

THE GLQO WATERSHED JOURNAL



The Gull Lake Watershed includes Gull Lake, Little Long Lake, Grassy Lake, Little Gull Lake, Miller Lake, Bullhead Lake, Duck Lake, Backus Lake, Dake Lake, Elliston Lake, Mud Lake, Wintergreen Lake, and Prairieville Creek.

LOVE YOUR LAKE . . . *Build the Dam!!*

By Jeff Price, Gull Lake Dam Association

By now, you are probably aware that the Gull Lake Dam Association has been working on a fund-raising campaign to reconstruct the dam on Gull Lake. A lot has happened since the start of this effort. A summary follows.

- We changed our name from the **Gull Lake Association** to the **Gull Lake Dam Association (GLDA)**
- We changed the structure of the GLDA from a non-profit shareholder corporation to a non-profit directorship corporation
- We have applied for Recognition of (Tax) Exemption (501(c)(3)).
- We have submitted a grant proposal to the Michigan DNR – Dam Management Grant Program in an effort to obtain partial funding for our project
- We have a newly redesigned website (Gulllakedam.org) which provides current information on GLDA activities.
- We have made presentations of the Gull Lake Dam Reconstruction Project to the Gull Lake Quality Organization (GLQO), the Four Township Water Resources Council (FTWRC), and Richland Township Board of Trustees.
- Prein & Newhof (Contracted engineering firm) has completed and presented their initial dam reconstruction proposal to the GLDA (March 27, 2019).

Continued on Page 2

SPRING 2019

In This Issue:

Love Your Lake...Build the Dam	1
Cooperative Lakes Monitoring Update	2
Sentinels of Water Quality	3
New Michigan Boating Laws	4
SWMLC Efforts.	5
Appreciating GLQO Members.	6

The Gull Lake Quality Organization is an all-volunteer organization. Our mission is to address concerns and provide education regarding the use of natural resources of the Gull Lake Watershed.



GLQO fully supports the fundraising efforts of the Gull Lake Dam Association and has made the commitment to help spread the word about their initiative to reconstruct the dam.

Gull Lake Dam Association Update

Continued from Page 1

What happens next!

- The GLDA Dam Reconstruction Campaign will officially began **May 1, 2019**.
- A follow up letter will be sent to all Gull Lake property owners which will detail how to donate to this campaign. We will be requesting a minimum donation of \$10 per foot of lakefront in order to complete the dam reconstruction project.
- American Village Builders has generously offered to allow us to promote our fund-raising campaign during their open house on Gull Lake as part of the Parade of Homes Show. Visit us there on June 9!
- We are planning to have a presence in the Richland Village Fourth of July Parade.

Why this project is important

The most valuable asset of any Gull Lake property owner is the water which laps at your shore. Since its founding 98 years ago, in 1921, the all volunteer Gull Lake Dam Association has owned, operated, and cared for the Gull Lake Dam, without which, the water levels of Gull Lake would rise/fall significantly, along with the value of your property.

Cooperative Lakes Monitoring Program (CLMP) Update

This spring is the eleventh year of GLQO's water quality monitoring. GLQO volunteers have been trained through the Michigan Clean Water Corps (MiCorps). From April through September, volunteers sample and test the waters of Gull and Little Long Lakes for water quality indicators such as water clarity, phosphorus, chlorophyll and dissolved oxygen. This is a measure of overall water quality and documents changes in the lakes over time.

GULL LAKE

- With an average TSI score of 30 based on 2018 Secchi transparency, chlorophyll-a, and summer total phosphorus data, this lake is rated as an oligotrophic lake.
- The low level of nutrients in the lake results in dissolved oxygen being available throughout the water column for the entire summer.
- Long term monitoring shows slight downward slopes on the parameters, indicating a very slow movement toward lower nutrient levels in the lake.

LITTLE LONG LAKE

- With an average TSI score of 35 based on 2018 Secchi transparency, chlorophyll-a, and summer total phosphorus data, this lake is rated as an oligotrophic lake.
- The lake keeps some dissolved oxygen in the bottom waters through early summer, but by late summer the lake has stratified, and the bottom water is devoid of oxygen.
- While the trends for individual parameters are mixed, the overall nutrient levels in the lake are largely unchanged since monitoring began in 2009.

