

DOCK SIDE

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Spring 2014

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Clean Boats & Clean Waters 2014

by Carl Holmgren, BLPRD Commissioner

The BLPRD 'Clean Boats and Clean Waters (CBCW)' inspection program will continue in 2014 for the eighth year. We will continue using student volunteers from Unity High School who need volunteer hours for graduation. We will also be using one Unity Grad who worked with the CBCW program who will assist with scheduling and team leadership. Our program is funded by both the BLPRD budget and Grant monies received from the WDNR. Student volunteer's work the 50/50 program, whereby they receive one hour of pay for each two hours worked, with the other hour credited to Community Service hours (required for graduation).

Our goal again this year is to cover all four of the public landings on the lake (Balsam Village Beach Landing, 46 Store Landing, Little Balsam, and East Balsam) at various times throughout the summer from opening (May 3rd) of fishing through Labor Day. We schedule two volunteers at any landing at the same time working week-ends and various weekdays.

As a reminder again; this is a three focus program. We inspect boats for invasive species, educate boaters on invasive species along with the local and State rules,

and gather data. State law states that it is illegal to launch or transport a with aquatic vegetation attached to boat or trailer. We will also collect aquatic plant samples of suspicious plants and have them tested and verified by Polk County LAWRD. We will note license numbers of obnoxious boaters and pass that information on to County authorities.

Data collected is summarized daily for each landing and entered into the State DNR database.

Boater awareness of the importance for keeping invasive aquatic species out of the lake is our goal. If you see a volunteer, say 'Thank You', as their efforts with Wisconsin Clean Boats and Clean Waters program that includes inspection, education, and data collection benefits all of us. ■



Four Commissioners to Attend the 2014 Wisconsin Lakes Partnership Convention

April 24th marks the beginning of the Wisconsin Lakes Partnership Convention at Stevens Point. This is the single most important event as it brings together environmental scientists, Regulators and Lake District Commissioners in an instructional environment and it provides vendors an opportunity to discuss their products that serve the needs of Lake Districts. This convention is open to the public. If you are interested in becoming involved in the ecology of Balsam Lake the website and registration is: <http://www.uwsp.edu/cnr-ap/UWEXLakes/Pages/programs/convention/2014/default.aspx>.



Curly Leaf Pondweed Treatment Areas

The Balsam Lake Management District is applying for a permit from the Wisconsin Department of Natural Resources to treat 65 acres on East Balsam Lake with an aquatic herbicide to control the invasive plant curly leaf pondweed. This proposed treatment would occur between May 15, 2014 and June 1, 2014.

The Balsam Lake District has been using the herbicide Endothall to treat curly leaf pondweed in various beds and navigation channels. Herbicides are used early in the season at a low dose to avoid harm to native plant species. The APM plan recommended continuing this treatment in order to minimize navigation problems, prevent the spread of curly leaf pondweed, and protect native plant populations. Recent studies suggest that CLP treatment may reduce mid-summer algae blooms.

Clean Lakes Midwest Inc will conduct a public informational meeting

on the proposed treatment if five or more individuals, organizations, special units of government or local units of government request one. The meeting will give the citizens a chance to learn more about the proposed treatment from the permit

application. Clean Lakes Midwest Inc is not required to, but may change the proposed treatment based on the information provided by the citizens attending the meeting.

Any request for public meeting must be made within five days after this notice is published in the Polk Ledger. The request must specify the topics to be discussed at the meeting, including problems and alternatives, and must be sent to Clean Lakes Midwest, Inc; Oakwood Hills, IL and the Department of Natural Resources, Water Permit Central Intake P.O .Box 7185 Madison, WI 54707

This notice is required by Chapter NR 107 Wisconsin Administration Code.

