



# LakeViews

*The newsletter of the Yahara Lakes Association*

Summer • 2003

## **MGE Cogeneration Plant: YLA is on Top of Water Issues**

As spring arrived and we looked out to ponder the lowest lake levels in many years, many of us also wondered about the request from MGE to draw up to 3 million gallons of water per day from Lake Mendota to power a proposed cogeneration facility to be located on the UW Campus.

YLA has monitored and reported the facts surrounding this evolving issue in recent newsletters. Many members of the Yahara Lakes Association Board are receiving calls and questions from lake property owners and others concerned with the developments surrounding the facility which is currently under review of the Public Service Commission. There are many political, financial, environmental, residential and scientific issues being raised.

In looking at our purpose and mission as an association, the YLA Board of Directors has made the decision that we will focus our efforts primarily on the scientific and environmental issues affecting water quality and lake levels of the Lakes Mendota, Monona, Waubesa, Kegonsa and the Yahara watershed.

A number of our board members participate on the various commissions and committees that will have impact on the decision making process for this project. As this moves forward, the Yahara Lakes Association will continue to monitor the progress and examine not only the short term solutions being offered, but the long term effects on lake levels and water quality, particularly during low flow and drought conditions.

We will continue to keep our members informed about developments and encourage you to contact your elected officials about issues that concern you.

## **LakeViews**

The “YLA Newsletter” has been given a name! In considering what to call this publication for people living along the Yahara Lakes, we felt that the name “LakeViews” is very fitting. We have lake views in common and we also have our individual “views” about the lakes. Those are not always in common!

Remember to share your views with us on the issues you are most concerned about. This association works hard to protect and represent what is best for our lakes and the interests of our riparian membership. Stories and comments are welcome...send yours to [yla@mailbag.com](mailto:yla@mailbag.com).



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## DNR perspective on the West Campus Cogeneration Facility

By Ken Johnson, DNR

As you may know, MGE/UW must acquire an approval to take water from Lake Mendota for use in their Cogeneration facility. The current proposal calls for a maximum use of 2.2 million gallons per day. Of that volume 1.85 million gallons will be lost, primarily to the atmosphere and never returned to the basin. The DNR has taken the position that surface water use during normal or high flow conditions isn't an issue. In fact one could argue that, since we now receive more flow from runoff than we ever have had before, removing a little excess surface water could be a benefit. However, we also know that *low flow* conditions in the Yahara have been declining. It is these low flows that often times define or limit what an aquatic system can sustain.

**Will Lake Mendota be affected?** Our analysis is NO. If we had a setting on Lake Mendota where we could magically shut down all inflow, shut down all discharge from the dam and run the cogeneration facility flat out for a month, the lake would decline about one-quarter inch. That's not a lot but frankly that decline will not happen. The operator of the dam is Dane County and before that it was the City of Madison. Historically, these operators have managed the Tenney Park Dam to protect lake levels. When the lake achieves a desirable level, discharge out of the dams is managed to protect levels. Therefore, a reduction in the volume of water available will be translated downstream in the form of lower flows in the Yahara River.

**Will any of the other downstream lakes be affected?** Our analysis of Monona, Waubesa and Kegonsa is similar to Lake Mendota. If the affect of lower flows from the cogeneration project were expressed solely in these lakes, the fluctuation would be more than Lake Mendota due to their smaller size. However, they too are managed to protect stage and not flow.

**Will the Yahara River be affected?** The clear answer to that question is yes, unless the removal is conditioned to protect the River during low flows. As a lake riparian you should be concerned about this impact to the river because fish and aquatic life move from one lake to the next through the river. Part of the life stage of many species involves the river despite the fact that they spend a lot of

time in the lakes.

In order to protect the river, the Department has established public rights stage in the river that limits pumping during low flow periods in order to protect public interest such as habitat, water quality, scenic beauty and navigation. These limits would probably be enforced at exactly the time the cogeneration facility is in the greatest demand.

