



The GLQO Watershed Journal

The mission of the Gull Lake Quality Organization is to address concerns and provide education regarding the use of natural resources of the Gull Lake Watershed.

Volume 2, Issue 3

glqo.net

June - Aug. 2008

NOTICE

Starting with this issue, The GLQO Watershed Journal will only be mailed to members who have paid their 2008 dues. Copies will be posted on our website glqo.net and may be downloaded.

Upcoming Events

Boater Safety Classes

Go to GLQO's website, glqo.net or check the MI DNR website, www.michigan.gov/dnr, for a complete list.

July, 2008

17th - Kanoë the Kazoo (See Newsletter Article for details)

Mark Your Calendars!!

23rd - Annual Meeting

Richland Area Community Center
9400 East CD Avenue
Richland, MI 49083
Phone: (269) 629-9430
Website: richlandareacc.org

September, 2008

3rd - Board Meeting, 6:30 p.m.
Check website for location

23rd - KBS Dessert with Discussion
KBS Education Center Auditorium

Topic: "Michigan's Changing Landscape"

Dr. Randy Schaetzl, Professor
Dessert available at 7:00 pm
Program 7:30 to 8:30 pm

October, 2008

15th - Board Meeting, 6:30 p.m.
Check website for location

28th - KBS Dessert with Discussion
Topic: "Animal Agriculture and the Environment - Finding the Balance"

Dr. Wendy Powers, Dir MSU
Environmental Stewardship for Animal
Agriculture...

(Co-sponsored by GLQO & Four Townships Water Resource Council)

PETER TER LOUW TO SPEAK AT ANNUAL MEETING ON JULY 23RD!

YOU WON'T WANT TO MISS IT!!!

By: Tom Noall

Don't miss the opportunity to hear and spend a little time with Peter Ter Louw, Executive Director of the Southwest Michigan Land Conservancy (SWMLC), at our Annual Meeting on July 23rd at the **Richland Area Community Center**. Pete and the members of his organization help people protect the local wild and scenic places that they care most about, and collaborate with GLQO to address concerns and provide education regarding the use of our natural resources of the Gull Lake Watershed. (See "**Protecting Prairieville Creek**" in this Newsletter).

The following bio will help you get to know Pete a little better before we see you at the annual meeting.....

Executive Director - Peter D. Ter Louw, terlouw@swmlc.org, Peter D. Ter Louw has a B.S. in Biology and a minor in Chemistry from Hope College in Holland, Michigan. He received a Master's of Landscape Architecture from the University of Michigan School of Natural Resources, with an emphasis on ecological design and restoration. After graduate school, Peter returned to his home in New Jersey and worked with the Passaic River Coalition initiating and creating the land conservation and acquisition program. Under his leadership as project manager and later as assistant executive director, this nonprofit watershed association secured over \$2.5 million in government and foundation land acquisition grants to purchase 800 acres of headwater streams, floodplains, wetlands, and recreational open spaces. Peter took over as Executive Director of the Southwest Michigan Land Conservancy in March 2002. With the help of staff, a board of directors and volunteers, he implements land conservation strategies in nine counties of Southwest Michigan. During the past two years, the Southwest Michigan Land Conservancy has protected over 1,000 acres through conservation easements and acquisitions that include wetland, marshland, prairie, agriculture and dense landscapes.

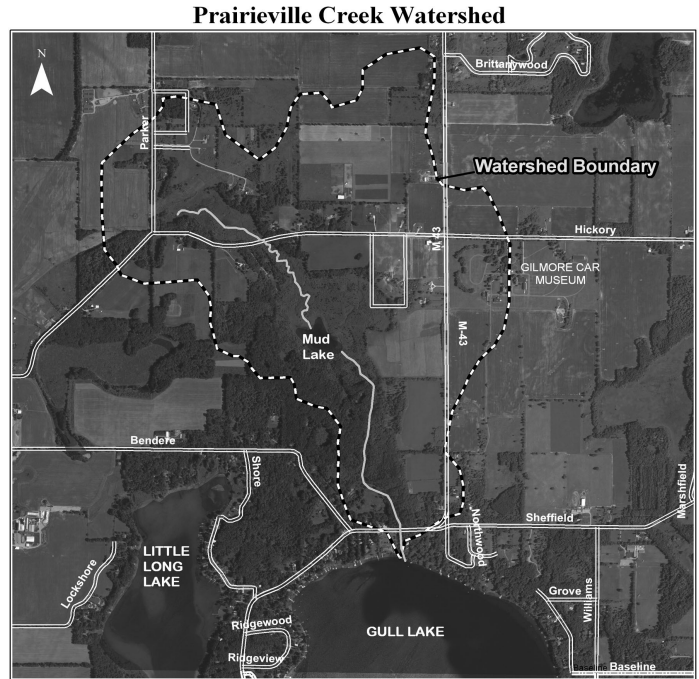
Protecting Prairieville Creek

By: Pamela W. Larson, Communications Director for Southwest Michigan Land Conservancy