For complete reports: <https://data.micorps.net/view/lake/>

Mussels, Mayflies and Other Bottom Dwellers – Sentinels of Water Quality

by Gary Mittelbach

Most readers of this newsletter will be familiar with Zebra mussels, those nasty, sharp-shelled critters that invaded the Great Lakes in the mid 1980's and are now found in more than 250 inland Michigan Lakes, including Gull Lake. But, you might be less familiar with the native mussels and clams that were once abundant in Michigan (45 native species). Once abundant, you say? Unfortunately, yes, and Zebra mussels have something to do with this.

Freshwater mussels live on the bottom of lakes, rivers and streams, where they largely go unnoticed by people (but not by the raccoons, otters and ducks that feed on them). Mussels make their living by filtering tiny food particles from the current of water that they continually pump into their bivalve shells (see photo at right). A single large mussel can filter up to 10 gallons of water a day. These native mussels do much to clean up the water and they are an important component of a healthy lake ecosystem.



Clams and mussels are also very sensitive to pollution and eutrophication and their presence is an indicator of good water quality. Many factors have contributed to the decline of native mussels in the US, where it is estimated that more than 70% of all species are endangered, threatened or of special concern. Pollution and eutrophication are some of the causes. The invasion of Zebra mussels is another. As the picture to the left shows, Zebra mussels attach to the shells of larger native mussels and clams, making it difficult for them to burrow into the bottom and leading to competition for food.

In Lake Erie, it is estimated that Zebra mussels have eliminated 90% of all native mussels. More locally, I witnessed how the invasion of Zebra mussels into Little Long Lake was followed a few years later by a multitude of empty shells of native mussels littering the lake bottom. Residents of Gull Lake may have noticed something similar.

Mayflies are another group of bottom-dwellers whose presence is a sign of good water quality. Mayflies (sometime called "fishflies" in Michigan) are a fascinating group of insects that have been around since well-before the time of the dinosaurs. There are many species of mayflies living in our lakes, but the most noticeable species found in Gull Lake and in the Great Lakes is the large mayfly *Hexagenia* (adult shown at at the right). All species of mayflies spend most of their 1-2 year lives as larvae living on the bottom of lakes and streams, where they feed on algae and detritus and grow through a series on instars until they metamorphose into winged adults. The larvae of the large *Hexagenia* mayflies found in Gull Lake build a U-shaped tube in the lake bottom, through which they pump water and feed on particles of algae and detritus (somewhat similar to the feeding ecology of clams). And like clams and mussels, these mayflies are very



Continued on Page 5

New Boating and Fishing Laws to Prevent the Introduction and Spread of Invasive Species

Michigan’s Natural Resources and Environmental Protection Act (Act 451 of 1994) Part 413 has been amended with changes for boaters and anglers that took effect March 21, 2019. The changes are intended to strengthen protection for Michigan waterways against the introduction and spread of aquatic invasive species.



What boaters need to know:

Prior to the amendment, the law only required that a person not place watercraft or trailers in the waters of Michigan if an aquatic plant is attached. In addition to this requirement, the new changes require all of the following prior to transporting any watercraft over land:

- Removing all drain plugs from bilges, ballast tanks, and live wells.
- Draining all water from any live wells and bilges.
- Ensuring that the watercraft, trailer, and any conveyance used to transport the watercraft or trailer are free of aquatic organisms, including plants.

This means that after trailering boats, and before getting on the road, boaters must pull plugs, drain water and remove plants and debris. Find a short video to show what boaters need to do.

<https://www.youtube.com/watch?v=0k2osDO7DTY> Violation of the law is a state civil infraction and violators may be subject to fines up to \$100.