To escape the pumping limits MGE has proposed mitigation. When the stage in the river falls below public rights stages MGE has proposed to offset the volume of water they will use by pumping well #5, a retired municipal well. Well #5 is located on property owned by MMSD and pumps primarily from a geologic formation that is separated from the shallow groundwater aquifer. A study recently completed by MGE's consultant, concluded that short term augmentation pumping of well number five will have little or no effect on surrounding surface water features.

MGE has further proposed to replace ground water volume taken out of well #5 by creating several enhanced infiltration areas (see separate article on groundwater recharge).

If you wish to know more detail about the mitigation proposal the two reference reports can be viewed at: [www.mge.com/community/cogen/updates.html](http://www.mge.com/community/cogen/updates.html).

## **MGE Cogeneration Facility: Report of the Ground Water Recharge Study**

by Aicardo Roa-Espinosa

A committee to evaluate ground water compensation related to the proposed MGE Cogeneration Facility which will draw its water from Lake Mendota has concluded that stormwater infiltration can be used to replace ground water pumped into the Yahara River.

A DNR water mitigation plan has been drafted to insure that the Yahara River below Lake Waubesa doesn't suffer during drought periods. It calls for using an existing municipal well to pump water into the river during droughts to replace water used by the facility. Supplemental well-water pumping would discharge water into the Yahara River above Lake Waubesa.

The expectation is that that ground water pumping during low flow will be needed infrequently, probably for 3 to 4 months every 3 to 4 years. The groundwater to augment low flow would be pumped from the bedrock aquifer.

To infiltrate enough water over time to replace the long term take from the aquifer, the amount would need to be equivalent to one month of the facility's water usage each year. This recharge rate was determined based on initial and future water needs of the proposed facility, and on projections of water well pumping use. The groundwater recharge goal for the initial phase of operation is 57 Million Gallons per Year (MGY), and the goal for future operations is from 90 to 120 MGY. The groundwater recharge would equal about 16% of the total water withdrawn from Lake Mendota.

The study committee evaluated several options for providing groundwater recharge to replace water withdrawn by water-well pumping. Options were divided into three categories: Tier 1 sites were at locations where property owners showed interest in recharge site implementation and environmental conditions made the site feasible. The Tier 1 sites were evaluated in detail with respect to groundwater recharge performance and costs. Tier 2 and Tier 3 site options were evaluated more generally.

Three of the four Tier 1 sites infiltrate stormwater runoff using ground surface areas, while the Wexford Park site would pump excess water from Tiedeman and Stricker Ponds to infiltration beds below the surface of the park. Projections include cost of construction and 20 years of operation, maintenance and monitoring. Results are summarized below:

### **Summary of Analysis Results for Tier 1 Recharge**

Site	Projected Recharge Rate, in Millions of Gallons per Year (MGY)	20-Year Net Present Value Cost (NPV)
UW Arboretum	24	\$897,000
Rennebohm Park	14	\$378,000
Hills Farm State Office Building	2	\$145,000
Wexford Park	80	\$1,631,000
Total	120	\$3,051,000

Implementation of all four Tier 1 sites would meet the recharge goal for both initial and future operation of the Cogeneration Facility. Although the Wexford Park site is the most complex and expensive project analyzed, it is also the most effective in meeting the recharge goal. If any of the sites became infeasible, additional sites could be identified from the additional Tier 1, 2 or 3 options.

# County Worker (and YLA Board Member) Fixes Copter's Sand Woes in Gulf Conflict

*Reprinted with edits with permission from the Capital Times (article dated Tuesday, March 25, 2003)*

Thanks to YLA Board member Aicardo Roa-Espinosa, Dane County Land Conservationist, Marines landing by helicopter in the middle eastern desert have a new weapon in the fight against sand and dust: the ability to see. With a soil bonding technique developed almost 20 years ago by Roa-Espinosa, Marine Corps engineers are treating the desert sands in the Persian Gulf region with a special polymer. The polymer almost instantly hardens the shifting, blowing sand into a solid mass, preventing huge clouds of dust that plagued landings in the desert.