Protecting the water quality of Gull Lake and the value of the surrounding property depends heavily on conserving and managing the Prairieville Creek Watershed. Prairieville Creek is a small, 2-mile-long creek at the north end of Gull Lake and is the only creek that flows into Gull Lake (see watershed map below). During the past year, the Southwest Michigan Land Conservancy (SWMLC) has worked with partners, **including the GLQO**, to develop a conservation plan to protect this critical resource area.

In late fall 2007, SWMLC was awarded a Michigan Department of Environmental Quality (MDEQ) matching grant to purchase development rights in the Prairieville Creek Watershed. The \$500,000 MDEQ grant will provide funds to purchase conservation easements on wetlands, land along the stream corridor, and uplands that will remain undeveloped and serve as a riparian buffer to filter out harmful nutrients and sediment from adjacent land uses. *Because this is a matching grant, SWMLC must raise \$500,000 in funds or protect additional land of equal value within the Prairieville Creek Watershed.*

Prairieville Creek is the most significant surface water contributor to Gull Lake, supplying about 21% of Gull Lake's water. Prairieville Creek has an extraordinarily high rate of groundwater discharge, which produces very stable and consistent water flow and temperature. Emerging groundwater averages 50°F all year, so the creek never freezes for more than a few days. As a result, Mud Lake and the creek corridor feed and shelter large numbers of both game and non-game wildlife species and offer regionally significant wildlife habitat during very cold or very dry periods.



This view of Mud Lake looks northwest into the surrounding forested uplands. Photo by Peter D Ter Louw

If you are interested in learning more about this project, call the SWMLC office at (269) 324-1600, and they will send you our four-page summary. **If you are interested in supporting the Prairieville Creek project, please make your check payable to SWMLC and mail your donation to:**

Southwest Michigan Land Conservancy
6851 S. Sprinkle Road
Portage, MI 49002

www.SWMLC.org



New, Expanded CAFOs Coming to Richland

By: *Anne Couture, President Couture Environmental Strategies
Russell Hall, Student Gull Lake High School*

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You may have heard or read about them recently in the Kalamazoo Gazette...CAFO's, or Concentrated Animal Feeding Operations (CAFO). Also known as Industrial Farm Animal Production (IFAP), this type of farming relies on high-through-put production to grow thousands of animals of one species, and for one purpose, such as beef, dairy, turkeys, pigs, etc. These are intensive operations where animals are housed in large numbers in enclosed structures, resembling more of an industrial warehouse than a traditional barn. In Michigan, a farm with at least 700 dairy cows, 1,000 beef cattle, or 2,500 hogs would be classified as a CAFO. This isn't your traditional "family farm"; rather, CAFO's are more akin to a large industrial operation.

Within the past year in Richland, 2 new CAFO's and one existing CAFO that is expanding, have received NPDES (National Pollutant Discharge Elimination System) permits from the Michigan Department of Environmental Quality (MDEQ); a Federal permit issued by the State designed to protect surface water resources.

The new CAFO set to open on AB Avenue at the former Gilmore farms, *Liberty Beef Farms*, will have nearly 2,000 beef cattle, according to James Duesema, who represents the owners Thomas Brink and Timothy den Dulk. The barn was scheduled to be complete in March, and the cattle to arrive in April. Over 1900 acres of property operated by Liberty Beef Farms have been identified as suitable for land application of CAFO waste. Over 492,000 cubic feet of solid manure will be produced per year, with an estimated 433,150 cubic feet of storm water runoff collected.

Another new CAFO, Hickory Gables, Inc. (Bas DeJong) will open just north of Liberty Beef on Cressey Avenue and will have about 1,650 dairy and breeding cows, according to the NPDES Permit. Manure spreading rights have been acquired for over 3,400 acres, to accommodate over 18 million gallons for liquid waste and over 1400 tons of solid manure annually. Potential receiving waters for both production and land application areas include Little Long Lake, Gull Lake, West Gilkey Lake, Miller, Lake, Indian Lake, Bull Head Lake, and other smaller unnamed ponds, all located in the Kalamazoo River Watershed.

