A REGULAR MEETING OF LEELANAU CLEAN WATER (LCW) WAS HELD AT 9:00 AM ON THURSDAY, NOVEMBER 20, 2014 IN THE COMMUNITY MEETING ROOM OF THE LEELANAU COUNTY GOVERNMENT CENTER, SUTTONS BAY, MICHIGAN

1. Call to Order
Sarah Litch called the meeting to order at 9:05 AM

2. Welcome & Introductions
Sarah Litch, Glen Lake Association  
Mike Litch, Glen Lake Association  
Steve Christensen, Drain Commissioner  
Rob Karner, Leelanau School, GLA  
Len Allgaier, Little Traverse Lake Conservationists  
Sarah U’Ren, Watershed Center  
Chris Otto, Sleeping Bear Dunes Nat. Lakeshore  
Yarrow Brown, Leelanau Conservancy  
Hugh Farber, Lake Leelanau Lake Association  
Sam McClellan, Grand Traverse Band

Public:
Kama Ross, Leelanau Conservation District

Staff:
Kristin Smith, Senior Planner

3. Consideration of Agenda
The agenda, as presented, was accepted by consensus.

4. Consideration of October 16, 2014 Meeting Minutes
Litch submitted a few grammatical corrections to the minutes.

It was moved by Allgaier, seconded by Farber, to accept the minutes as corrected.
On a voice vote the motion carried, unanimously 8 – 0.

5. Public Comment
Kama Ross, Forester, Leelanau Conservation District. Ross indicated she would be willing to help with a workshop geared toward landowners who are considering putting in buffers. She would like to do the presentation and was willing to provide as much leadership as needed. She suggested Leelanau Clean Water consider a June date for the workshop.

Allgaier discussed changes in the forests that require preventative measures such as cutting, along with making sure run-off is not being promoted and landowners are sensitive to best forest management practices.

Litch noted it is a timely issue with what is happening to our trees and shorelines.

Brown asked when the annual tree and shrub sale is held. Ross said the first week in May.

Litch suggested a special session for the meeting scheduled for June 18, 2015 at 9:00 AM and to invite the public for a workshop on trees, shrubs and shorelines.
Staff Comments
Smith noted an email was received from Barbara Weber, who wanted to let LCW know David Brigham will not be attending today’s meeting. She sent another sample letter to LCW that may be used when corresponding with the MDNR.

Weber and Brigham met with Heather Hettinger, from the DNR fisheries at the millpond. Weber said Hettinger immediately comprehended the problems of the nutrient loading in the pond and felt removing the dam would be very helpful. She also suggested the Leelanau Forum connect with Brett Fessel and the Grand Traverse Band, since they are experienced in restoring streams and rivers. Hettinger outlined the monitoring, testing, frequency that needs to be done and suggested monthly testing for at least a year. Weber felt she was very insightful.

Weber also mentioned during Northport’s political campaign forum, Village Council President, VonVoigtlander was asked how the eutrophic conditions in the pond could be taken care of and her response was: “You would have to take out the dam and let the creek flow.”

Farber wondered if Weber was pleased with last month’s discussion, and if a follow-up letter would be necessary. Smith believed the Leelanau Forum would still like LCW to send a letter, since Weber sent another sample with her email. Smith commented that one of the agenda items for today’s meeting is the letter to the DNR, which has been formatted as a sign-on letter, for individuals or organizations to sign, if they choose. Input was sought from the LCW Board for wording in the letter.

6. Presentation
Yarrow Brown, Leelanau Conservancy
Watershed Planning & Water Quality Data
Brown mentioned her main role at the Leelanau Conservancy is to manage all of their private conservation easements. She started working in the Water Quality program in 2008 when more staff support was needed. She has a background in watershed planning. She noted water is part of the Leelanau Conservancy’s Mission: To protect the land, water and scenic character of Leelanau County.

Brown stated the Water Quality Monitoring Program started in the 1990s with the problem of swimmer’s itch and evolved into a water sampling program. The goal was to develop a sampling program to look at long term trends over time, by doing the same testing on a yearly basis in the same locations. Brown noted Tim Kielty has been the backbone of the program. Up until 2012, Tim Kielty did all of the testing on a volunteer basis. In 2011, Kielty decided to step back from the program and the Conservancy Staff became more involved. In the 1990s there were 9 lake sampling sites, but they have since been reduced down to 7. (The two sites no longer sampled are on Lake Leelanau.) They are sampled 4 – 5 times per year. In addition, there are 18 streams that are sampled. She mentioned they stopped sampling Hatlem Creek two or three years ago, since it is extensively sampled by the Glen Lake Association. She noted with limited resources and volunteers, they rotate sampling in some of the streams to every other year.

