted of talks and drafting of the accord. It is a process that has at times been contentious because of issues such as diversions to communities just outside the Great Lakes Basin, such as the City of Waukesha.

The new accord offers an opportunity to communities that straddle the Basin boundary to use water from the Lakes. The accord helps clarify the circumstances and requirements for such diversions. It imposes strict requirements for receiving water. The agreement requires water removed from the basin to be returned to the basin; a requirement that the City of Waukesha has previously opposed. Any diversion that averages over 100,000 gallons a day over a three-month period must still be approved by all eight governors. However, any state that disapproves must provide a reason, unlike under the current situation. Presently the City of Waukesha is studying the accord to see if it really would help them.

The accord also affects groundwater by banning withdrawals of groundwater from the basin along with surface water from any surface water body. However, this raises an interesting question about what would be considered a withdrawal of groundwater from the Basin. The Basin boundaries are based on surface water divides, which is why communities such as Waukesha cannot tap the Lakes. However the Great Lakes groundwater basin extends beyond the surface water basin in many places, such as in Waukesha County. Therefore, an entity could withdraw groundwater from the Great Lakes Basin while technically operating within a different surface water basin. The short answer would seem to be that any such diversion would also be prohibited. However, communities, such as Waukesha, have been doing that for years. Obviously they could be grandfathered but does this imply limits on future development that would use Basin groundwater outside the Basin? What about places where the Great Lakes Basin may overly groundwater that discharges to another surface water basin? Would users of that water be required to abide by the Accord just because they are technically within the Basin?

All of this is a moot point for now as the Accord is not yet law. The Accord must still be approved by the governors and legislatures of the Great Lakes States. Then, because this would be the equivalent of an international treaty, the Accord must be approved by Congress to become law. It is possible that Federal legislators from water short states will view this as an attempt to hurt their states and scuttle approval.

By Troy Thompson

Newsletter Advertising Rates

2.5" x 3.5" (business card)
$20/issue $60/annual

3.5" x 5" (quarter page)
$35/issue $100/annual

5" x 7" (half page)
$65/issue $175/annual

7" x 10" (full page)
$125/issue $320/annual

Comprehensive Planning in Wisconsin: Are Communities Planning to Protect Their Groundwater?

by Bobbie Webster, Chin-Chun Tang and Lynn Markham

This article is the second in a three-part series describing a project by CLUE staff that examines comprehensive planning efforts to protect and manage groundwater in Wisconsin. In the first article (see Spring 2005 *Tracker*), we summarized the purpose and background of the project and described our preliminary results. The following article includes the final results of the study, as well as observations and recommendations.

FINAL RESULTS

Following a preliminary review of 79 plans, we selected 29 plans for additional review from those that had mentioned groundwater the greatest number of times. Figure 1 shows the geographic distribution of the 29 communities whose comprehensive plans were reviewed. All of these communities rely on groundwater for drinking water. Seven communities represented by green dots have low susceptibility to contamination whereas the 22 communities represented by red dots have moderate to high susceptibility to contamination. The detailed review examined the types of goals and policies that are included in the plans, as well as the type and format of groundwater-related data and information. We also conducted in-depth interviews with five rural Wisconsin communities that have implemented groundwater protection or remediation measures.