Dust during the helicopter landings produces a very dangerous situation, since neither the pilot nor the crew chief, who serves as navigator, can see through the cloud. Additionally, the dust tends to stick to the night goggles worn by the crew chief, literally blinding the chief, and the dust becomes positively charged from the electricity of the helicopter, producing a conduit of static electricity between the ground and the helicopter. The static electricity can short out the copter's electrical system.

Roa-Espinosa spent a week in the desert, working 14 hours a day with a crew of 22 Marines, to come up with the right mixture of polymers and water that would work on the desert sand.

The Marine Corps had been using aluminum forms and concrete to make landing pads, but the technique costs thousands of dollars and it takes days for one pad. Using the polymer technique, it takes about 30 minutes to make a 200 foot-by-300 foot pad, costing \$150.

The Colombian-born Roa-Espinosa, who also is a visiting professor in biological systems engineering at UW-Madison, developed his soil bonding theory in 1984 in a two-page doctoral thesis. Its original purpose was tied to land conservation and development, to keep soil from eroding during rainstorms on hillsides and stream banks and at construction sites. The polymer acts as a bonding agent, keeping soils from washing away, or in this case blowing away when hit by gale-force winds from a landing helicopter.

Helping the Marines was almost a fluke. A Marine Corps engineer had been working on the dust and sand problem for months, using a variety of techniques such as spraying oil on the sand, but nothing was working. He put



*YLA Board Member Aicardo Roa-Espinosa is surrounded by grateful U.S. Marines in the Persian Gulf region.*

out a notice on the Agricultural Research Service Web site, which was seen by a colleague of Roa-Espinosa.

Roa-Espinosa said the Marines are considering having him train soldiers on how to apply the polymers, or at least write a manual for use by the Marine Corps.

"This technique will save lives," Roa-Espinosa said. "Being able to save lives, I never had that feeling before. Any of these soldiers could be my sons, so it's very heartwarming to be able to help."

## **Finding Boater Safety Education:**

DNR boating safety web site with information on classes (in person and on the web), boat registration, rules of the water: <http://www.dnr.state.wi.us/org/es/enforcement/safety/boated.html>.

BOAT/US on-line safety course  
<http://www.boatus.org/onlinecourse/>

Madison Power Squadron: in person, correspondence, and on-line courses general phone number: 273-4496  
Contact: James Paul-Washa Phone: 608-846-8088  
<http://www.madisonsquadron.org/>.

## **New!**

### **Get your lake property address sign**

By now each lake property owner on Lakes Mendota, Monona, Waubesa and Kegonsa should have received a letter from the Dane County Lakes and Watershed Commission and Sheriff's Department informing you of your lake property address. This "lake address" is cross-referenced in the 911 computer with the property's street address. This lake address system is intended to assist emergency personnel and to provide a more rapid response to emergencies on or near our lakes.

Lakeshore owners are being asked to voluntarily post their lake addresses on a sign at the end of their pier. These signs are very similar to those used in the Dane County rural numbering system. The sign and set of numbers can be purchased at a cost of \$10 from the Dane County Clerk, Room 112, City County Building. In addition the following municipalities have agreed to sell signs to Lakeshore residents: Dunn, McFarland, Monona, Middleton, Sherwood Hills, and Westport. If you did not receive the letter with your lake address, please contact Sue Jones, Lakes and Watershed Coordinator, at 267-0118 or [jones.susan@co.Dane.wi.us](mailto:jones.susan@co.Dane.wi.us).

Thank you for your cooperation in this effort to promote public safety on our lakes.

### **Who are your local elected officials and how do you find them?**

Being a part of the political process starts with knowing who your elected officials are. Please, follow the directions below to identify them. These folks are elected to represent your interests. They are your political voice, so let them know what you think.

Finding out who your elected officials are on the Internet is easy. However, if you don't have internet access, you can call the City of Madison, Clerks Office, 266-6573 or the Dane County Clerk's Office, 266-4121 to get this information. You can also purchase a copy of the Official Dane County Directory for \$1.00 from either the City or County Clerk's Office This handy directory includes contact information for all Dane County elected officials and municipalities—cities, villages and towns.