Items sampled on the lakes include: Lakes: Phosphorus, Nitrate and Chlorophyll a. A hydrolab is used to collect other data including Secchi Depth and vertical profiles of Conductivity, Dissolved Oxygen, Oxidation-Reduction
Potential, pH and Temperature. Stream sampling is more limited. A total of 18 streams are sampled. Walt Neilson, Fred Neidhart and Wayne Swallow started the Stream Sampling Program. Historically stream measurements included flow, total phosphorus, ammonia, nitrate, and Total Kjeldahl Nitrogen. Today they only sample for flow and total phosphorus. Brown noted on the lakes they try to get out four times per year, starting in the spring through the fall.

Brown discussed the following accomplishments of the program, including the use by lake associations, research on mussels and Mycrosystin, it engages volunteers and the community, it lead to the development of a database in 2008 and a website for the public to view the data: http://leelanauconservancy.org/land-protection-and-stewardship/water-quality-program/

Because of the work being done on a Plan for the Good Harbor Watershed, she is specifically trying to update the data for Little Traverse Lake and Lime Lake areas. Brown said Excel spreadsheet data is available on the website, along with PDFs of the charts or it can be emailed. Brown described how a lake can be selected on the website, the different reports for that lake are pulled up and selections can be made. Several lakes can also be compared. Data is available through 2012 currently, and will soon be updated to 2014.

Brown reviewed one of the charts created from the data comparing the Trophic Status Index of Leelanau County lakes. She noted all of our lakes are oligotrophic (low in nutrients). In terms of total phosphorus, all are below 8 micrograms. This is the standard that the Platt Lake needed to maintain, as determined by court order to be in compliance. She noted it is an average level that needs to be maintained over the course of a year.

Brown explained how trends can be determined, by plotting data such as the water temperature at 18 meters over the years. Another example would be to compile data to determine trends such as phosphorus at all depths averaged out over the years, to see if it is generally decreasing over time.

Brown reviewed the future needs of the program which includes, data analysis and report writing. This would include comprehensive reports to summarize the data as well as updating watershed plans. She also feels it is important to spread the word about the database, how to access it and who to contact.

Funding through grants or private fundraising is another one of their future needs, commented Brown. It costs about $10,000 per year to fund the program and they have 3-5 years of funding remaining. Brown also mentioned the need for an Annual Review of Data by a person or group is something they are looking for which could possibly trigger additional sampling to identify threats and sources of nonpoint source pollution.

At some point, Brown would like to endow a Water Quality Program that would generate enough revenue each year to keep it going.

Farber asked who would do data analysis. Brown thought a scientist or someone with experience looking at data. Otto thought a scientist would be needed to take the data from the Water Quality program to look at the quality of the lake and determine what that those numbers mean. Allgaier suggested a lake science person, could
spot a trend, put together some thoughts of a cause, and then develop an understanding of whether it is a lake specific or systemic issue. He noted this group could look across a lot of sampling programs for systemic things.

Brown has been looking at resources and needs help spreading the word. She would love to get a grad student or PhD candidate to work on the data. It would be good to take 20 year-old reports and make them current on a five or ten year cycle.

Allgaier discussed his work with the Northport Energy group and the grad students that have been assigned to work with them. He wondered whether the same opportunity would apply to water quality.

Litch suggested Tom Kelly would be a resource, who could possibly assist.

Otto said he will look at what the National Park Service does and would be willing to share information.

U’Ren briefly discussed the University of Michigan’s School of Natural Resources. The wanted to try to get some grad students to work on a sub-watershed plan. She mentioned Grenetta Thomassey from the Tip of the Mitt put together a packet and provided a presentation to attract students. U’Ren thought it might be more involved than Brown first thought and suggested contacting Grenetta.

Brown briefly discussed the plankton data that has been collected since the late 1990s. She noted it is expensive to analyze.

Brown commented she enters data in February, but has not been able to really do the analysis. She has emailed the data out, but should probably follow-up to see what has been done with the data.

