# The Gravel Laker

Volume XXV Number 1

www.gravellake.org

Spring, 2013



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# **President's Corner**

Hope for rain! I know that sounds counter-intuitive to many of us "weekend warriors" who like it hot and sunny on the relatively few days we spend at the lake. Nevertheless, Michigan and, in particular Lake Michigan, is experiencing record low lake levels. Why does this matter to Gravel Lake? More or less, all lakes in our area trend with the levels on Lake Michigan. For an inland lake like ours, lower water levels mean that sunlight can penetrate into deeper areas of the lake that do not traditionally support much weed growth. As the water level goes down, weed proliferation will almost certainly increase. That said, we're on schedule for a whole lake treatment this year (using Sonar). As you read this, Professional Lake Management will likely have already applied the treatment that will provide reliable control for this year and years to come. Due to the success of our weed control program, we have not needed a whole lake treatment in several years. (This is great for our SAD budget and is ultimately what allowed us to reduce the yearly assessment). If you have questions, comments, or concerns about our weed treatment program, please contact me.

It's time for a picnic! Based on your feedback, the Gravel Lake Association is organizing a picnic for you and your family. The intent of this event is to provide a family-friendly, on-lake event for you to meet and greet old and new neighbors. We will host our first semi-annual membership meeting prior to the picnic at 11AM and go right into food and fun following the meeting at about 12PM. We will serve hot dogs, hamburgers, chips, and drinks. There will be activities for both kids and adults. All activities are free to everyone! Each paid membership is eligible for up to five (5) complimentary food tickets. You can purchase additional food tickets for \$1 each. Both the membership meeting AND the picnic will be at my lakehouse at 32313 Chamberlin Drive. If you aren't sure where that is, just look for the big tent! Boat and car parking is very limited. The meeting and picnic will go on rain or shine. In order to help us make sure we have enough food, please RSVP to Janice Pinkos at fampinkos@aol.com by Saturday, June 22nd. See page 19 of this issue for more info. See you at the meeting and/or picnic!

Craig DeSimone, GLA President

#### **BOARD/MEMBERSHIP MEETINGS:**

- Saturday, June 29th at 11am Membership Meeting & Picnic
  - Location 32313 Chamberlin Drive (look for the big tent)
  - Trustee elections
  - Dues collection
  - 50-50 raffle
  - Buy Gravel Lake paraphernalia shirts, coozies, towels, etc.
- Saturday, July 20th Board of Trustees meeting at 10am (Porter Township Hall)
- · Saturday, August 10th at 10am Membership Meeting
  - Location Raab's pole barn on Gebhard Beach
  - Officer elections
  - 50-50 raffle
  - Buy Gravel Lake paraphernalia
- Saturday, September 28 Board of Trustees meeting at 10am (Porter Township Hall)

#### FOURTH OF JULY ACTIVITIES: Friday 7/5-Sunday 7/7

- Boat Parade Friday, July 5th at 6PM
  - Theme: Fourth of July
  - Register via email with Carlie Stogis (cstogis@gmail.com ) by Friday, July 5th
  - Include FAMILY NAME, DESCRIPTION OF BOAT/THEME, and BEACH
  - Prizes!
- · Kids' Games Saturday, July 6th at 12PM Willow Beach Resort
  - Ages 1-12
  - Prizes for all participants
- Paddle Boat Regatta Saturday, July 6th at 6PM
  - Location Channel
  - Register at 5:45PM at the Public Access
  - All participants MUST have certified flotation devices
  - Divisions:
  - 1-person kayak
  - 2-person kayak
  - Youth paddle boat (both racers under 12)
  - Adult paddle boat
  - Paddleboard

# Gravel Lake Association 2013 Calendar - continued

- Fun Run Sunday, July 7th at 10AM Willow Beach Resort
  - \$4 per person (fees pay for events and any proceeds to go the GLA)
  - All ages welcome!
  - Prizes and refreshments

## **Important Dates**

Date	Event
6/29/13	Membership Meeting, GLA First Annual Picnic
	(Please note that the 6/29 Membership Meeting will be held at 32313 Chamberlin Drive)
7/4/13	Fourth of July
7/5-7/7	Gravel Lake Fourth of July activities
7/5/13	Boat parade
7/6/13	Kids' Games, Regatta
7/7/13	Fun Run
7/20/13	BOT meeting
8/10/13	Membership Meeting @ Raab's Pole Barn
9/14/13	MLSA Region 3 Fall membership meeting
9/28/13	BOT meeting
9/6-9/8	Paw Paw Wine & Harvest Festival



## Lake Bathymetry and Topography

Mapping the physical characteristics of Gravel Lake and its surroundings can inform a deeper understanding of the lake in many ways. For instance, looking at the topography of the area surrounding Gravel Lake, we can see a series of hills and depressions (Figure 1). This is a geomorphological indicator of glacial activity. Large chunks of ice during the last ice age deposited in this region, displacing earth. This activity left large depressions as the ice melted, becoming swamps and lakes. These lakes are typically relatively shallow; accordingly, Gravel Lake reaches a relatively shallow maximum depth of 51' (Figure 2). From this simple data of its surrounding topography, its size, and some basic bathymetric data, one can come to some broad-reaching conclusions about the lake's origins, lifecycle, and ecology.

