



# Lake Shore Breeze

Fall, 2009

Fremont Lake Association

## AWRI/GVSU PROJECT UPDATE ON FREMONT LAKE STUDY

Nichol DeMol – Project Manager –  
AWRI/GVSU

It has been a busy field season on Fremont Lake. Since April, board members from the Fremont Lake Association and the Annis Water Resources Institute (AWRI) of Grand Valley State University have been collecting samples on the lake and at the mouth of each of the tributaries that flow to the lake. The goal of this monitoring is to conduct a general assessment of water quality conditions in Fremont Lake and its connecting waterways.

Of specific concern are the nutrients in the lake and finding out where they are coming from. The lake and tributaries were assessed for levels of phosphorus and nitrogen. Nutrients can be considered as pollutants when their concentrations are sufficient to allow excessive growth of aquatic plants and algae. Blooms of algae resulting from nutrient enrichment eventually die and decompose, removing oxygen from the water and potentially leading to levels of dissolved oxygen that are insufficient to sustain normal aquatic life. In addition, Chlorophyll *a* and phytoplankton samples were collected at the lake sites. Chlorophyll *a* is commonly used to measure water quality. Low levels suggest good conditions, while long-term persistence of elevated levels can indicate poor conditions. Phytoplankton are mainly microscopic free floating or suspended algae. By looking at this community, we can get a better idea of the quality of the lake.

We are now in the process of evaluating this monitoring data and determining areas of concern. These results will be distributed in February 2010. To distribute this information, AWRI will create a brochure for watershed stakeholders and hold a one-day workshop for students in the Fremont schools. A final report will be generated for this project that will provide recommendations about strategies, which should be considered in future management of the lake and its tributaries.

*(Editor's Note - The Spring, 2010 Newsletter will include the AWRI/GVSU Analysis & Recommendations. Nichol will have a presentation at the Annual Meeting)*



## **MSU/DEQ SEDIMENT SURVEY ON 6/18/09**

### **Fremont Lake Sediment Trends: What mud can tell you about the health of a lake.**

**Ryan Vannier - Michigan State Univ., Department of Geological Sciences**

Analysis of the mud found at the bottom of every lake can tell a very interesting story about the lake's environmental history. This mud, commonly referred to as lake sediment, contains a number of contaminants like mercury, lead, arsenic, cadmium, zinc and persistent organic pollutants (PCBs, pesticides, etc). Because these contaminants react very readily to sediment particles they usually stay in the sediment and do not move into the water. Over time, these sediments and their associated contaminants accumulate on the lake bottom and act as a kind of a chemical tape recorder of toxic chemicals and other significant environmental changes in the watershed. The concern is that any possible contamination in these sediments can directly impact bottom-dwelling organisms and represent a continuing source of toxic substances in aquatic environments that may impact wildlife and humans through food or water consumption.

At Michigan State University, in conjunction with the Department of Environmental Quality, we collect these sediments in long tubes, called sediment cores. Four sediment cores were collected from Fremont Lake on June 18, 2009. Sediment cores were collected from the deepest portion of Fremont lake (measured to be 87 feet).

Using this information allows us to answer questions like:

- What chemicals are we exposed to in Fremont Lake?
- What are the current trends of contaminants (increasing or decreasing)?
- How do contaminants enter the lake (from the atmosphere or the watershed)?
- What impacts have humans had on the lake?

It is important to understand that Fremont Lake is not being subject to this kind of sediment sampling because of any prior knowledge of a particular environmental problem. To date, many lakes in Michigan have been sampled as part of the projects history which began with a report prepared by the Michigan Department of Environmental Quality in January of 1997 entitled, "A Strategic Environmental Quality Monitoring Program for Michigan's Surface Waters". This report set up a framework for statewide surface water quality monitoring which this sampling is consistent with. A key goal of is to measure trends in the quality of Michigan's surface waters, and one activity designed to examine these trends is the collection and analysis of high-quality sediment cores. Sediment core collection began in 1999 and has continued to the present with usually 5 to 7 lakes being sampled a year (some are repeated). To date, nearly 50 lakes have been sampled in Michigan as part of this project. Fremont Lake happened to be the first this year. Other lakes included in our 2009 sampling season were Long (Ionia), Higgins (Roscommon), Crystal (Benzie), Black (Cheboygan/Presque Isle), and Clear Lake (Montmorency). Previous reports showing the results of lake sediment analysis in other lakes, as well as, an in-depth description of the project details can be found with this link: [http://www.michigan.gov/deq/0,1607,7-135-3313\\_3686\\_3728-32365--,00.html](http://www.michigan.gov/deq/0,1607,7-135-3313_3686_3728-32365--,00.html).