Brown commented that Leelanau County will soon have complete watershed plans for all of the major watersheds in the county. Watershed Plans are important because they allow you to apply for funding through the Clean Michigan Initiative and the EPA. She commented that the process is continual, a plan is created, implemented and should be evaluated every year. Brown said one of the things lacking is the plans are not visited every year. She wondered if LCW or another organization, would be willing to help with a yearly review.

Karner said the Glen Lake Association (GLA) forges ahead with pressing issues, they have to deal with. When they leave a trail of accomplishments, said Karner, the plan serves as a checklist and they continue to move forward. He noted the plan is not always in front of us and it should be.

Brown briefly discussed the Conservancy’s role in Watershed Planning which is to assist as needed or requested. They also apply for grants for land protection within approved watersheds. U’Ren discussed funding through section 319 program. Now, the RFPs now do not approve funding for watershed plans. If you want to write a watershed plan, you need to find the money yourself. Funding is not available for updating, either.

LCW members held a discussion of the changing world of requirements for watershed plans. Allgaier mentioned Greg Goudy has acknowledged prevention as the strongest tool you have, but money is flowing to visibly
impaired water bodies. U’Ren mentioned Congress wants water bodies off the impaired list, more than saying we protected water from getting on the list. She noted there are other sources of funding besides the DEQ and EPA, such as U.S. Fish & Wildlife. Members noted the time required for approval of the watershed plans can be lengthy.

Brown discussed the implementation phase of watershed planning. She noted people feel very connected to Lake Michigan and the shoreline, but she does not have good idea of how to coordinate efforts. Litch commented that she can see LCW holding an all-day event for people who have watershed plans to come together to figure out how they are going to provide impetus for implementation and how to monitor the plans.

Brown discussed an organization for countywide watersheds and wondered if LCW could fill that role. Members discussed a disconnect between knowing the priorities, but not having a grasp of what they can, and should be doing, and how they get that information. Allgaier suggested LCW is the integrated body for a lot of lake stewardship and lake examination activity. How do you get it out to the general public? We are struggling with portraying it to people who are skilled as well as riparians who what to do the right thing.

Karner discussed the Lake Charlevoix Guardian program. All hot topics fall under one umbrella. Riparians take the pledge to do the right thing to be lake friendly. If they do that they can receive help with things like inspections and greenbelting. Riparians will get recognized for doing the right thing and will be listed on the website as being lake friendly. They can even go one step further and have their property lake certified. The checklist is an educational process and helps people understand the “go to” best management practices to be the most lake friendly they can be. One step further is to take an expanded list and have the property evaluated. Karner is working with a committee of the Glen Lake Association and volunteers to implement program.

**Water Quality Monitoring Handbook.** Litch discussed a meeting with Cal Killen, to see what he could do with the Water Quality Monitoring Handbook to integrate the associations and park to make it a relational database and compare data and testing across lakes. He has done a lot of work on this. Litch suggested, Killen should be paid an honorarium for his work, which will be available in a hard copy and would be posted on the Leelanau Clean Water page of [www.leelanau.cc](http://www.leelanau.cc)

Allgaier discussed the process followed by Killen. Karner noted Killen followed a template modeled after the Michigan Invasive Species Network. A map is used to designate where the sampling is being conducted in the county and includes who conducts the sampling, how, when and includes graphs and data. Allgaier also discussed an information section which could include such things as why something is sampled and before and after pictures.

Litch commented that Killen is very capable of analyzing the data. With the assistance of Karner and the GLA Water Quality Committee, data analysis could be done, and once a year data could be uploaded to the website. She felt it could be a pretty powerful relational database. The basis would be the handbook, this is the next step.
Karner felt a goal of website once it is refined, would be for a general novice, who does not know a lot about water quality data to learn something. At the same time someone with considerable experience in water quality data analysis, interested in mining the data, will be able to get what they need. He is hoping this will serve a wide range of abilities and interests.

Karner referenced the watersheds in Leelanau County, including inland lakes and streams. He wondered if the water from Big Glen, Little Glen and Fisher that empties out of the watershed into Lake Michigan, is better or worse than what is in Lake Michigan to begin with. Otto commented no one he knows is doing that testing. The testing conducted by the National Park includes beach testing which is bacterial. Otto discussed water chemistry testing in Lake Michigan including a benthic monitoring station in Good Harbor in collaboration with the University of Wisconsin. He noted it is not public information until it is published.