Water surface area, in combination with the lake's depth determines the effects of wind on the lake's ecosystem. Larger surfaces mean more fetch area for waves, and the size of waves determines the potential for mixing of deep water in terms of oxygenation, nutrient, and thermal distribution. The slope of the lake's bed will determine the change in surface area when lake levels rise or fall. These slope and wave size factors will also determine the effects of erosion on the shoreline. The amount of shoreline relative to the surface area (i.e. the regularity of the shoreline) will determine both the potential for human development and thus impact on the ecosystem, and also the potential for undeveloped shoreline to provide habitat and biodiversity.

The lake's bathymetric conditions may also provide clues to its relationship with groundwater. This relationship is usually very complex, and not directly observable. Usually certain parts of the bed seep water into the groundwater table, while others receive seepage from groundwater. These exchanges are often obstructed by impermeable or semi-permeable organic sediment. Thus, an important part of a lake's bathymetric data is the composition of its sediments. This data, in combination with topographic, surface water flow, rainfall and hydrogeological data can help describe the flow between the lake and groundwater.

Bathymetric maps will also provide a basis for understanding the profundal and littoral habitats of the lake. Profundal areas are waters too deep for rooted plants to grow, and thus provide substantially different habitat than littoral areas, in which rooted plants proliferate. The presence of these plant beds will also act to suppress wave patterns, and thus erosion and the suspension of fine particles, which results in clearer water. Thus, a lake's bathymetric condition is a good baseline indicator of habitat distribution for plants and animals, as well as general water quality.

Simple data, like topography and bathymetry can provide the basis for a larger framework for understanding lake ecology. It can contribute to basic understanding of plant and animal life, including fisheries. The data will also shed light on the lake's water cycle, its water quality, its origins, and its future.

Marc Mascarello, Contibuting writer

# Lake Bathymetry and Topography - continued



# Lake Bathymetry and Topography - continued



Gravel Lake Association -- P.O. Box 531, Lawton, MI 49065 --

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# All About Zebra Mussels



If you've ever picked up something from the bottom of Gravel Lake, it is very likely that you have encountered a zebra mussel. These tiny stripedshell mollusks adhere themselves to a myriad of underwater items including other living beings. Most often, zebra mussels can be found attached to rocks, sand, clam shells, or even on manmade items like piers, lifts, or boats. Often times, zebra mussels can layer themselves so thickly on top of each other that they end up killing whatever living thing they reside on. You may have noticed that in the past decade or so the clam population of Gravel Lake has drastically decreased. It is very likely that the zebra mussel played a part in this decline.

So what exactly are these tiny fingernail-sized mollusks? Zebra mussels are filter-feeding organisms that use a siphon-like mechanism to pull bacteria, feces, and other food particles from the water which they use as their nutrition. Each tiny mussel can filter up to 1 liter of water per day!

The zebra mussel uses byssal threads, a cluster of fibers from their shell, to attach to hard surfaces. Zebra mussels start to reproduce around their second year of life. Zebra mussels start to reproduce in the second year of their 4-5 year life span. The female will lay somewhere between 100,000 and 500,000 eggs! However, only a fraction of these eggs-- about 2%--will reach a reproductive age themselves. This may seem like a small percentage, but zebra mussels can take over an ecosystem quite quickly.

Zebra mussels are slowly but surely making their way through more and more lakes in the United States. These tiny creatures are actually native to Russia, and are thought to have made their way to North America in the mid-1980s. It is hypothesized that large ships from Russia emptied their ballasts full of water into Lake St. Clair (the lake that sits between Michigan and Ontario, Canada), thus unleashing the zebra mussels on a new environment. And since then, they have been making their way into lakes around North America.

Even though they are known as an invasive species, zebra mussels are not all bad. They help improve water quality and clarity by pulling bacteria from the water. They have been known to increase water clarity from several inches, to several feet. However, on another negative note, this "cleaning" of the water also rids the environment of algae, which is food for other creatures and organisms living in our lakes. This can greatly impact the circle of life in the underwater ecological system. Everything from clams to sport fish have been affected by the zebra mussel.