Results from Fremont Lake will be made available when the 2009-2010 Sediment Chemistry Trend Report is completed and uploaded to the DEQ website. A presentation will be given to the Fremont Lake Association to discuss results likely at the Annual Meeting.

## **LAKE IMPROVEMENT CONFERENCE**

**Sponsored by North American Lake Management Society (NALMS)**

Norm Knorr and Dean Morehouse attended the above conference held on October 16 at the Kettunen Center in Tustin, Michigan. Concurrent sessions were held on Lakes and Lake Management, Cooperative Lake Management, Milfoil Weevils, Aquatic Plants and Exotic Species, Special Assessment Districts and other topics.

According to Jennifer Jermalowicz-Jones of Lakeshore Environmental, Inc., there are a number of invasive exotic species in inland lakes. She defined "exotic" as those species that are not native to a particular geographic area. Examples would be Eurasian Watermilfoil (threat to native plants), Hybrid Milfoil (cross between Eurasian Watermilfoil and Native Watermilfoil), Curly Leaf Pondweed, Starry Stonywort, Hydilla, Giant Common Reed and others. If the exotic species are not controlled, they will cause considerable damage to the Native Species and therefore limit their growth.

She outlined the management techniques. 1. One solution of course is to do nothing. 2. Chemical herbicides and algaecides are used the most. 3. Mechanical harvesting. 4. Use of the Milfoil Weevil. The Milfoil Weevil may be a new solution to some. It is a very small bug that loves to eat Eurasia Milfoil. It is an expensive way to go. One bug costs about \$1.25 and it takes thousands to accomplish the task.

One speaker pointed out that whatever course the property owners on a lake chose to take they should be reminded of conclusions made by Aldo Leopold over seventy years ago with his "Land Ethic". He said more obligation comes to the private landowner and that is who must step up to solve a land problem. Aristotle also stated, if you own it you take care of it; you work hard to make it the best it can be; and you are passionate about it. If you don't own it the opposite will be true. Together WE "own" Fremont Lake and together we can accomplish a great deal to solve its problems.

## FREMONT LAKE: WORKING TOGETHER TO ENSURE A COMMUNITY TREASURE

*(Editor's note – This article from "City Beat" was submitted by Bryan Gruesbeck, City Manager)*

People enjoy spending time at Fremont Lake. Whether fishing, water skiing, enjoying ice cream at the Lakeside Swirl or relaxing by a fire at the campground, everyone agrees that Fremont Lake is an important community asset.

Recently, community leaders have taken steps to protect the lake. In late 2008, the Fremont Lake Association, Fremont Area Community Foundation, City of Fremont and Grand Valley State University's Annis Water Resource Institute began a study of the water quality at Fremont Lake and its surrounding tributaries. Results of the study are expected by February of 2010 and will be used to recommend future actions to keep the lake clean and safe.

In late July of 2009, a number of lakeside residents contracted with the firm of Professional Lake Management (PLM) from Caledonia, Michigan, to chemically treat algae and exotic plant species like "Eurasian water milfoil". Many lakes in Michigan have employed PLM with much success. The results of PLM's treatment will be monitored and also used to help drive future decision making.

There is more work to be done. The City will look for additional ways to improve the waterfront and campground. Citizens who have questions or are looking for ways to get involved with Fremont Lake improvement efforts are encouraged to contact the Fremont Lake Association or the City of Fremont.

*(Editor's note: As mentioned in the "City Beat" article, several Lake residents contracted with PLM to spray for weeds & algae. Recently, PLM mailed information to property owners information about the weed survey they conducted & their services. Their information also included 11 suggestions designed for individual property owners to directly improve Fremont Lake & their beach front. It pointed out that everyone's action play a role in the health of our Lake.)*

In addition, the PLM Weed Survey & Analysis was utilized by AWRI/GVSU as part of their project allowing them to more effectively allocate the projects resources.

The Lake Association Board does not take a position on spraying or will endorse a specific contractor. However, for property owners who need weed &/or algae control, the service provided by a Licensed Contractor ensures that DEQ approved chemicals will be applied at the correct strength & at the proper time to protect the fishery. This approach has to be preferred over what has been referred to as "Midnight Chemists" dumping a variety of chemicals at random strengths & times of the year. Besides the potential damage to the lake & fisheries, the use of chemicals without a DEQ Permit is a crime & subject to a heavy fine.