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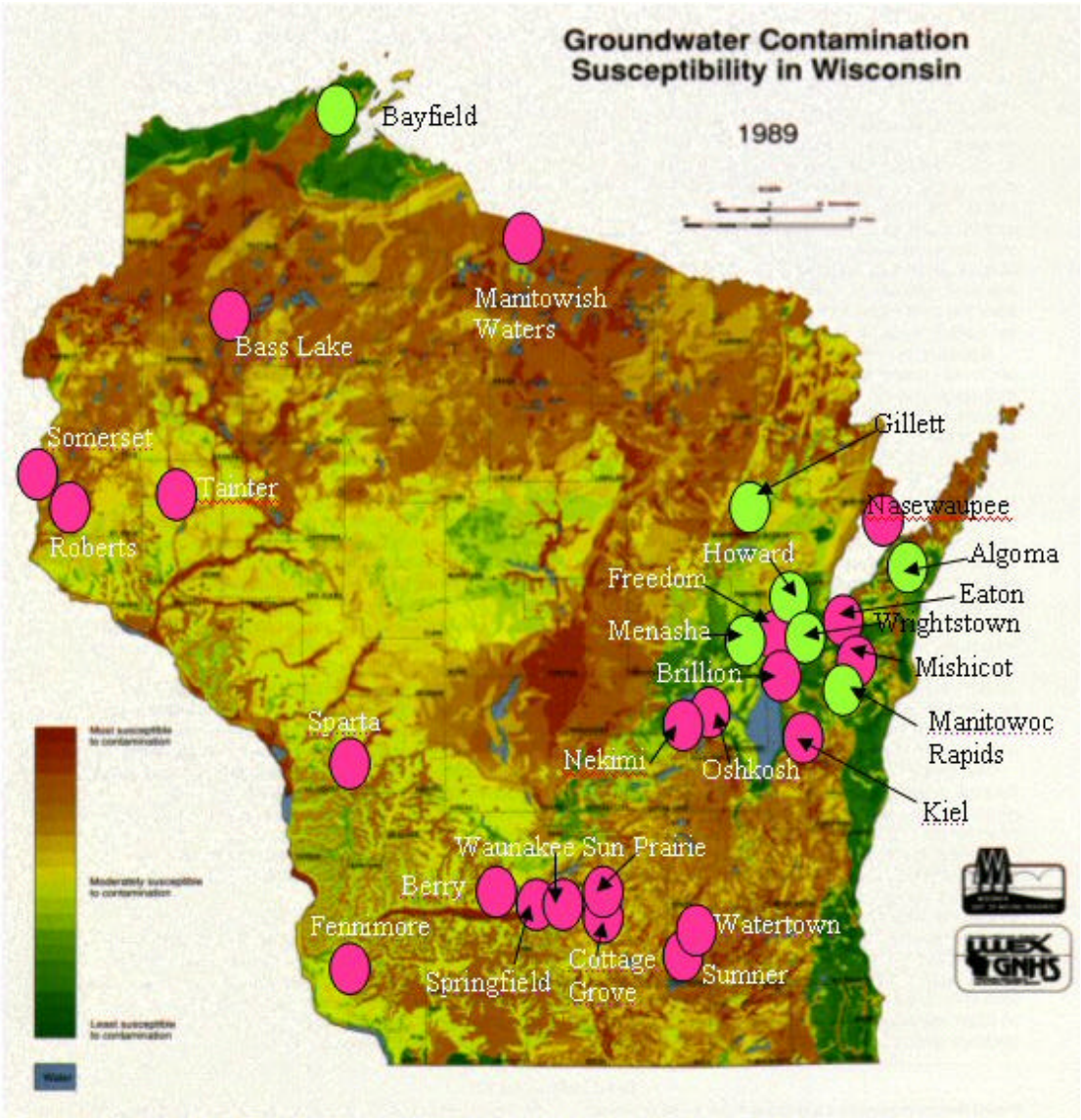

Figure 1: Ground-water

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Results

Plan goals related to groundwater

A goal is a general statement describing a desired outcome in a community. The number of groundwater-related goals mentioned in these plans was limited. On average, each plan contained 1.4 groundwater-related goals. Twelve plans (41%) that did not contain any groundwater-related goals.

Plan policies related to groundwater

Policies describe courses of action used to ensure plan implementation and to accomplish goals. On average, each plan contained 8.5 groundwater-related policies. Figure 2 shows the number of policies and the number of plans in which they occurred.

The most common policy category was *waste management*; 25 of 29 plans had a total of 74 policies on waste management. The least common policy category was *remediation*; two plans of 29 contained three policies on remediation. Only a few of the plans had policies that provide clear information about who will implement the policy and by when. *Plan data related to groundwater*

We also examined the plans for groundwater data.

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Figure 2: Policy Appearance in Plans