So how do we help stop the spread of these invasive little creatures? One option is to heat or cool water, as these mussels do not survive outside the realm of 32-96 degrees Fahrenheit. This option may sound quite absurd for such a large body of water as our Gravel Lake, but a harsh winter may play in our favor. Other options include, UV light, acoustic vibration, electrical currents, chemical molluscicides (such as chlorine), or even manual removal. Some of these methods will also affect other organisms, so living with the zebra mussel may be the most logical option.

Tricia Barker, Contributing writer

Zebra Mussel Photo Credit: U.S. Geological Survey - Department of the Interior/USGS

# **Farewell to GL friends**

#### Charles P. VanBelleghem

Charles P. VanBelleghem passed away Wednesday, January 23, 2013. He was born August 29, 1944 in South Bend, IN. After teaching English and Journalism at Bremen High School, he married Elaine Bliss and moved to Chicago. They relocated to Gravel Lake in Lawton, MI in 1973. He worked for American Motors in South Bend, IN and General Motors, Hydramatic, and American Axle in Three Rivers, MI. After retirement, he joined the Red Cross Disaster Team, worked at a Katrina volunteer camp in Lizanna, MS, and was active in his church, St. Margaret Mary in Marcellus, MI. Charles loved traveling and visited 47 states, Canada, Mexico, and Europe. He and his wife, Elaine loved traveling together in their 5th Wheel, following birding trails. He also loved Gravel Lake and was often seen sailing his Hobie Cat on the lake. He enjoyed beach parties and activities with his lake friends and neighbors. Surviving are his wife, daughter Dana, sister, Renee (Jensen), and brother, Gary. Charles was a loving husband, father, and brother. He will be greatly missed by family and friends.

#### Jack Essling

Jack Essling, 69, a long-time Gravel Laker passed away March 24, 2013, after a courageous four-year battle with cancer. For close to 30 years Jack and his wife Mary owned a yellow cottage on Gravel Lake. Along with their two children, Chris and Andrea, they enjoyed spending time at the lake with friends and family. In the late 1980s, Jack bought property behind his cottage and built the now famous pole barn and volleyball court where the 4th of July volleyball tournaments were held. Meeting his friends on Friday nights at Big T's (when it was just 2 rooms) guickly became a tradition. Jack and Heinz Gutmann were some of the first beer club members. Look for his name on the plaque next time you go and have a drink in his honor. Jack's passions included playing softball and tennis, the Cubs. da Bears. Notre Dame football. Indiana basketball, the Catholic Church, traveling the country to state capitals in the RV, and getting together with his friends. A memorial mass will be held on Saturday, July 6, 2013 at 11:00 a.m. EST at St. John Vianney Catholic Church, 4101 Clyde Park SW (131N and 44th Street), Wyoming, MI 49509.



, Lawton, MI 49065 --

### Beginning Balance as of 11/1/12 \$28,257.70

#### Deposits

Total Deposits	\$ 793.38
2013 Membership Dues - 4	\$ 166.00
April Interest	\$ 1.38
2013 Membership Dues	\$ 313.00
& \$25.00 Auction	\$ 168.00*
2012 Membership Dues - 3	
2012 Membership Dues - 3	\$ 145.00*



#### Expenses

Superior Imaging The Canopeum -		838.65*
Deposit for Annual Meeting Picnic Van Buren County Land Services -	\$	100.65*
Info for G.L. Directory	\$	70.00
The Michigan Riparian Michigan Lakes and	\$	600.00
Stream Membership Dues	\$	180.00
Michigan Waterfront Alliance	\$	100.00
Total Expenses	\$	1,888.65
Checkbook Balance as of 4/18/13	\$2	27,162.43
Other Assets:		
Certificate of Deposit		
Certificate of Deposit - Maturity Date 6/12/13	\$	5,200.65
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Certificate of Deposit - Maturity Date 6/12/13 Certificate of Deposit - Maturity Date 6/12/13 Certificate of Deposit	\$	5,200.65

\* Deposits & Expenses from 2012



Gravel Lake Association

-- P.O. Box 531. Lawton. MI 49065 --

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#### Ingredients:

1 cup olive oil ¼ cup chopped fresh parsley ½ lemon, juiced 2T hot pepper sauce 3 cloves garlic, minced 1T tomato paste 2t dried oregano 1t salt 1t fresh ground black pepper 2 lbs. large shrimp, peeled and deveined with tails attached skewers



#### Directions:

1. In a mixing bowl, mix together olive oil, parsley, hot sauce, garlic, tomato paste, oregano, salt, and black pepper. Reserve a small amount for basting later. Pour remaining marinade into a large resealable plastic bag with shrimp. Seal and marinate in the refrigerator for 2 hours. For the last 30 minutes of marinating, add the lemon juice and stir.