A third CAFO that is expanding, Prairieview Dairy LLC, (John Vander Dussen) has been permitted and is located less than 2 miles north of the Hickory Gables CAFO in Prairieville Township. This CAFO will accommodate about 1,575 dairy cows. Prairieview Dairy has over 3900 acres under its control for manure applications. Estimated amount of CAFO waste produced annually for land application is over 29 million gallons per year of liquid manure, and over 550 tons of solid manure.

According to the Michigan Department of Environmental Quality (MDEQ), one cow produces the same amount of waste as 23 people. This means that the 5,225 cows at the Richland CAFOs will produce the same amount of waste as about 120,000 people. Unlike the waste from people, the waste from these cows will not go through a sewage treatment plant. Rather, the manure will be spread as fertilizer in fields all across the Richland area, essentially encircling Gull Lake. All the farm fields identified to accept manure from these three CAFO's are included in a GIS map, created by the Four Township Water Resources Council, using information supplied by the CAFO owners in their respective NDPDES applications. (see page 3 of 3)

In January 2008 the Michigan Court of Appeals ruled that Michigan's program for regulating large livestock and poultry farms violates the federal Clean Water Act. In a 2-1 ruling, the court said that Michigan is not doing enough to regulate CAFOs. The Michigan appeals court also ruled that the

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Michigan program does not give enough public notice about where CAFOs are going to be built and give the public the opportunity to comment. It is too early to tell what effect the decision will have on the CAFOs here.

Bastian DeJong, owner of the Hickory Gables farm on Cressey Avenue, emphasized that farms have to operate on a large scale to be profitable today. It is costly to run a truck of milk, according to DeJong, and so you don't want to run a truck half empty. According to DeJong, it takes a lot of cows to fill up a tank of milk.

CAFOs are a "necessary evil" according to Gary VanDeWeert, a consultant for dairy farmers including Mr. DeJong. "If we want to keep food economical and affordable, we have to have CAFOs" VanDeWeert said".

However, a new Report of the *Pew Commission on Industrial Farm Animal Production* comes to a different conclusion: "The industrial farm has brought about tremendous increases in short-term farm efficiency and affordable food, but its rapid development has also resulted in serious unintended consequences and questions about its long-term sustainability." In its Preface, the report states that "The present system of producing food animal in the United States is not sustainable and presents an unacceptable level of risk to public health and damage to the environment, as well as unnecessary harm to the animals we raise for food." The Pew Commission makes several recommendations relating to Public Health, the Environment, Animal Welfare, Community Impact, and Additional Research Needs.