### **Using the internet:**

**If you live in the City of Madison, go to the City of Madison Website and follow these steps:**

1. <http://www.ci.madison.wi.us/>
2. Click on E-Government.
3. On the E-Government page click on Who are my elected officials?
4. Enter your house number and street
5. This will bring you to the page that identifies the name, address, and phone number of your Madison Alderman, County Board Supervisor and State Assembly and Senate Representatives.

**If you live in any area outside of the City of Madison, go to the Dane County Website:**

1. <http://www.co.dane.wi.us/>
2. Click on Board of Supervisors
3. Under County Board Access Information, click on Supervisor Information and Home Pages
4. Click on "Not sure which district you live in? Check out the online supervisory district maps."
5. Here you will find a map of Dane County that you can enlarge to identify your street and Supervisory District #. With this information, go back to the Supervisor Information and Home Pages to get the name, address and phone number of your supervisor.
6. For your town, village, or city representatives go to the Official Dane County Directory (see below).

**For the Official Dane County Directory, go to:**

1. <http://www.co.dane.wi.us/>
2. Click on Departments and Elected Officials
3. Under Elected Officials, click on County Clerk
4. Under directories find the Official Dane County Directory
5. You can open this up as either a Word Document or an Adobe Document.
6. This handy directory includes contact information for all Dane County elected officials and municipalities—cities, villages and towns.

# Wisconsin Association of Lakes (WAL) Convention: Time Well Spent!

By Chuck Dykman

The Wisconsin Association of Lakes annual convention was held in Green Bay from April 10-12. There was a pre-convention workshop on Thursday, with much more on Friday and Saturday morning. On Thursday morning, the pre-convention opened with professors from the UW and UW Stevens Point giving their views about Wisconsin's water resource – where we are, and where we are going. After a break, the executive directors from WAL, the River Alliance, the Wisconsin Wetlands Association and Wisconsin Groundwater Association spoke about their concerns for the future of Wisconsin's lakes and streams. This prompted lively discussions at lunch.

The afternoon offered a number of breakout sessions. Dinner featured the Habanero Jazz Band, and a short talk about ways to keep lakes clean and safe in tight budget times. The evening featured some “how-to-do-it” sessions such as how to carve your own duck decoys, deer skinning, nature photography and fly tying.

Friday sessions featured a talk on Wisconsin's Public Trust Doctrine by Bill O'Connor, and a multi-media presentation on water around the world by Bill Korth from UW-Stevens Point. Several legislators rounded out the morning in a question and answer session about budget cuts affecting our lakes, but the news wasn't all bad. Many of the lakes programs have survived and continue to provide funding for projects. The afternoon was filled with more break-out sessions, about things from lake association and lake district management to a history of loons and dragon flies. There was also a legal update, where participants could have their questions about lake law answered by Attorney Bill O'Connor.

There were exhibitors from all over, giving away and selling everything from erosion control devices to weed rakes and phosphorus free fertilizer. Some manufactured piers, water toys and devices to put a television camera below the water and see what's there. You could easily spend hours looking at everything. The evening workshops were on lake monitoring, fishing, lake organization goals and purple loosestrife control.

Saturday morning brought more breakout sessions on milfoil, lake projects, new and proposed DNR rules, lakeshore restoration, water herbicides and boat and pier law. The Saturday lunch featured the soon-to-leave Wisconsin Tourism Secretary, Kevin Shibilski. Then came the highlight of the conference – the WAL RAFFLE. This is the best raffle in the state, bar none! I won a print of a Sunfish, which now proudly hangs in our bathroom. But the big prize was a 20 horsepower Mercury Four Stroke motor, donated by Mercury Marine Products.