ON THE BAY AT GULL LAKE

JAQUA REALTORS OPENS ITS 8TH LOCATION IN WEST MICHIGAN ON GULL LAKE IN RICHLAND

Visit Us @ JaquaRealtors.com

Our Watershed Benefits from SWMLC Efforts *By Hilary Hunt*

Recently, the GLQO board met with Hilary Hunt from the Southwest Michigan Land Conservancy (SWMLC). Since the SWMLC was founded in 1991, the nonprofit has protected over 16,000 acres of wetlands, streambanks, farms, forests, and fields in Southwest Michigan. As one of the jewels of our region, Gull Lake has received special attention and care throughout this history. In particular, SWMLC has focused on protecting properties along Prairieville Creek, a small creek at the north end of Gull Lake. As the primary tributary and major contributor of water into Gull Lake, it provides over 60% of the surface water inflow into Gull Lake. It's also the only cold-water fish-spawning area for the lake.

Protecting places like Prairieville Creek has scenic benefits of course, along with protecting the homes of wildlife and preserving the lake's beauty for those who live on and visit the lake. However, conserving land near waterways is also crucial to the health of lakes and rivers. Protecting natural land near bodies of water improves water quality, reduces algae blooms, provides safe drinking water, maintains property values, and more.

With over 3.5 square miles permanently protected in the Gull Lake and Augusta Creek watersheds, and 2 miles of riverbank protected nearby on the Kalamazoo River, there are many opportunities to visit protected natural land nearby. Wondering what protected land looks like? Join SWMLC for a series of unique, free events this spring and summer celebrating and exploring the natural heritage and beautiful landscapes of the Gull Lake region.

Saturday June 8, 8am – Kanoë the Kazoo: Paddle the Three Lakes

There's no better way to experience the Gull Creek watershed than on the water. SWMLC is partnering with the Four Townships Water Resources Council, the Kalamazoo River Watershed Council, and the DNR Fisheries Division to lead this paddle. Topics will include birds, fish, wildlife, and aquatic plant life. Rental kayaks available.

Saturday August 17, 10am – Experience the Boudeman Family Farm

This is your chance to see an incredible and historic property that is rarely open to the public. The Boudeman family has generously conserved nearly 1,000 acres including beautiful farmland and both sides of Natural Beauty-designated road BC Avenue. Mobility accommodations available.

Sentinels of Water Quality *continued*

sensitive to pollution and eutrophication and do best where the water is clean. Their abundance declined significantly in Gull Lake in the years prior to putting in the sewer system, but they bounced back quickly after the sewer was installed in 1984 and water quality improved.

Interestingly, adult mayflies do not feed (they don't even have mouthparts) and they live for only two days (hence their scientific name Ephemeroptera). During their short adult life, they molt once and then gather in large swarms to find a mate and if successful, lay their eggs in the water and die. Imagine spending 99% of your life living on the bottom of a lake with only two days as an adult to mate and reproduce before you die. What if a fish happens to catch you as you emerge from the lake, or a bird finds you sunning on a branch, or the night you go looking for a mate it is windy, cold and rainy? Bummer! Yet, despite this strange lifestyle, mayflies have been around for more than 100 million years. To combat their predators, many species of mayflies emerge synchronously and in great numbers that satiate the fish and birds that eat them. We sometimes see large emergences on the shores of Gull Lake and famous examples of huge mayfly "hatches" exist in towns along the shores of Lake St. Clair and Lake Erie.

So this summer, when you see the large mayflies around Gull Lake (these species come out in mid-summer, not May!) think of them as a sign of clean water in our lake and wish them well on their short but busy adult lives.