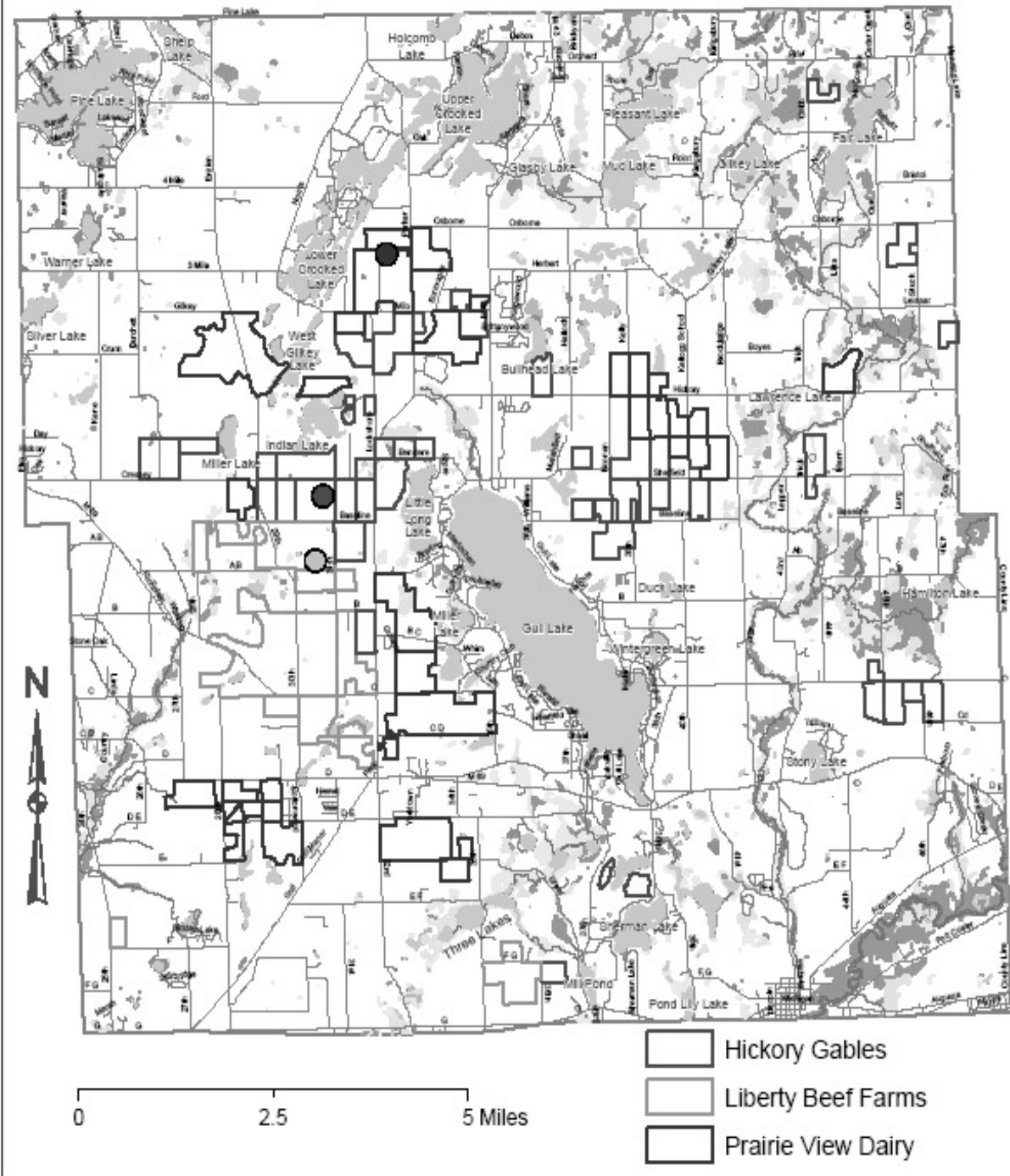
Where do we go from here? Richland embraces its farming heritage. Remember "Richland, not Pitland?" But now we are faced with another challenge: how do we, as a community, work with our neighboring CAFO's to mitigate potential adverse effects on our environment, our infrastructure, and our and quality of life?

"There are good ones and bad ones. It depends on how conscientious the operator is," Mr. VanDeWeert said. "We never know if an operator will do things properly until a problem happens."

To start the community conversation, Bas DeJong he has met with neighbors and the board of the Gull Lake Quality Organization, and has been very open, honest, and forthright. In fact, Mr. DeJong is very interested in use of a methane digester, which could use the manure to create a bio-fuel, methane, for energy, while leaving the nutrient content of the manure intact for land application. A consortium of CAFO's in Allegan County has cooperated in installing methane digester, through the assistance of the MSU extension. There is also pending legislation in Lansing that would provide financial incentives to install alternative energy systems such as methane digesters. While perhaps not the ultimate solution, a methane digester could help to minimize odors and pollution from storm water runoff, concentrate the nutrients in the manure to maximize its fertilizer qualities, and generate electricity for the farms. All in all, it would seem a methane digester is a win for the community, the farmers, and the environment!

Your GLQO intends to follow this issue and provide information and assistance to both the CAFO farmers and the community. Stay tuned as we walk down a path that will hopefully be an example of how to integrate CAFO's effectively into the community, without significant adverse effects.

Four Township CAFO Manure and Waste Application Sites



Did You See the Bottom, 31 Feet Down?

By: *Mike Gallagher*

Saturday, May 24th was this year's opening day of bass season. Many things made it one of the best opening days that many will remember. The temperature was in the 70's, the breeze put a little chop on the water and the drifting perfect, the fish had not filled up on May flies and the water was crystal clear. How clear was it? Well, you could see the bottom . . . 31 feet down!

I measured the clarity using the Secchi disk method. Fr. Pietro Angelo Secchi, the scientific advisor to the Pope in 1865, developed the method to measure the clarity of the Mediterranean Sea. His simple method is still used today to measure water clarity of lakes and seas all over the world. A round 8" disk that is painted alternately in black and white quadrants is attached to a measuring tape and lowered into the water. When the disk cannot be seen, it is pulled up until it is visible, and the measuring tape depth is recorded.