YLA will let you know when it's time to sign up for next year's convention. It will be in Green Bay again at the KI Convention Center, on April 16 and 17, with a pre-convention workshop on Thursday, April 14. Everyone who lives on a lake should attend this convention at least once. The topics seem never-ending, the products are great, and the problem is choosing what to attend. Mark your calendars for next year, and call YLA for information on how to register.

## Friends of Marine And Trail Enforcement

A group formed to raise money for increased patrolling time by the boats of Marine and Trail Enforcement has scheduled a fundraiser for 2 p.m., August 10 at Nautigal's. The event features a free picnic with music by West Side Andy and Melford. All you need to do is show up and enjoy the many fun activities, free food and music.

The organization, known as “Friends of Marine and Trail Enforcement,” last year raised over \$8,500.

# Who to Call About Lake Issues

Dane County Sheriff's Office	Emergency	911
	Non-emergency	255-2345
	Tenney Park office	246-3888
	TDD	266-1111
DNR Violation Hotline	Available 24 hrs/ day	800-847-9367 Or Cell phone # 367
Lake Information & Coordination	Dane Co. Watershed Mgmt.	267-0118
Weed Spraying and Plant Mgmt.	Madison DNR	273-5955
Fish Management	Madison DNR	273-5955
Lake Levels and Weed Harvesting	Dane Co. Public Works Dept.	266-4018
Tenney Locks		266-4364
Beach Monitoring Information	City of Madison Health Dept.	266-4842
Shoreline Permit Information	Madison DNR	273-5955
Shoreline Zoning	Dane Co. Dept. of Land Reg.	267-0118

## Mark the Dates!

### Events on and around the Yahara Lakes

#### Take a Stake in the Lakes

The annual cleanup of lakes, rivers and shorelines in the Yahara basin sponsored by Lakes & Watershed Commission.

June 14: Cleaning Lakes Mendota, Kegonsa and Wingra. Information Center will be at Wingra Park.

June 21: Cleaning Lakes Monona and Waubesa. Information Center will be at Law Park.

#### Badger State Summer Games-Finals

Events take place at approximately 60 venues throughout Madison & Dane County

Thursday, June 26- Sunday, June 29

#### 2003 Rhythm and Booms

Warner Park, Madison

Saturday, June 28th, 2003 (rain date Sunday, June 29)

#### Paddle & Portage

Capitol Square, Isthmus

Friday, July 18

## Wednesday Evening Watershed Walks

A series of walks within the Upper Yahara River Watershed and beyond, Experience the sights and sounds of our watershed.

Watershed Walks begin at 6:30 p.m.

**June 4** Saint Benedict Center, 4200 Co. Hwy. M, Waunakee

**June 11** Pheasant Branch Creek Conservancy, Pheasant Branch Road, Middleton

**June 18** Gov. Nelson State Park Yahara Lakes Week Picnic, 5140 Co. Hwy. M, Waunakee

For questions or in the event of inclement weather contact: Nancy Schlimgen, Naturalist, Saint Benedict Center: 836-1631 ext.159 [www.sbcenter.org](http://www.sbcenter.org), or

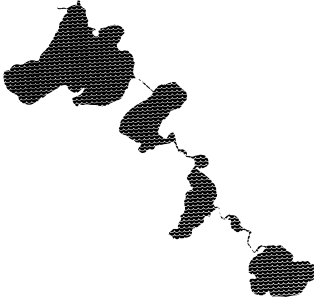
Jennie Nuese, Coordinator, Token Creek Watershed Association: 334-8941 [www.tokencreek.org](http://www.tokencreek.org).



## NEWSLETTER

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**Yahara Lakes Association, Ltd. is a non-profit organization of over 700 members dedicated to protecting and representing lake property owners and improving the environment of Lakes Mendota, Monona, Waubesa, Kegonsa and the Yahara watershed.**

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### **COMMITTEES**

Communications Committee  
Lake Quality Committee  
Legislation and Legal Committee  
Membership Committee  
Water Safety Committee

*Call 848-1450 if you would like to become involved in any of the above-listed committees, or if you have concerns you would like a committee to address.*