A map of the treatment areas and a copy of the permit application are available on our web site: BLPRD.com or by calling Loren Johnson at 715-646-2361. ■

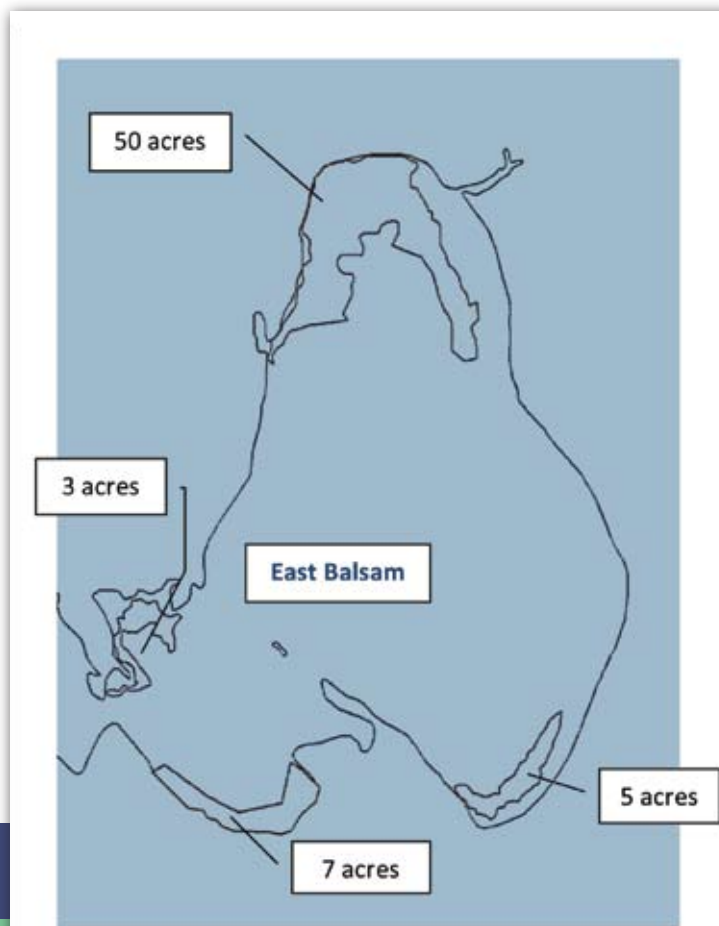


Figure 1 East Balsam Basin, areas to be treated are highlighted in Red and are approximated.

Young Environmental Scientists Wanted

Interested in how science is used to determine the quality of Balsam Lake? We are looking for environmental science oriented individuals to help run the volunteer Citizen Lake Monitoring program.

Volunteer lake monitoring is a great way to, learn more about our lake, observe and document long-term changes in our lakes' health, and collect valuable data. This data is used to report on lake conditions and water quality trends, to prepare lake and watershed management plans, and to teach others about our lakes' health and what we can do to take better care of them. Wisconsin has several monitoring programs that depend on citizen involvement.



Training: DNR and University of Wisconsin-Extension staff provides volunteers with the necessary equipment and training. Volunteers provide their time, energy, and a willingness to share information with their lake community and other lake users. Lake enthusiasts can receive training through the Citizen Lake Monitoring Network in three areas. You will receive training on how Secchi Disk Transparency measurements are taken, what is measured by the Secchi Disk process and why it is important to our lake. You will receive training on how to collect grab samples used to measure total phosphorus and chlorophyll levels in our lake. You will participate in collecting data to construct bathymetric diagrams.

Your data will be entered into the Wisconsin's DNR database that is available for all to see. Your data will be used by the Wisconsin DNR and the Federal Environmental Protection Agency to help understand the quality of Wisconsin's lakes and the quality of the nation's lakes. ■

It is Spring. Time to Evaluate Runoff at Your Property

In each section, circle the phrase that best describes your property.

Are all areas of your lot well covered with vegetation?

1. My lot is completely vegetated with tall growth between my house and the lake.
2. There are no areas of bare soil on my lot. My lot has some tall vegetation near the water.
3. There are few areas of bare soil AND/ OR my property is covered with a thick lawn.
4. My lot has extensive areas of bare soil AND/ OR is covered with a thin lawn.
5. Gullies have formed from water running across my lot.

Are there any deposits of sand or other materials, or can you see where water flows on your lot?

1. No deposits or other indication of water flow are present.

2. I can see where water flowed across my lot.
3. There is a clear channel were water runs through tall grasses, leaves, or pine needles.
4. Water clearly brings leaves, pine needles, and sand to my lot.
5. There are large deposits of sand and debris in flatter areas of my lot. I could easily fill a 5 gallon bucket.

How steep is the slope to the lake?

1. There is a ridge that prevents all water from flowing to the lake.
2. The lot is completely flat. Water pools and soaks into the ground.
3. The lot has a gradual slope. Water may make it to the lake in a big storm.
4. My lot has a moderate slope to the lake.
5. I have a steep slope to the lake. A ball placed at the top of the hill will roll to the lake.