We thank the 2019 GLQO Individual and Family Members

Heather Adams	Gar and Robin Chapel	John and Lorelee Fisher	Byron and Carol Hodgson
Scott and Holly Allen	Lynne and John Chipman	Michael and Karen Fisher	Susie Hogan
Mike and Lou Ann Ambro	John and Susan Chrisman	Ed and Nancy Fitzgerald	Fred Holt
Anonymous (14)	David and Kathryn Christ	Kurt Ford	Dennis and Kathy Hoorn
Charlotte Ashton	Gary Cirulli	Rick and Pam Foster	Susan Houseman and Curtis Hall
Bud and Judi Baldwin	Dorne Clark	John and Ann Gallagher	Robert and Helen Hughes
Jack Bargo and Patti Colasanti	Jack Clark	Dan and Mary Beth Gallagher	Bruce Hutchinson
Jennifer and Rebecca Barlow	Wanda G. Clawson	Mike and Kathy Gallagher	Ed Ihling
Elizabeth Barnes	Linda Cohen	Tom and Mary Jo Gallagher	Annette Isom
Anthony Bartalone	Bruce and Donna Cohen	Joni and Roger Ganger	Phil and Carey Isom
David Battjes	Jim Collier and Stuart Verseman	Chip and Miranda Garside	Robert and Amy Isom
Jim and Mila Beck	Bob and Paula Cook	John and Sharon Garside	Fred and Megan James
Bryan and Courtney Beck	Michael and Corie Costello	Judy and Jamie Geary	William and Joanne Jellison
Mac and Susan Behnke	Alison and Rob Credit	Andrew and Kendra Geeslin	John and Judith Jereck
Lynn and Tom Belco	David Creguer	Karen Geib	Si and Shirley Johnson
Margie and Bob Berres	Larry and Judith Crittenden	Alfred and Jean Gemrich	Diane and Brooke Johnson
Dr. Kevin and Mary Beyer	Sally and Randy Crockett	Michele Libbrecht and Jay Gesmundo	Ryan and Martina Johnson
Karl and Pamela Beysiegel	Jerry and Sharon Cross	Jack S. Gesmundo	Randy Johnson
Gordon and Sally Birdsall	James A. Cupper	Vicki Gesmundo and Mike Marcinek	Steve and Peggy Johnson
Jeffrey Bither	Randy And Brenda Curtenius	Susan C. Gilmore	Susanne Johnston
Randy Bonzheim	Diann and Jim Danhoff	Steve and Elaine Ginsberg	Courtney Jones
Dick and Debbie Boris	Ken and Teri Davis	Don and Janet Gladstone	Dorothy Jones
Deb Ball and Rod Borton	Philip and Terri Dawson	Jim and Bonnie Gordon	Darrell and Kim Junkins
Kristen Boss	Jim and Barb DeKruyter	Bjorn and Lori Green	Bob and Val Karam
Sherwood and Kathryn Boudeman	Malinda and Greg Deleeuw	Susan Grimm	Jeff Kares
Sherwood and Sharon Boudeman	Al and Lisa DeLucia	Jim and Bonnie Grooters	Mike Kasten
Kappy Boudeman	Jim and Lindsey DeMaagd	David Gruss	John and Kathy Keagle
Greg Bouhanna	Pam Dewey	Frank and Diane Guarisco	Michael Keenan
David and Heide Boutell	Laurel and Mark Disney	Gull Hills Tract Spring Creek Channel Dock Assoc	Richard and Joan Keilen
Stephen Bowers	Larry Dopp	Bill Gust	Steve and Michalina Keith
Jon and Susan Bowers	John and Susan Doster	William Guzy	Brad and Lauren Keller
Robert and Dolores Boyle	Donald and Jeree Drake	David and Michelle Halley	John E. Kelly
Brenda Brenner	Lisa Duffy	Stephen Hamilton	Dave and Karen Kempe
Sharon Brignall	Sid Durham	Pete and Margaret Hamlett	Sue Markus and Rick King
Joe and Jane Brogger	Dr. David Dvorak	Bill and Marge Hannapel	Todd Kingma and Betsy Kingma
Nancy L. Brookins	Kris and Claire Eager	Carole L. Harding	Fred and Pat Kinney
John and Judi Brown	Trey and Becky Eldridge	Pamela Harrington	Jason and Laurie Klein
Cleve and Sue Brown	Ron Elenbaas	Fred and Nan Harrison	Rolf F. and Judith Kletzien
Michael and Sara Brundage	Dennis Elmer	Jeff Price and Sue Harrison	Wes and Susan Kolb
Nick and Jane Bruns	James Elsener	Curt and Beth Hartman	Dave and Kay Koldyke
Laurie Hanson and Tracy Buck	George M. Elsener Family	Henry B. Hawk	Tom Kotarski
Fred and Sharon Buckley	T.P. Emerson	Pete and Jo Hawk	Garry and Claire Krouse
Roger Buddig	Bill and Betsi English	Jim and Marsha Heath	Shirley Kruger
John Budnick	Thomas English	Rick and Shirley Hebert	John and Martha Kuch
Keith Buell	John and Janis Etcorn	James and Patricia Heilenbach	Richard J. Laninga
Randy and Karen Byrd	Gerald and Jane Feldman	Mal and Pat Hickok	Stephanie Larsen
Janet and John Carrig	Carol Fetterolf	George and Arla Hillebrand	Jim and Linda Lass
Dan and Kathy Casey	Allison Field	Janeth Hinchman	Phyllis Lavene
Richard and Joanne Chamberlin	Wendy Field		Camille Lawrence
	Alice Fish		Patricia Lawrence