2. Preheat grill for medium-low heat. Thread shrimp onto skewers, piercing once near the tail and once near the head. Discard marinade.

3. Lightly oil grill grate. Cook shrimp for 5 minutes per side, or until opaque, basting frequently with reserved marinade.

4. Sprinkle with fresh lemon juice. Serve as a side dish, or over pasta. Enjoy!

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America bald eagle beaver Blue Boat parade canoe cottage family fishing flag Fourth of July Friends Fun Run Gravel Lake kayak kids Kids Games lemonade long weekend Memorial Day memories paddle boat pontoon red regatta sand castle skiing sparklers sunscreen swimsuit tubing wakeboard white

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# **GRAVEL LAKE MERCHANDISE**

T-shirts, hats, and towels for sale. T-shirts: \$15 (\$12 for kids) Hats: \$10 Towels: \$25 Limited sizes and colors available.

Contact Suzanne Reed at 269-808-0327 or Carlie Stogis 630-461-6200 to purchase items



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#### Sources

ALL ABOUT ZEBRA MUSSELS http://www.dnr.state.mn.us/invasives/aquaticanimals/zebramussel/index.html http://fl.biology.usgs.gov/Nonindigenous\_Species/Zebra\_mussel\_FAQs/zebra\_mussel\_faqs.html http://www.in.gov/dnr/files/ZEBRA-MUSSEL.pdf http://nationalatlas.gov/articles/biology/a\_zm.html http://www.protectyourwaters.net/hitchhikers/mollusks\_zebra\_mussel.php#why

#### BATHYMETRY

Richard P. O'Neal and Gregory J. Soulliere. "Conservation Guidelines for Michigan Lakes and Associated Natural Resources", Michigan Department of Natural Resources Fisheries Division, Special Report 38, March 2006. http://www.michigandnr.com/PUBLICATIONS/PDFS/ifr/ifrlibra/special/reports/SR38.pdf

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Gravel Lake Association					
Membership Form: January 2013 - December 2013					
Fill out and mail to: Gravel Lake Association, P.O. Box 531, Lawton, MI 49065					
This document is also available on the website @ www.gravellake.org.					
Please print clearly.					
Member name(s):					
Beach: Lake Phone:					
Gravel Lake Address:	Lawton, MI 49	065			
Home Address:					
City: State:	Zip:				
Home Phone:					
E-mail address:					
Please print clearly. Mail Check or Money Order payable to Gravel Lake Association					
Membership dues for 2013	\$35.	00			
Optional Riparian magazine	\$12.	00			
Additional donation					
Fish Stocking Donation\$10.00\$15.00\$25.00orOther					
Total Enclosed	\$				
Please indicate where your Riparian should be sent (circle one):	home	lake			



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# Classified ads — Free for paid members!

A reminder to all dues-paying members that classified ads on the website are a free benefit of your membership. This includes advertising your personal business. Links to websites or color advertising can be discussed as well, but may entail a fee. Questions and ads can be emailed to Jim McGreal at jim@jmcstudios.com.



#### Gravel Lake Assoc. Annual Meeting & Picnic

Come One, Come All... Saturday, June 29<sup>th</sup>, 2013 – Rain or Shine Meeting: 11:00 a.m. to 12:00 p.m. Picnic: 12:00 p.m. to 3:00 p.m. 32313 Chamberlin Dr. Look for the Big Tent!

Please join us for what we hope will become an annual picnic for the residents of Gravel Lake to socialize with old neighbors and meet new neighbors. We invite you to come for the meeting, or if you can't make the meeting, just come for the picnic!

#### The Details:

- Paid 2012 or 2013 Gravel Lake Association membership will allow up to five (5) members of each household to eat free of charge.
- Additional food tickets (along with non-member food tickets) can be purchased for \$1.00 by visiting the check-in table (where membership dues will also be collected).
- Tickets are for <u>food only</u>; all <u>festivities are FREE</u>!!
- Food: jumbo hot dog or hamburger, chips, and a drink.
- Festivities: music, games, adult and kids' bean bag tournaments, balloon toss, inflatable slide races, and a jumpy house.
- To ensure enough food, RSVP the number of attendees who will be eating to <u>fampinkos@aol.com</u> or via the invoice by June 22<sup>nd</sup>.
- Limited boat and street parking will be available.



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