

Friends of Silver Lake

Annual Meeting Minutes

June 7, 2014

9:00AM

Revised and Corrected 7/3/2014

President Ed DeJong called the meeting to order at 9:00AM. He welcomed everyone to the meeting and introduced the board and the guest speakers.

USGS/GVSU Silver Lake Diagnostic Evaluation

Angela Brennan and Joe Duris from the USGS shared the progress they have been making on the Silver Lake Nutrient Project. She reviewed that the Silver Lake Improvement Board determined that a comprehensive evaluation was needed to determine why Silver Lake has experienced accelerated Eutrophication of the lake. The objective of the USGS has been to characterize the inputs and outputs to the lake, develop a nutrient budget, and identify the nutrients loading the lake.

They have been working on 8 tasks.

1. Groundwater Reconnaissance. Temporary wells were installed to measure water chemistry and nutrients. Results identified spots for 4 long-term wells.
2. Septic and Groundwater Influence. Wells were put in in the N, S, E and W to measure groundwater influence. They also began measuring 10 private wells for groundwater levels and observe groundwater flow by installing seepage meters.
3. Monitoring Surface Water Flow and Water Budget Data Analysis. A stream gauge was put in at Hunter Creek. A staff gauge was put in at the Silver Lake Channel Dam. Atmospheric data collection began. A water budget was established.
4. Water Chemistry. Samples are being taken 4 times a year for 2 years plus 2-3 storm events per year. The 5 monitoring locations around the lake have been reduced to 3 at the South, middle and

- North as well as Hunters Creek, the tributary at the State Park, North Shore Drive and Silver Creek. Ground water chemistry and Drainage tiles are being monitored. A bathtub model has been created. This model will use the data collected to predict how the lake would react to % increases and reductions in nutrients from identified sources.
5. Identify other potential nutrient sources or conditions. Mark DeMatt is taking data from a station in his yard that monitors rain water. This also includes lawn run-off and waterfowl.
 - 6-7. See Al Steinman below
 8. Data Interpretation and Reporting. Results will be published by September 2015.

Angela showed us the website that is available for our use and described how to use it.

<http://mi.water.usgs.gov/projects/silverlake/> If you click on the icons all the data for that icon will pop up for you to see. Another link will graph the information. A supplemental page gives an overview of inland lakes and the water quality.

Joe explained that at the stream sites the gauge allows us to measure flow, which is used to calculate load [flow x concentration]. At the other sites flow rate needs to be determined and added to the data at the location in order to determine the load. The website will show the concentrations and load where available.

Joe explained the variations between a high and low flow condition. All this information is available on the USGS site.

It is important to look at loads because we have more nutrients coming in to the lake than going out for both nitrogen and phosphorus. The USGS will build a bathtub model to show what levels the lake is at currently and then they can open and close “faucets” to see what would happen if different actions were taken. We will then be able to see what would benefit the lake the most.

In 2015 the stream gauges and other equipment will be decommissioned and models for scenario testing will be built. A

report will be written and published and a final presentation will be given to the Silver Lake Improvement Board.

If you have any questions you can direct them to Angela Brennan at 517-887-8905. The website is <http://mi.water.usgs.gov/projects/silverlake/> . You can also find all of the project reports on the Friends of Silver Lake web site: www.FriendsOfSilverLake.org

Al Steinman from GVSU/AWRI spoke about task 6 and 7.

6. Identifying Nutrients. Al spoke about controlling algae blooms. GVSU has been taking algae from the middle of the lake and incubating them in plastic containers under 4 different treatments: nitrogen added, phosphorus added, both nitrogen and phosphorus added; and control. After 4 days, the algae are collected and measured for growth and toxin production. The largest algal growth response in 2013 was to the combined addition of nitrogen and phosphorus, suggesting that we need to control both to solve the problem. They showed that the algal toxin levels were well below the levels identified by the World Health Organization as problematic.
7. Internal Phosphorus Loading – Determine flux of P and N from sediment. Testing has been done to determine if the phosphorus in the water is staying in the sediments at the bottom of the lake or if it is entering into the water column. If it is a major source, possible solutions for this problem would be to add alum or aerate the lake. Lab incubations indicated that the amount of P released by the sediments was very low, although N release was high. These results indicate that internal P loading is not a major source of P to Silver Lake.

Ammonia release from the sediment in the lab was relatively high, but only under very low dissolved oxygen concentrations, which are not common in Silver Lake. Dredging would remove the nutrients in the sediment, but it is very expensive and given the low rate of internal P loading in Silver Lake, it is debatable whether such an expense is justifiable.

GVSU/AWRI has received a grant from Michigan DEQ to study *Gloeotrichia*, a cyanobacterium that can release microcystin, a toxin. The microcystin concentrations in 2013 were well below the 1.0 ppb concentration recommended by the World Health Organization (WHO) for drinking water. The WHO standard for recreational use of water is 20 ppb for microcystin. Hence, in 2013, the microcystin did not appear to be an issue for Silver Lake. GVSU/AWRI will be monitoring biweekly in 2014 for toxic phytoplankton and toxin concentration.

A graduate student at GVSU will be doing her Masters thesis on *Gloeotrichia* toxicity in the lake, with sampling throughout 2014

Questions were taken from the audience.

One question concerned dredging. The preliminary data shows that dredging would not make a significant improvement to the condition of the lake. The bathtub model we will have available at the conclusion of the study will allow us to see what the impact on the lake would be depending on which solution was implemented. We will be able to look at all the options and make a decision based on scientific data not on opinions. The report will include scenarios. We will be able to take the data of the condition of the lake and say if "A" was done to the lake then "B" would be the result. While the USGS will not make recommendation of what decision should be chosen, Al Steinman and Tony Groves will.