## INDEPENDENCE DAY CELEBRATION



We're getting bigger & better at celebrating Independence Day with spectacular Fireworks, Colorful Boat Decorations with Enthusiastic Crews, & Patriotic Parties. Special Thanks are in order to the "Weather Scheduling Committee" of the Board for the great weather. The "Community Fireworks" that's been organized by Eric Hanson & Scott Crandall were again spectacular & appreciated. These "Community Fireworks" are financed by donations from lake residents, community citizens & a \$500

Association contribution. We're encouraged

to send our donations for the 2010 Fireworks early to enable Eric & Scott to utilize "Early Bird" pricing so next year's celebration can be more spectacular. Please send your donation to Fremont Fireworks Assoc. LLC, c/o Crandell Funeral Home, Box 148, Fremont.

The entire lake also appreciated & enjoyed several spectacular Fireworks from Lake residents around the Lake that made this year's celebration the best we've had.



## BOAT PARADE

The theme of our 2<sup>nd</sup> Annual Boat Parade, “Honor the Flag” resulted in an increase of participants to 16 family entries. The enthusiastic crews presented Patriotic & creative decorations to begin this year’s celebration of Independence Day. All entries were to receive the very prestigious “Participant” Ribbon to be placed an appropriate place of honor at their homes. However, the judges were so excited by the quality of the entries that they did not award the “Participant” Ribbon to all of the entries. Families that were denied this valued award can pick up their prize at the Annual Meeting.

The Morehouse family depiction of Betsy Ross with 5 versions of the flag was awarded 1<sup>st</sup> Place. Other awards recognized the Rodgers families display of an authentic WWI flag, the Fazer family honoring the Revolutionary flag in era attire, the Saia family honored Betsy Ross, the VanderKolk family display of Hawaii being the 50<sup>th</sup> state & the Knorr family displayed the largest flag. Thanks & congratulations to all the families who made this a Patriotic & memorable event.

“Pirates of the Caribbean” & the movie “2010” are themes being considered for next year. The kids & grandkids will relate to the “Pirates” while some of us have forgotten what the movie was about & for sure, the younger set haven’t seen it. Next year’s theme will be announced in our Spring 2010 Newsletter. Any theme suggestions??



## 2010 MEMBERSHIP DRIVE

The Fremont Lake Association reorganized a few years ago & has developed some organizational policies, increased our communication efforts, coordinated several activities & in 2009 arranged for the completion of the AWRI/GVSU Project to improve the quality of the Lake. We have come to identify that the main purpose of a Lake Association is to enable Members to more effectively manage a multi-million dollar asset that we all currently share & enjoy for the Common Good as well as improve our personal Return on Investment for the future.

As a result of these accomplishments, our membership role has increased to 80 Members & the obvious purpose of this section is to promote our 2010 Membership Drive. While our dues are voluntary, your involvement is needed to enable the Association to continue the effort to improve Fremont Lake. Dues are \$25.00 per calendar year. Please complete the enclosed Membership Form & return to Post Office Box 53.

The 2010 Membership Drive is headed up by Stan DeKuiper. Stan has updated our Membership List with the assistance of Drain Commissioner, Pat Baker, providing the Drain Level Assessment Roll. As the saying goes – “If you haven’t received this Newsletter, contact us ASAP”. Better yet, let us know of any additions / corrections of your neighbors or others who would be interested in joining us in this distinguished organization.

Eric Heger is working on developing an Association Website to more effectively communicate Fremont Lake information on the Internet. The Fremont High School Computer Class is planning to help us develop a Website as part of student involvement in their Community Service Program. After it’s developed, we’ll be asking for a volunteer to maintain the Website. Plans are to have the Website developed by April. The expected name – [www.fremontlakemi.com](http://www.fremontlakemi.com). The Township & City have indicated they will provide a link to our site. In addition, copies of our communications will be available on a file at the Fremont Library.