Patricia Lawrence	Amy and Jeff O'Brien	Jim and Michelle Sahli	Jerry and Margaret Trepanier
Suzanne Stimson Leech	Billy and Amanda Ogden	Shawn Johnson and Jennifer Santos	Steve Allen and Andrea M. Troutman
Wendy and Allen Levy	Tom and Charlene O'Neill	Tom and Judy Schau	Gail Turluck
John and Rita Light	Jerry and Max Orum	Steve and Gina Schau	Roger and Jeanne Turner
Christopher Light	Jerry and Carla Orwin	Dick and Jean Schmitt	Mary L. Tyler
Howard D. Linders	Craig and Sue Osborn	Greg and Charlene Schofield	Bill and Ruth Ann Uggen
Ron and Karen Logan	William and Barbara Parfet	Louis and Margie Schultz	Christopher Uggen
Eric and Charlene Longman	Don and Ann Parfet	Ron and Nancy Schultz	Brad Vandenberg and Amy Upjohn
Joe and Madison Lukeman	Preston and Barbara Parish	Jim and Deb Scott	Tom and Olga Van Dis
Faye Luscombe	Donald and Sue Paulson	Sam and Susan Sefton	Bo and Mel Van Peenan
Judy Maier	Michael and Frances Peikert	Tim and Judy Shank	Richard Van Werden
Chris and Laura Maloney	Dustin Perrin	Tom and Lisa Shannon	Michelle and Peter Van Wormer
Ray and Carolyn Maly	Karol Peterson	Mike and Julie Sharp	Tom Vander Molen
Linda Markham	Stephen E. Pew and Kathleen M. Keelan Pew	T.R. and Kathy Shaw	Jim and Sarah Vandermolten
Joe and Kristine Mauro	Kim Ziel and Robert Phillips	Esther M. Shaw	Edwin Vandersalm
Ed and Nancy McCarty	Laura and Gregg Pierce	Julie Shaw	John and Cathryn VanderSalm
Jim and Mary McCarty	Perry and Jennifer Pinto	Jennalie and Joel Shepherd	Dan and Carol Vogt
Tom and Valli McDougale	Todd and Tami Polmanteer	Shepherd Family, LLC	Jay and Stephanie Walbridge
Russ and Connie McFee	Todd and Tami Polmanteer	Richard and Johanna Shields	Barb Walker
JB and Alba McKay	Martin and Carol Ranly	Linda Shierlaw	Dana Walters
Joni Melges Green	Ann E. Ransford	David Shufelt	Bill and Nancy Weckler
Amy and James Melvin	Alison Thor and Gerald Rapp	Bruce and Kathy Shurtz	Karen and Mark Weishaar
Nick and Julia Miladore	Jack and Gwen Raseman	Robert Simon	David and Lee Weiss
Robert Millard	Ann and Jim Rawsky	Doug and Deidre Smith	James Westcott
Kate Miller	Judah Gesmundo and Paul Raynes	Gregory and Michele Smith	Bob and Lori Wheelright
Kevin and Elizabeth Miller	Robert and Margo Rebar	Drs. Peter C. Smith/Diane M. Czuk Smith	David and Cindy Wiedemer
Kathy Miller	Bob and Bina Reed	Joyce Snow	Brook and Emily Wilke
Sara Miller	Barbara and William Reichard	Carl and Cherie Spinden	Tim and Tonia Williams
Dave Mitchell	Eric and Martha Reid	Edward Sternaman	David P. Wilson
Kay Gross and Gary Mittelbach	John P. Renwick IV and Kelly F. Renwick	Spencer and Carolyn Stiles	Brian and Teri Winne
Ron and Joan Molitor	Carol and Dave Renz	Charles Stoddard	Stephen and Linda Winquist
William and Phoebe Moreo	Dave and Shelly Reynolds	Harry and Tineke Stolt	Jerry Wojtala
Christine L. Mueller	Robert D. and Mary Jo Rial	William D. Johnston and Ronda E. Stryker	Dan Wood
John A. Mulholland	Mark and Marymarie Rice	Carol Tedrow	Drew and Rachel Worgess
Craig and Debra Mumy	Brian and Jackie Rice	Gary and Karen Theisen	Patti Wright
Patrick H. Murphy	William and Nancy Richardson	Ron and Edna Thompson	Doug and Jackie Wunderly
Mike and Susan Murphy	Robert and Mary Ringemann	Bill and Carolyn Ticknor	Monica Yesh
Christine and Stephen Murray	James C Ritz	David and Carol Ticknor	Ron and Sonya Young
Christine and Stephen Murray	Wendy and Doug Robbins	Isobel and Matt Tracy	Harold and Bonnie Zeigler
Markley Noel	Rob and Lori Rowe	Michelle and Chris Tracy	Marsha and Bob Zick
Jim and Kristin Nolin	Bill and Jane Ryan	Elizabeth Travis	
Nancy L. and James D. Nordlie	Brad and Rene Saar		
Kim and Valerie Nuyen			
Robert and Kay O'Boyle			
Sean and Nicol O'Brien			