Another question asked why after the USGS came in, conditions seemed to improve. Was someone dumping into the lake and stopped after they realized they might be found out? There is no answer to that, but it is important to remember that even though the lake did not look as bad last year as in previous years, the tests indicated was still eutrophic 4 out of 6 times it was tested.

Golden Township Treasurer, Connie Cargill, gave a report on the finances of the Silver Lake Improvement Board. The report indicated there is a current balance of \$120,483. At the end of the contract with the USGS and the assessments that will come in she predicts that we will have about \$50,000 left.

Golden Township Fire Protection

Golden Township has entered a new agreement with the City of Hart, Hart Township and Weir Township. There is ongoing discussion regarding the possibility of having a satellite fire barn near Silver Lake. If you have questions contact the township supervisor or board members.

Golden Township Park at Silver Lake

Bob Henry gave a report on the Golden Township Park. It is to be a free access community park with public restrooms.

2002 goals were made for the Silver Lake Community. The first 3 were to improve the road to the lake, create a walkway/bike trail around the lake, and to create a community park. The first 2 of these have been completed.

Park Activities:

- 2008 there was a discussion with Harvey Berens to purchase the park land from him.
- 2009 A grant was written to the Michigan National Resource Trust fund. It was not successful.
- 2010 A second MNRTR grant was submitted. It was awarded.
- 2012 The township acquired the property.
- 2013 The park was dedicated.

The park advisory committee includes, Harvey Berens, Connie Cargill, Jeff Clark, Gary Dunham, and Bob Henry. The committee asked for community input. There was an open forum and the Friends of Silver Lake sent out an online survey. 179 people responded to that survey. A master plan was developed. If you would like to see the entire plan, go to the Friends of Silver Lake website. www.FriendsOfSilverLake.org

2013 Projects (funded by donations). include a park entrance from the road and the removal of marginal trees.

2014 Completed tasks. The land has been graded with donated fill, grass has been planted, a park sign was installed, and electric service has been put in. The next project is a 40 X 60 picnic pavilion.

Pending grants include installing a parking lot base, park walkways, a nature trail, restrooms and a band shell. Support is needed for donations for a well and a sprinkler system and volunteers to work on the projects.

470 people attended the 2014 Community Spirit Days at the park. The Picnic in the Park dinners will begin July 8 and go through August 26. Hot dogs are free and everyone is asked to bring a dish to pass. Volunteers are needed to act as host and/or hostess for a week.

Silver Lake to Lighthouse Bike Path

Tom Rickhoff reported on the proposed bike path. Last year's survey indicated there is a lot of interest in a bike path from Silver Lake to the Lighthouse. The good news is that progress is being made. The bad news is that it will be a long process. The DNR has approved moving forward and the state park is in favor of it as well. Charlotte Kiefer from the State Park put together a work proposal. Next is a feasibility study. Charlotte, Bill DeJong, and Tom Rickoff are working on that. It has been on hold because the State district-planning supervisor left. A new person has been hired. Her background includes trail planning supervision. That should be helpful. The representative from the DNR said they feel very good about working with community groups. Our chance of getting approved will be increased if we can raise the money to fund the feasibility study.

Friends of Silver Lake Web Site

Marty Hayden asked everyone to check the membership lists and be sure all your information is correct. Also check with your neighbor and see if we have their information. If we do not or if they do not know please get us their information.

Marty walked us through the Friends of Silver Lake website. The address is: www.friendsofsilverlake.org. The website includes all of the water evaluation information, township park information, board meeting meetings, annual meeting minutes, sign-up sheet to get information and a contact sheet to get your information to us. The email address is FriendsofSilverLake@gmail.com.

Volunteers Needed

We are still doing canvassing to get information out to people. Please let us know if you would be willing to go door to door asking people for their information to be added to our list so we can send them information. We also need tech savvy people to work on this issue.

Fundraising

A 50/50 raffle was held to raise money. Gary Darling won the raffle and donated the money to be used toward the new township park.

Treasurer's Report

Bill DeJong gave the treasurer's report. The balance in our account is currently \$9149.76. Last year we spent about \$2500 which included \$500 for fireworks, \$1800 for additional water testing, and \$97.66 for printing. Remember there are no dues and everyone can be a member. Donations will be appreciated.

Board Elections

Tom Rickhoff, chair of the nominating committee, recognized the outgoing members Jean Adams, Nancy Pechar, and Marty Hayden. Marty will continue to help with the website. There are 9 board members. 3 stagger each year. This year's nominees include Chris Olsen, Dr. Michael Jonassen., and Dr. Lawrence Walker. Write-ins are welcome as well. Please vote. If you are interested in being a board member in the future please let a board member know. The three nominees were elected in a paper ballot.

Other Business

- County Commissioner, Larry Byl, reported that the Riley fracking well, SW of Mears has been plugged. There will be no future activity. He met with Stafford Dusenbary from the DEQ. He has promised more communication in the future.
- Representative Bumstead left 2 pieces of information for us. One on campgrounds and one for Pure Michigan.
- The Greater Silver Lake Fireworks Fund would like to increase the fireworks program and improve the quality. More funds are needed to do this. Donations are being accepted. If you would

like to donate you can send it to the Friends of Silver Lake and we will include it with our donation.

Thank you to everyone for all they are doing for the betterment of the Silver Lake Community. Thank you for coming to the meeting.

Respectfully submitted, Sue Sharp, secretary