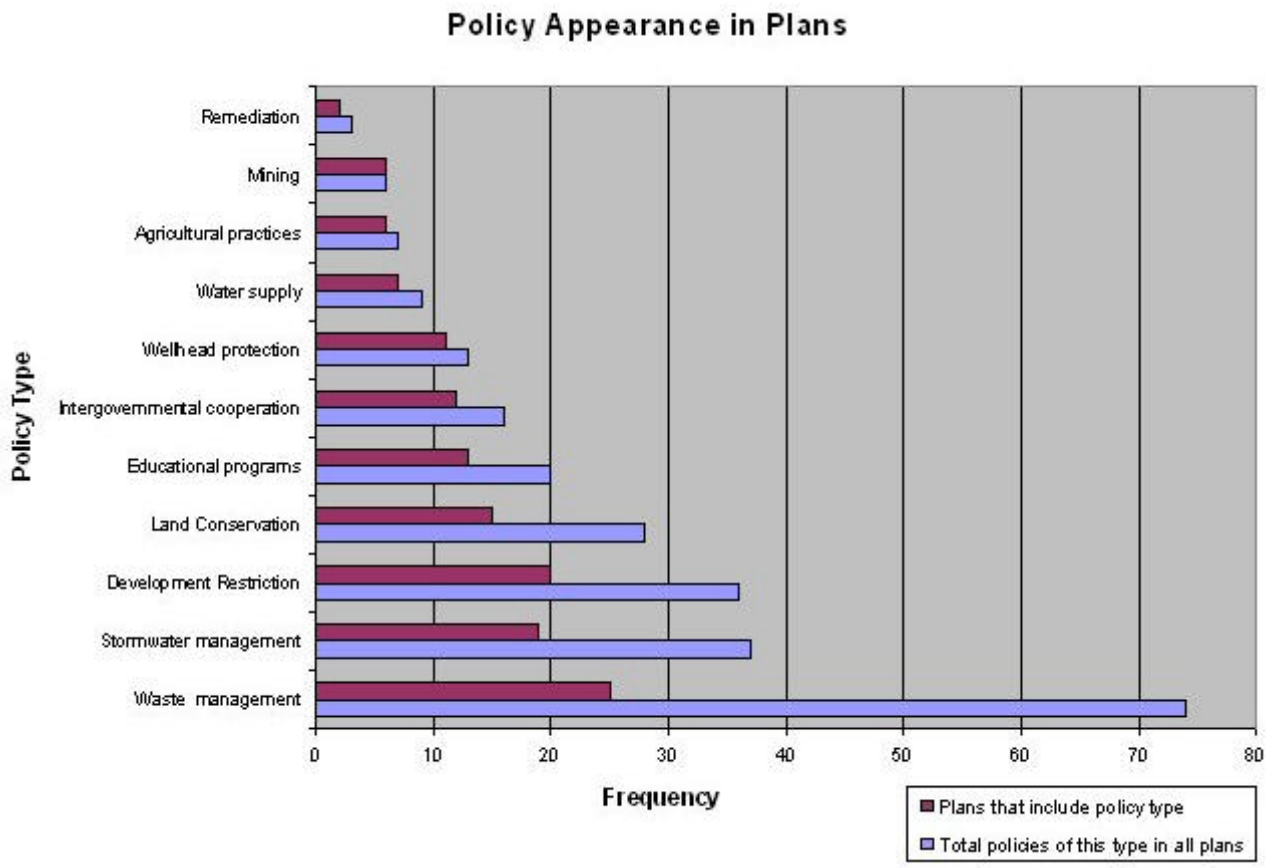

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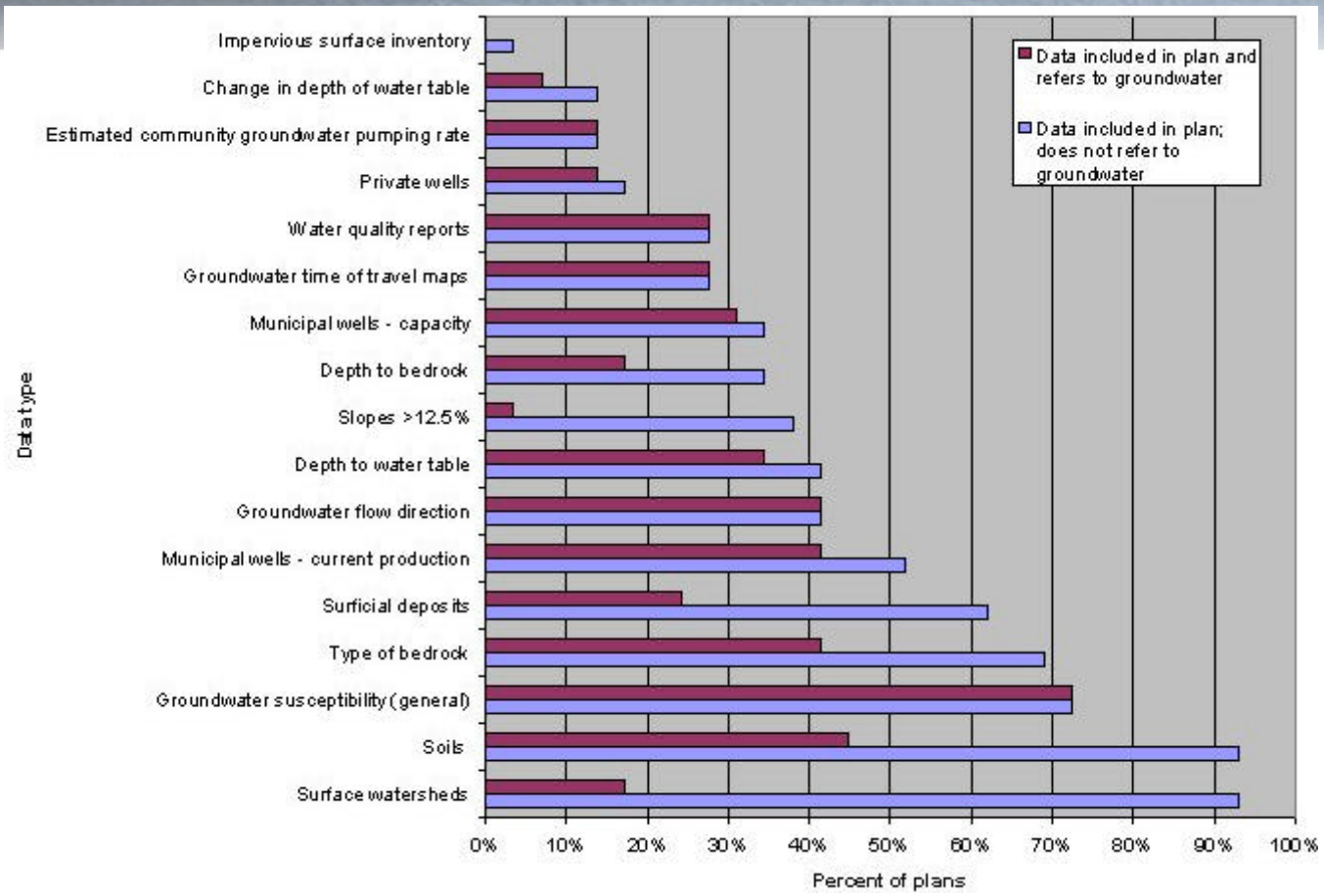
Figure 3: Groundwater data in comprehensive plans