Karner asked about testing and data available for Sleeping Bear Bay. Otto said they have produced high resolution bathymetric maps in the last 6 months collected with multi-beam sonar scanning. He noted areas shallower than 10m are harder to collect. With the collected data, they worked on a project with the Research Institute at Michigan Tech, incorporating LIDAR data from the Army Corps of Engineers and satellite data to create one bathymetric map of the entire lakeshore.

Litch asked if the National Park had a watershed plan. Otto stated they have a management plan which includes water, as well as a water resource plan from Ft. Collins. Karner briefly discussed plans for an upcoming transect project on Glen Lake and what he hopes to learn. Otto commented this type of work, conducted on the lakeshore was eye opening. He noted it is useful to know what is there. This type of project was worthwhile for the National Park to know what was going on deep below the surface. He commented it is possible to tell Zebra Mussels from Quagga Mussels at significant depth. Karner thought that would be useful, and video taken could be used for educational purposes. It brings awareness and provides another way to look at the lake in order to preserve Glen Lake.

U’Ren discussed moving forward and getting projects done. She noted often education is not watershed specific. She said information she would discuss pertaining to the Grand Traverse Bay Watershed would also be applicable to Lake Leelanau. Some issues are widespread over multiple lakes and watersheds. She commented on the possibility of the organizations in Leelanau Clean Water pulling together and all applying for a grant, or doing a project that involves education and outreach.

Brown discussed ideas for the future of LCW. Could it be more independent and able to apply for grants on its own? She thought it would be ideal to have a Watershed Center in Leelanau County. U’Ren briefly discussed the work done by the Watershed Center. Brown noted the Conservation District is another option. They can apply for grants. Christensen discussed the possibility of more collaborative work with the Conservation District and discussed plans for the Conservation District Office to move into the Government Center.

Karner would like to take on the Lake Guardian Program as a project and would like to see it expanded statewide. Christensen suggested a sticker/emblem for your car. It would be statewide and a particular color could designate a watershed. He noted the statewide recognition would be very positive for people to recognize
that someone in your watershed is doing the right thing. Brown commented that she would like the program to be a little more comprehensive like a Riparian Guardian Program. Karner noted that it is comprehensive and will even include businesses, such as landscapers and lawn care workers, endorsed by the Glen Lake Association for their lake friendly practices. Brown commented as the Watershed Plan for Lime and Little Traverse Lake gets underway, the Glen Lake Association has been bold in its actions reaching out to landowners. It sets a good example for other lake associations, who are more timid when it comes to landowner involvement.

Otto discussed King County, Seattle. They have implemented many of the ideas mentioned by Karner. They even work with dentists regarding high metal content in the water. They figured out it was from the amalgam fillings going down the dentist’s drain and came up with a separator to prevent it from happening. He likes the idea of a preferred provider list. For example, it would be helpful for people moving to the area to check out a Michigan Natural Shoreline list of builders.

Brown discussed the idea of a day in spring or fall for training or a hands-on workshop. She noted there are a lot of resources among lake associations and a Training Day would be good thing to hold. She also discussed Watershed Plans with regard to the townships. She has reviewed Master Plans and Zoning Ordinances for the watershed and feels Leelanau is not looking that great regarding provisions in those plans for protection of the water. She felt some model language for the township plans and ordinances would be helpful. Allgaier suggested a model septic ordinance or a water quality based module that would go into a Master Plan.

Brown discussed the idea of overlay districts in the watersheds as well as alternative and community septic systems.

7. Unfinished Business
   Sign-on Letter to the MDEQ/DNR regarding Northport Mill Pond

Smith will hold on to this letter until the December meeting. Brown asked why a letter was needed. From her perspective she felt the Leelanau Forum was heading in the right direction without having a letter from LCW.

8. New Business
   Leelanau Clean Water Budget
   2. Remaining Projects

Litch discussed projects being considered by Leelanau Clean Water that have come out of meeting discussion, including:

- Stewardship idea expended to other lakes.
- Workshop in January for developers, realtors and riparians which will include Rob Karner presenting How Your Shoreline Has Changed and Sarah U’Ren presenting Stormwater & Low Impact Development

The workshop could also include Prairie Crossing – Chicago, IL to present guiding principles for developers.

- Bring those involved with watershed plans together to brainstorm about implementation, review and involving others on projects within the plans.
- Coming together to share different technologies (conducting a cladophora study) and to incorporate modules into township master plans.
- Kama Ross, Forester, Leelanau Conservation District. Workshop geared toward landowners who are considering putting in buffers.