This year, long time resident and fisherman on Gull Lake, Jerry Rapp, volunteered to collect weekly Secchi disc readings at the deepest point on Gull Lake. Those readings will be sent to the Cooperative Lakes Monitoring Program. The primary purpose of this cooperative program is to help citizen volunteers monitor indicators of water quality in their lake and document changes in lake quality over time.

Last year, 200 lakes in Michigan submitted 3515 Secchi readings ranging from 1.5 to 49 feet. Silver Lake in Grand Traverse County was the clearest at 49'. While the average transparency reading was 12.3', Crystal Lake in Benzie County was clear at 44', Higgins Lake measured 46' and Torch Lake was at 44.5'. Depth comparisons to other lakes are interesting but the real value in our readings will be their comparison over time. We plan to continue the Secchi disc monitoring for years which will help us to evaluate the quality of Gull Lake.

Gull Lake and many other lakes typically get less clear as the summer progresses. Last summer, we saw Secchi disk readings at 19' in the middle of August. Changes in clarity can be caused by:

1. Increased abundance of free floating algae
2. Erosion of the shoreline or erosion from site development near the lake
3. Recirculation of bottom sediment from motorboat activity
4. Discoloration of the water from wetland runoff and/or plant decomposition
5. Increased turbidity
6. Reduced zooplankton populations

The clarity of beautiful Gull Lake will make for many great days enjoying our natural wonder. I will remember this opening day of bass season as being one of the best ever even though I could see the size of that big one that got away and swam at least 31' down.

Pine Lake Paddle Tour on July 17, 2008

By: *Ken Kornheiser, Past President of the Four Township Water Resource Council*

For the fifth year in a row the Four Township Water Resources Council is participating in the Kanoe the Kazoo events. We are sponsoring a guided tour on Pine Lake in Prairieville Township in the evening of Thursday, July 17, 2008.

Naturalists will be along helping participants appreciate the lake paddle. Among these will be Steve Allen, a naturalist with the Kalamazoo Nature Center for many years and now with Geum Services, Inc., Ecological and Native Plant Consulting, who will discuss shoreline features that protect water quality and enhance wildlife habitat. Dr. Elena Litchman, Professor of Biology from MSU at the Kellogg Biological Station, will provide a guide to the lake ecology. And Dr. Lois Wolfson, MSU Department of Fisheries & Wildlife and the Institute for Water Research will help with aquatic plant identification and control.

The launch site will be from the Michigan Career and Technical Institute (MCTI) on the North shore of Pine Lake. Current plans are for interested participants to assemble and register at 5:00-6:00 PM at the Kellogg Lodge for a 6:30 PM launch with the tour lasting approximately 2 and 1/2 hours.

Participants are expected to provide their own canoes or kayaks and life vests. Some water or other drinks will be available, but you are encouraged to bring sun screen, bug repellent, cameras, binoculars, hats, rain gear, cell phones, extra water and refreshments. Please, no alcoholic beverages.

Updates on the paddle tour will be available at the Four Township Water Resources Council website Four Townships Water Resources Council (www.ftwrc.com). Pre-registration is recommended. Please send the names, addresses, phone numbers and email addresses of participants, the numbers of canoes/kayaks to mail@ftwrc.org. Please provide the ages of any participants under 18, who must be accompanied by an adult.

Additional information about the Kanoe the Kazoo Program is available at Kingman Museum - Battle Creek, Michigan (www.kingmanmuseum.org/kanoe.htm).

Due to space limitations, we were not able to include the following articles in this issue and have placed them on our website glqo.net

Webmaster's and Historian's Corner

By: Eric Reid

Water Safety Reminders: For Family and Friends

By: Tom Noall

Note: The dates and times of GLQO Board Meetings and other "Upcoming Events" are subject to change and should be confirmed by checking our website glqo.net

GLOO
P.O. Box 34
Hickory Corners, MI 49060

The Gull Lake Quality Organization's Executive Committee and Board

The executive committee:

President: Brian Winne (08-1)
Water Quality

Secretary: Tom Noall (09-1)
Communication/Public Relations

Vice President: Chris Tracy (08-1)
Law Enforcement

Treasurer: Peter Knibloe (09-2)
Treasurer

Board Members:

Woody Boudeman (09-2)

Susan Bowers (08-2)
Law Enforcement

Terry Carpenter (08-1)
Development/Access

Mike Gallagher (10-1)
Water Quality

Jay Garside (10-2)
Governmental Liaison

Todd Lennen (10-1)
Fisheries

John Luchsinger (10-1)
Fisheries

Gene McKay (10-1)

Rick Newell (10-1)