The most common groundwater data include surface watersheds, soil types, and groundwater susceptibility. The least common groundwater data include impervious surface inventory, changes in water table depth, and estimated community groundwater pumping rate.

Discussion

Observations

Importance of groundwater varies by community The extent to which groundwater is addressed in comprehensive plans varies significantly. Some plans have extensive groundwater data and policies, some have little. The type of data and policies in these plans are consistent across plans done by the same plan writers.

Communities with moderate or high groundwater susceptibility had significantly higher groundwater goal scores than communities with low groundwater susceptibility. This fact suggests that communities with moderate or high groundwater susceptibility are aware of potential groundwater problems and want to protect their groundwater. However, the moderate and high susceptibility communities do not have higher policy scores. These scores suggest that communities with moderate or high groundwater susceptibility are aware of potential groundwater problems, yet they may be unsure how to achieve their goals, may perceive barriers to achieving their goals, or are unwilling to commit to policies in their plan.

Based on observations made while developing the case studies, nearly all communities that are engaged in groundwater protection efforts have had groundwater problems.

Availability of groundwater data and the ability to interpret it varies

The type, format, and extent of groundwater information in comprehensive plans is generally limited. When groundwater data or maps are included in plans, little or no attempt is made to interpret the data. This result may be explained in part by the fact that groundwater data are incomplete or inaccessible locally or on a state-wide

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level. Also, when data are available, plan preparers may not know how to interpret or process it. In those communities where groundwater data are available, communities generally made an attempt to incorporate it into local comprehensive plans. We found, for example, that communities located in counties that have produced a groundwater protection plan incorporated more groundwater information in their comprehensive plans. In addition, communities with municipal water systems (and therefore at least one person responsible for water testing and reporting) included significantly more groundwater data in their plans than communities without municipal water systems.

Policy frequency depends on regulations and local land uses
Groundwater-related policies that are required by state or federal law appeared more frequently in local plans than other policies. For example, the Wisconsin administrative code Comm 83 requires inspection of POWTs every three years whereas the Wisconsin administrative code NR 216 requires larger municipalities to develop storm water plans. Conversely, policies that are resource or issue dependent, such as those related to remediation, mining, or agriculture appear less frequently. Communities that are not facing these issues are unlikely to include them in a local plan.

Weak linkages exist between data, goals and policies
The groundwater data scores did not correlate with goal or policy scores achieved by local communities. This fact suggests that communities do not consistently require a minimum level of groundwater data before developing goals and policies. We also found that the groundwater goal scores do not correlate with the policy scores. Some communities are including groundwater goals but are not taking it to the next step by developing associated policies. At the opposite end of the spectrum, some plans include multiple groundwater policies yet include no groundwater goals.

These findings may result from the very expansive nature of comprehensive planning.

Communities can easily overlook groundwater when developing their comprehensive plans, particularly if there is no local champion willing to speak out on groundwater. These findings may also be related to the fact that groundwater planning is complex and new to many communities and planners. The following section provides recommendations for improving the groundwater components of comprehensive plans and their implementation.

Recommendations
Based on our review of comprehensive plans, development of community case studies and discussions with key players in groundwater planning, we provide the following recommendations for improving the groundwater component of comprehensive plans in Wisconsin.

Increase citizen involvement to heighten the priority of groundwater in local communities
The development of a comprehensive plan is steered heavily by local participation. The only way to ensure that a comprehensive plan addresses groundwater issues is to invite residents with a strong interest in groundwater to actively participate in the process. Community involvement that brings attention to groundwater can spark effective goals and policies.