## 2<sup>ND</sup> ANNUAL CHRIS CARIS MEMORIAL - FISHING FOR KIDS

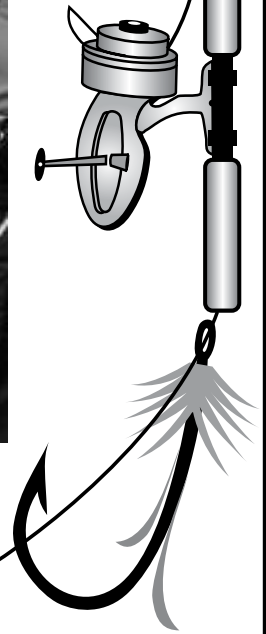
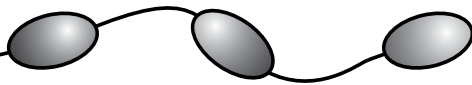
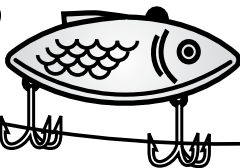
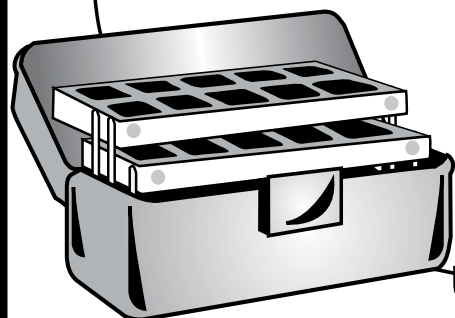
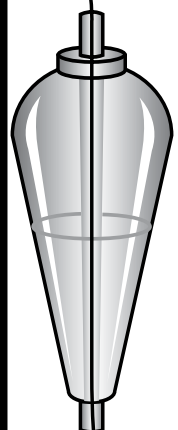
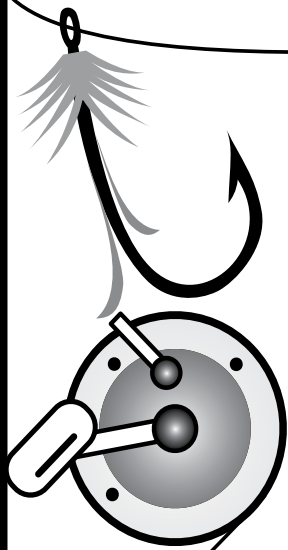
24 boys and girls plus their mentors attended the July 7th event. The Setup Team arrived at 6am and other Teams began their responsibilities. The children were given an event shirt and a cap then they proceeded past Chris' information tables to have their pictures taken with their mentor. Next stop was to have sunscreen applied by Jean Morehouse. By 9am the group gathered in the pavilion to enjoy healthy snacks and to meet Ted and Jeannie. They were welcomed and learned why they were invited to participate. Within 1/2 hr, the groups were subdivided and led to the 6 educational stations.

Following learning about the various aspects of fishing, the kids and mentors were ready to practice what they learned. By color coded groups they picked up their numbered bucket, put on their brightly colored life vests and walked to their assigned boat. 8 boaters took the groups out on the lake for 1½ hrs. Lunch was ready for the happy fisherpersons and their mentors.

The closing ceremony was the moment when all the boys and girls were proclaimed, "Winners". They received a medal placed around their necks and had their pictures taken. Also, they were given a big canvas bag filled with a special book, posters, lures, hooks, free ice cream cone certificates and wooden coins to redeem for cones, and their very own rod and reel.

The event concluded at 1:30 pm. All the volunteers (even those whose assignment were finished) stayed all day. A good time was had by all. The 3rd Annual Chris Caris Memorial-Fishing For Kids is planned for July 6, 2010.

Ted and Jeannie want to thank EVERYONE for volunteering and supporting this event for children. We feel so blessed to live in this community!!! We look forward to seeing you, next year.



**Fremont Lake Association**

c/o Sheridan Township Hall

PO Box 53

Fremont, MI 49412

**Annual Meeting Monday, May 3, 2010**

**Board of Directors**

Dean Morehouse – Chair

Mike Oosterhouse – Treasurer

Norm Knorr – Secretary / Editor

Tom Moore

Darrel Crawford

Bruce Essebaggers

Stan DeKuiper

Kurt Lowdermilk

Eric Heger

**Return Service Requested**

**From Dean's Dock**

As the recently elected President of the Fremont Lake Association, it reminds me of a quote-“I must hurry to catch up for I am the leader”. The quote sums up the activity and commitment of all the Board Members. Each have taken on tasks such as reviewing the Boards by-laws, membership, budget, water quality studies, communication and the boat parade and fireworks. Each is important to all of us who have a “stake in the lake”.

The articles in this newsletter communicate much of this activity and the efforts to make Fremont Lake the best it can be. There are many behind the scene contributions also. The organization of the water safety meeting and the Chris Caris fishing event are two examples of many.

Our goal as a Board is to work as efficiently and effectively as possible for all who use Fremont Lake. Working together we can have a great Fremont Lake experience. Please join us by becoming a 2010 member of the FLA. (or continuing your membership).

Thank you for anything you have done to make Fremont Lake better.