Farber discussed his proposal to the Lake Leelanau Lake Association Board to host a luncheon for the Township Supervisors and Planning Commissions (There are 7 townships around the lake) in order to discuss lake protection.

Litch commented a decision needs to be made about the January Workshop and Prairie Crossing. Perhaps the Executive Committee should get together to work up a schedule for suggested projects, including dates and details to present to LCW. She felt there were too many ideas to pull together right now.

Litch stated Prairie Crossing would be requesting a $500 honorarium for travel and housing. Prairie Crossing is a Planned Development, with the developers including plans for the environment, water quality, recreation, aesthetics, etc. To her knowledge no one is doing this type of development in the area. LCW needs to begin planning the workshop and invite the realtors, developer, landscaper, riparians and landscape architects.

Allgaier commented the questions raised by the target audience for the session has to be will being knowledgeable increase profitability or just be a burden and cut the profitability? Litch briefly discussed Prairie Crossing. The people in that area wanted a better lifestyle, not development down. The developers listened.

**Computer Integration of Water Quality Monitoring**

*It was moved by Karner, seconded by Allgaier to pay Cal Killen $500, to do the website work to get the water quality monitoring data integrated.*

*On a voice vote, the motion passed, unanimously 8 – 0.*

**Prairie Crossing**

U’Ren did not think it was worth paying $500 to Prairie Crossing for the presentation. U’Ren thought Prairie Crossing could be included via Skype or Go To Meeting.

Christensen discussed landscape plans. He believed offering a premium project would not generate more income. He thought the ideas were great but it is a very competitive marketplace.

Litch said she could use some help and expertise on how to market the presentation. She noted that it sounded like the group was not in favor of bringing in Prairie Crossing. Karner thought there might be a possibility to bring them in someday, but not at this time.

Farber asked if Prairie Crossing had any type of video presentation available for purchase or if there is anything that could be put on the website.

Members briefly discussed the length of the workshop (full or partial day) what should be included, as well as possible speakers to invite.
Mike Litch commented the Michigan Shoreline Partnership has certified shoreline landscapers for restoration and shoreline work that is to a certain standard. He suggested maybe someone within that group could come, like Jane Herber. U’Ren thought someone from the Michigan Shoreline Partnership would be better for riparians and homeowners, rather than developers.

**Advertising**
U’Ren discussed the workshop with the Traverse Area Association of Realtors (TAAR) and they would be willing to advertise it in their newsletter for their members. She just needs to get the information from LCW to them.

Christensen said he will work to put a list of landscapers together so information can be sent out to them.

Allgaier said he would talk to his son who is in the Artscaping business about how to get the word out.

Smith noted there is money in the budget to put an ad in the *Leelanau Enterprise*.

The format of the Workshop was discussed, including presentation versus panel discussion. Regarding failing septic systems, Farber commented on the cost of testing and corrective action as well as the fact that people have more options than they used to today. Allgaier thought there is a better more direct way to test systems that may fail, and provide incentives to get repairs done. It is important to reduce the fear.

U’Ren suggested pushing the Workshop back to February. She said she would call Tom Fountain about septic systems. She would also call Greg Goudy. She suggested an all-day session with a lunch available for purchase. She would also set up a Doodle poll for the date in February.

Smith reviewed reservations for the Community Meeting Room in February. She will coordinate the final date with U’Ren, once the speaker availability is confirmed.

**9. Communication Items/Reports**

A. **Fracking**
Litch noted the second phase of pre-hydraulic fracturing testing has been completed. She is happy to report the water quality is looking excellent on Glen Lake.

B. **Communications**
Farber submitted an article to the *Leelanau Enterprise* advertising this meeting and reviewing the last one.

Brown said she will send Smith a modified Powerpoint of today’s presentation that can be posted on the website.

C. **Water Sampling**
Allgaier commented Cal Killen has been moving down path of identifying computer tools to make a user friendly, information resource available. It will allow users to drill down to data and serve first timers who need to understand the basics as well. He felt Killen will be a significant resource.

D. **Excessive Nutrient Loading**
E. **Invasive Species**
Litch referenced a handout on genetic differentiation and aquatic vegetation mapping.

F. **Reports from LCW Members**
None.

10. **Adjourn**

*The meeting adjourned, by consensus, at 11:25 AM.*