Hire local government staff and consultants that value groundwater
Groundwater protection measures achieved by many of the communities featured in the case studies were spurred by a single individual that valued groundwater and persistently sought opportunities to provide education, funding and other resources to prevent and address groundwater issues. Groundwater protection and remediation efforts also depend on support from local government officials and their constituents.

Improve the accessibility of groundwater data to plan writers
Data collection during a comprehensive planning process may be overwhelming (imagine collecting information on all nine elements). Groundwater data that are convenient, easily accessible and in a format that can be directly utilized in a plan will be much more likely to be included by plan writers and citizen planners to include groundwater data. Increasingly, scientists will need to find ways to better translate scientific information into jargon-free language understandable by the public.

Provide education to help plan writers better interpret and use groundwater information
Most professional planners and community members lack training in groundwater planning. Outreach workshops designed to educate professional and citizen/volunteer planners on how to interpret and use groundwater information would address this need.

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Provide funding assistance to support further groundwater studies

Based on the detailed plan review, groundwater data related to groundwater time of travel, impervious surfaces, and potential contaminants are lacking. These types of information require additional funding to research and investigate.

Provide education about the costs of groundwater contamination

Based on the observation from the community case studies that groundwater protection is often not a high priority until problems become apparent, it may be beneficial to provide education illustrating the costs of groundwater contamination and associated remediation. While the case studies illustrate this to a limited extent, a study of the fiscal impacts of contaminated groundwater in Wisconsin communities may be more effective to demonstrate the cost avoidance potential of groundwater protection measures.

In summary, the Wisconsin comprehensive planning law adopted in 1999 requires plans to include goals, objectives, policies, maps and programs for the conservation and effective management of groundwater. While most of the plans we reviewed contained limited groundwater-related data and a smattering of groundwater goals and policies, much remains to be done. Specifically, all plans should include data about current groundwater quality and quantity, groundwater flow direction and potential sources of contaminants. Based on this enhanced data set, local goals and policies should be developed to address local groundwater issues. Planning for groundwater is a long-term community endeavor with many valuable and indispensable benefits.

Acknowledgements

We thank the University of Wisconsin System for funding this project through the Groundwater Research Program. We are also grateful to the advisory committee for their constructive advice and encouragement.

REFERENCE University of Wisconsin Extension (UWEX) Wisconsin Geological and Natural History Survey, 1989. *Groundwater Contamination Susceptibility in Wisconsin*. www.uwex.edu/wgnhs/gwmap.htm *Reviewed by Anna Haines, Rebecca Roberts, Kevin Masarik and Dave Lindorff.* The full research report, including five community case studies highlighting rural Wisconsin communities that have implemented groundwater protection and/or remediation measures, is available at: www.uwsp.edu/cnr/landcenter/groundwater/index.html

Is Wisconsin's water really dirty - Another View

A report called "A National Assessment of Tap Water Quality" has recently been published by the Environmental Working Group. Go to http://www.ewg.org/tapwater/findings.php to view the original report. It is quite interesting in that it ranks States by their water quality.

Summary of findings

The study presents some very valuable data:

· Water suppliers across the U.S. detected 260 contaminants in water served to the public.
· One hundred forty-one (141) of these detected chemicals — more than half — are unregulated.
· For 64 of the unregulated contaminants found in tap water, the government has not yet recommended unenforceable, health-based limits in tap water.
· For 46 of these chemicals, no health information whatsoever is available in standard government and academic references.
· The report identifies the general source of these contaminants over the period from 1998 to 2003 as mostly industrial.
· The online report provides links to State and Local geographic locations for contaminant summaries.

Observations on significance

The views expressed by the *Environmental Working Group (EWG)* are not necessarily those of the WGWA newsletter staff. In fact, I believe the authors in charge of putting a spin on the story for the mainstream media have overstepped their bounds making the report overly politicized.

Wisconsin's drinking water is second worst ... or so it seems from the graphs presented under “National Findings”. How can this be? Wisconsin was carved out of the wilderness of early America and was one of the first States to jump on the environmental bandwagon. Wisconsin has lost so many industrial jobs in the last 10 years that there’s a huge reduction in any industrial pollution it may once have been capable of. What could possibly have made our drinking water so dirty? Well folks, it’s all in the definition.

The approach to defining "dirty" water is to record everything that has a hit of some contaminant as "dirty". With the increased sensitivity of environmental measuring equipment today, this approach is misleading. Because a contaminant is detected does not mean it is anywhere near dangerous. States using less advanced environmental instruments will not be able to measure contaminants at the small concentrations that other States may detect and report, report those contaminants as undetected, and, therefore, be listed as less “dirty”.