We thank the 2019 GLQO Corporate Members

Abigail Hayden Interior Design, LLC
Bell Tower Lake House Living, LLC
Boris Realtors
Franklin Beach

Gull Lake Country Club
Gull Lake Marine
Gull Lake Ministries

Hawks Hollow Builders
Mac's Garage, LLC
Michigan Lawn Services
Serafino's

The Gull Lake Quality Organization

P.O. Box 144 / Richland, Michigan / 49083

Website: glqo.net

Contact: info@glqo.net



Upcoming Events

Sunday, June 2, 2019 at 5:30 p.m.

*Welcome to Summer Party
Gull Lake Country Club*

Tuesday, July 16, 2019 at 7:00 p.m.

*GLQO Board Meeting
Gull Lake Ministries*

Tuesday, August 6, 2019 at 6:30 p.m.

*GLQO Annual Meeting
Kellogg Manor House*

Sunday, August 18, 2019 at 3:00 p.m.

*Cereal City Concert Band Lakeside Concert
Kellogg Manor House*

2018-2019 Board of Directors

Vicki Gesmundo Marcinek (20-2)

President

Gary Mittelbach (20-1)

Vice President

Jim Collier (19-2)

Secretary

Don Paulson (20-2)

Treasurer

Bryan Beck (21-1)

John Etcorn (19-1)

Kathy Gallagher (20-2)

Mike Gallagher (20-2)

Tom Gallagher (20-1)

Pete Hawk (19-2)

Joe Lukeman (20-1)

Steve Keith (20-1)

Robert Phillips (19-1)

Gregg Pierce (20-1)

Linda Shierlaw (19-1)

Brook Wilke (20-1)

*GLQO by-laws allow volunteers to serve as directors for two consecutive three-year terms. After each Director's name are two numbers: the **year** their current term expires, and the **number** of the current term.*

We welcome you to volunteer for committee work (of your choice) and to participate in our board meetings.

The Gull Lake Watershed includes Gull Lake, Little Long Lake, Grassy Lake, Little Gull Lake, Miller Lake, Bullhead Lake, Duck Lake, Backus Lake, Dake Lake, Elliston Lake, Mud Lake, Wintergreen Lake, and Prairieville Creek.