Many of the contaminants recorded as "unregulated" are unregulated for a reason -- there is no verifiable scientific evidence that concentrations found in groundwater cause significant health problems. By the EWG’s own admission, nearly 100% of the contaminants recorded as "regulated" appear in concentrations that are below enforceable health standards. To me this reads "clean" and not "dirty".

Certainly there is reason for caution when concentrations in a public supply approach the enforceable standard, but to quantify these waters as "dirty" or even "contaminated" is to overplay the risk factor. For instance, a lifetime of ingestion of drinking water that is 3 times the enforceable limit for radium will bring the risk of death to about that of being struck by lightning. Also, it has long been known that the iron and magnesium concentrations in much of Wisconsin’s ground water are above limits set for aesthetic reasons (taste and odor).

Much play is given in this article to contaminants like pharmeceuticals found in streams and lakes. Remember that 90% of the drinking water supply in Wisconsin and Minnesota comes from ground water, where significant concentrations are seldom found. The boogeyman of "unregulated contaminants" may even keep us healthy by providing minerals which our body needs and chemical challenges for immune system growth. The EWG article presents a valuable data set, but interpretation apparently is more concerned with good ratings than good science. The article recommendations complain about the high "cost of treating water", yet suggests changes that would surely increase these costs. Let's give EPA the credit they are due in promulgating regulations only where they are necessary and achieving near 100% compliance from water utilities.

Lee Trotta, PG

"Out-of-Boundaries"
HOMAGE TO THE EGYPTIAN WATER GODS

by Lee Trotta
Reference article printed Printed 12/17/05
http://www.world-science.net/exclusives/051217_egyptfrm.htm

The photo shown is of a tomb painting from Hierakonpolis, from prehistoric Egypt's Naqada culture of about 3400 BC. It is included in an article published by World Science (Dec. 17, 2005) to describe pre-Egyptian cultures even more ancient than the Naqada. However, the richness of this painting includes items unrelated to their story that may interest hydrogeologists.

The article quotes Toby Wilkinson in his book *Predynastic Egypt* as saying: The painting represents a ritual water-borne procession. A man holding apart two wild animals in the lower left is a type of "hero" or "master of the beasts" figure found in other artworks of its time.

To me, the whole painting represents early attempts to capture "godlike" myths – to ease the transition a dead man's soul to the realm of the gods. We know that later Egyptians grew to depend on the Nile River so much that it drew a type of worship, hence the importance of the water-borne procession in elevating the image of the nobles on those boats. The "hero" appears to be holding apart two lions, a skill that might indicate a transcendence to deity status. Just look at what it did for Hercules in later Greek mythology!

What about that merry-go-round next to the lion tamer? Is this truly just a circus act? It appears to have live oxen and antelope attached. Horses lived a continent away at this time. Why would the artist

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include a temporary amusement on a tomb wall meant to support the dead man in the afterlife?

I think the wheel is much more important than a transient bit of circus entertainment. I think the circular array of animals is man's first attempt to represent a water pump. What is more important to a man in the desert than water? Why wouldn't its life-giving properties be given a status of worship. What better place to worship than around the well. After all, one cannot honor the surface water of the Nile without giving due respect to the ground water found so rarely in this desert landscape. How better to honor the inventor of the circular pump, than to paint his invention among the other god-like representations on this tomb wall?

This pump isn't powered by gasoline or electricity, but by animal power. Similar to Jacob's well from the Bible, water had to be raised from great depth to the surface. To save time, the inventor put draught animals to work on that task. By tracking in a circle the rope attached to the large bucket is drawn up (probably over a pulley) and the supply is brought within reach. Reverse the animals and the bucket goes back down. This wheel moved by animals or men is called *sâqiya* in Egypt. By about 100 BC (based on a fresco in the Graeco-Roman Museum in Alexandria), this simple water-lifting wheel had been fixed with gears and made to turn a vertical wheel with multiple buckets for irrigation purposes.

I felt it was my duty to highlight this omission in the overview presented by World Science. After all, aren't hydrogeologists just water worshippers under the skin?

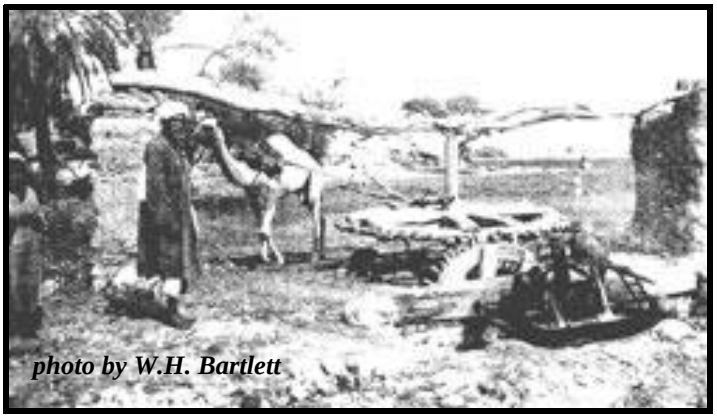

photo by W.H. Bartlett

Board Meeting Minutes

Wednesday January 25, 2006
Conference Call

Persons present: Boyd Possin, Janis Kesy, Dave Nemetz, Ken Wade, Corey Pagles, Lee Trotta, Becky Caudill, Mike Raimonde, Troy Thompson, Joan Viney, and Marilyn Weiss

Call to order about 5:00 pm

Last meeting minutes (October 25, 2005) - Minutes accepted. Minutes are posted on website.

Treasurer's Report – Bank account balance is $11,520.60. Lee has taken over treasurer duties from Marilyn. In the past balance in the account has "unofficially" stayed above $7,000. Currently, account is at US Bank. Lee will be changing the account to a new bank. Becky thanked Marilyn for her years of service as treasurer.

Membership Report – Only a handful of renewals have come in so far. Membership is reactive rather than proactive. Need to send out a reminder about renewing membership. Discussed changing membership renewal data to a different time of year. Lee to send out hardcopy of renewal form.
Old Business

- In October 2005 board made decision to join NGWA. Lee to take care of paying the membership fee to NGWA. IA and CA only states currently associated with NGWA. Membership fee is $250/annually.

- WGWA will not be combining 2006 conference with AWRA. Potentially could combine conferences in 2007. AWRA Conference is scheduled for March 2 & 3. Have a WGWA representative go to the AWRA conference and discuss combining conference efforts in 2007. Boyd volunteered to go to AWRA. Lee mentioned in the past WGWA had joint conference with WI Lakes Association. Boyd commented that Lakes Association overwhelmed everything else at conference. Combined conference did not work.

New Business

- WGWA Address Change has been taken care of. PO Box has been closed. New address is Lee's residence.

- WGWA Mission – review mission statement. Where do we want to go with our mission? Discussion of mission statement placement on website. Is it easy to access?

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- WGWA Web site face-lift – Becky mentioned WGWA website needs to be updated. Information on the site is old. What will it cost and how much time to update site? Need some "sparkle" on the site. Discussed putting together a subcommittee to address website updates. Discussed password access to website

- WGWA Notes – Becky has been getting notices from other agencies for inclusion in the WGWA Notes with links to calendars. Send out an email reminding members to renew.

- Open Positions (coordinators and Education Committee Chair) Volunteers:

  Western Area Coordinator, Bjorn A. Lysne, (thinking about it), Hydrogeologist at SHE

  Northeast Area Coordinator (Green Bay, Appleton, Oshkosh, Fond du Lac, surrounding area), still open. Any suggestions?

  Education Committee Chair, Paula A. Richardson, Hydrogeologist, NRT.

- Membership – Discussed member retention. Potential of changing membership renewal to different time of year. Tie renewal to the spring conference. Use spring meeting as the vehicle to get renewals out. Have two fees for conference member and non-member. "Sell conference" rather than selling membership. Review the following lists for potential members: registered geologists, AWRA members, AIPF members, database of past members. Advertise at other professional conferences? Reach out to university with one page posting.

- Spring Conference – Boyd taking the lead in organizing. Any ideas for a conference theme? Discussed locations for conference – determined the Wisconsin Dells works well because it is a central location. Boyd will look at potential conference center. Settled on April 7 for conference date with backup date of April 21

- WGWA Student Research Grant Program – No one familiar with it. Supplanted by student paper awards at spring conference.

- Newsletter Status – Newsletter to come out mid February. Will include call for papers for spring conference. AWRA meeting is March 2 & 3. Ideas for newsletter articles: local meeting summaries, ideas on what WGWA is doing, special interest articles. Overall comments-shorten up newsletter, limit number of special interest articles in each issue. Promote Groundwater Guardian in the newsletter.

- Groundwater Guardian Groundwater Festival donation. Festival will be in Manitowoc this year on April 27. Festival very good learning experience for 5th and 6th graders. Becky made motion to donate $1500 to Festival, Dave seconded motion. Motion passed.

Boyd motioned to adjourn meeting at 6:50 p.m., Dave seconded motion.

News from the outgoing Treasurer

Marilyn M. Weiss

For Transactions Between: 1/1/2005 and 12/30/2005

Account Name	Withdrawals	Deposits	Subtotals	Balance
Beginning Balance			**$13,699.93**	**$13,699.93**
Membership				
Dues	$0.00	$5,255.00	**$5,255.00**	**$5,255.00**
Conference				
Registrants	$0.00	$1,340.00	**$1,340.00**	
Costs	$1,828.81	$0.00	**($1,828.81)**	
Misc.	$249.60	$230.00	**($19.60)**	
Awards	$2,250.00	$0.00	**($2,250.00)**	**($2,758.41)**
Newsletters				
Production	$1,600.00	$0.00	**($1,600.00)**	
Ads	$0.00	$130.00	**$130.00**	**($1,470.00)**
Board Meeting				
Phone Charges	$461.40	$0.00	**($461.40)**	**($461.40)**
Scholarships/Donations				
Donations	$3,000.00	$0.00	**($3,000.00)**	**($3,000.00)**
General				
Educational Materials	$115.00	$0.00	**($115.00)**	
PO Box	$48.00	$0.00	**($48.00)**	
Misc.	$16.66	$100.00	**$83.34**	**($79.66)**
Web				
Net Provider	**$95.40**	**$0.00**	**($95.40)**	**($95.40)**
TOTALS				**$11,090.06**

The 2005 Board, Committee, and Area Coordinators

President (2006)
Rebecca Caudill
Natural Resources Technology
Phone: 262.522.1215; Fax: 262.523.9001
rcaudill@naturalrt.com

President-Elect (2006)
Boyd Possin (2007 President)
Phone: 920.606.0323; Fax: 419.858.8471
boydpossin@earthlink.net

Secretary (2005-2006)
Janis S. Kesy, P.G., Senior Technical Consultant
Foth & Van Dyke and Associates, Inc.
Phone: 920.496-6819; Fax: 920.497.8516
JKesy@foth.com

Treasurer/Membership (2006-2007)
Lee Trotta
Brookfield, WI 53045
Phone: 262.641.9341
lctrotta53072@yahoo.com

Past President (2005 President)
Dave Nemetz
Liesch Environmental Services, Inc.
Phone: 608.223.1532 Fax: 608.223.1534
dnemetz@madison.liesch.com

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Corey Pagels (2004-2006)
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Phone: 608.833-5555; Fax: 608.833.5551
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Kenneth Wade (2005-2007)
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Phone: 608.767.3111 (M, Th, F)
kenneth.wade@dot.state.wi.us

Michael Raimonde (2006-2008)
Metcalf & Eddy, Inc.
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Ground Water Sand Model Reservations
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Kathi.Ried@CH2M.com

Web Site
Joan Viney
Phone: 608.279.9598
jviney@tds.net

Education Committee
Vacant

Area Coordinators

We are looking for coordinators in many of the following areas. If you are interested, please contact Rebecca Caudill.

Western Area
(LaCrosse, Black River Falls, Eau Claire, Chippewa Falls, surrounding area)
Position Open.

Southern Area
(Madison and surrounding area)
John Tweddale
BT^2
Phone: 608-224-2830 and 608-224-2839
jtweddale@bt2inc.com

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North Central Area
(Stevens Point, Wisconsin Rapids, Wausau, Rhinelander, surrounding area)

Tod Roush
Maxim Technologies
Phone: 715.845.4100; Fax: 715.842.0381
troush@maximusa.com

Northeast Area
(Green Bay, Appleton, Oshkosh, Fond du Lac, surrounding area)
Position Open.

Southeast Area
(Milwaukee, Sheboygan, Racine, Kenosha, surrounding area)

Michael Raimonde
Metcalf & Eddy, Inc.
Phone: 262.909.8316
mike.raimonde@m-e.com

Join the Wisconsin Ground Water Association Today!

WISCONSIN GROUND WATER ASSOCIATION MEMBERSHIP APPLICATION/RENEWAL FORM

Please take a few moments and become a member of, or renew your membership in, WGWA. Annual dues are $15 for students, $30 for individuals, and $25 per person for corporate memberships of six or more. Dues are payable to "WGWA." Complete the following form and send, with check, to:

Wisconsin Ground Water Association
c/o Lee Trotta
18905 #D Wilderness Court
Brookfield, WI 53045

Individual Membership: Regular Member:____$30 Student Member:____$15
Name:_____ Title: _____
Firm/Agency: _____
Mailing Address:_____
City, State, ZIP Code: _____
Telephone Number:_____ Fax: _____
E-Mail:_____

Are you interested in participating in any WGWA Committees?

___ Newsletter ___ Membership ____ Web Site ___ Legislation ___ Program & Education
___ Please check if you don't have e-mail access and need to receive the *WGWA Newsletter* via regular mail.

Corporate Membership Discount (six or more individuals): ____$25/individual
Firm:_____
Mailing Address:_____
City, State, ZIP Code: _____
Telephone Number:_____ Fax: _____
Corporate Individuals (include each individual's e-mail address, if available. Attached additional page if necessary):

Name	Title	E-Mail
1.)		
2.)		
3.)		
4.)		
5.)		
6.)		

___ Check here if you don't have e-mail, and need to receive the *WGWA Newsletter* via regular mail.