(cont'd)

Evaluate Runoff at Your Property (cont.)

How close is the main structure to the lake?

1. My house and all structures are greater than 500 feet from the lake.
2. My house is at least 75 feet from the lake.
3. My house is between 40 and less than 75 feet from the lake.
4. My house is between 20 and less than 40 feet of the lake.
5. My house is less than 20 feet from the lake.

Total the numerical value from each section. You're going to have a score between 4 and 20. Scores between 9 and 12 are good. But there may be an opportunity for improvement. Consider a runoff mitigation system. If your score is greater than 12, you have the greatest opportunity. Installing mitigating features will change the impact your property is having on your lake.



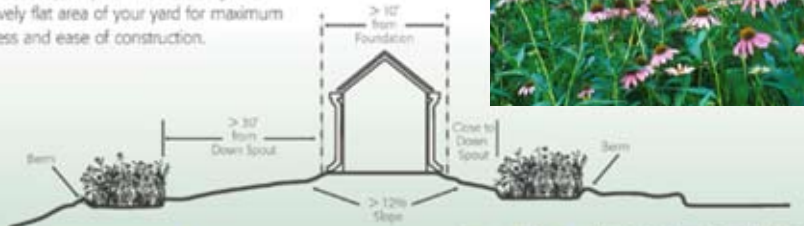
*Cheryl Clemens,
Harmony Environmental
in Amery, Wisconsin 715-268-9992*

Cheryl Clemens is Balsam Lake's design consultant for reducing property, and therefore nutrient runoff. The Lake District has funds to cover her site visits. The funds are limited. Contact Cheryl Clemens, Harmony Environmental, in Amery to discuss opportunities to correct property runoff, (harmonyenv@amerytel.net).

Consider the possibilities—

Rain Gardens

Rain gardens are designed to capture runoff from rain events and absorb water over several hours to a few days. Absorbed water is filtered and purified by the soil. When rain gardens are planted with a variety of colorful native flowers and grasses, they attract hummingbirds and butterflies to your yard. Place a rain garden on a relatively flat area of your yard for maximum effectiveness and ease of construction.



Rain Barrels

Rain barrels capture water from a rain gutter downspout for watering gardens and potted plants. Many styles are available for purchase or you can build your own. Be sure that your rain barrel is covered to prevent mosquitoes from laying eggs and reproducing.



Infiltration Areas

Infiltration areas may be flat areas of woods or tall grasses or constructed pits or trenches. Where the slope is flat and the soil is sandy, it may be possible to simply divert water to an area where it can soak in. Other times infiltration areas are constructed by digging a pit or trench, lining it with porous landscape fabric, and filling the void with 1-2 inch clean rock. The size and depth depends upon the size of the area draining to the infiltration area and the type of soil beneath it. Do not encourage infiltration over a septic drain field, near a drinking water well, or within 10 feet of the foundation of your house.



Native Plantings

Planting native trees, shrubs, flowers, and grasses has many benefits. They provide a home for birds, butterflies, and other creatures that live near the water. They keep water clean by filtering runoff and holding soil in place. Another great benefit is the natural, north woods beauty that results!

Septic System Improvement

Older septic systems – especially those that are close to the lake level – can lead to pollutants flowing to the lake. Upgrading old systems means that waste water is treated appropriately so it can't damage lake water quality.

Polk County's Shoreland Zoning Ordinance

There is a debate occurring as Polk County Board of Supervisors subcommittee works to align their Shoreland Ordinance with Wisconsin Chapter NR115. The zoning ordinance draft proposals may be viewed at: <http://www.co.polk.wi.us/>

The process as I understand it is:

1. Public information.
2. Public comment.
3. Polk County Board of Supervisors adoption of the new ordinance.
4. One year wait period before the new ordinance goes into effect.

Aquatic Plant Management

After disappointing results last spring with regards to the Curly Leaf Pondweed (CLP) treatment results, the Balsam Lake District Commissioners conducted an investigative effort to understand the root cause of the treatment failure. The findings were:

1. The application was conducted with water temperatures above bid specifications. The bid documents directed application at water temperatures between 45 - 60 degrees Fahrenheit. The water temperature at the time of the application was 65.4° F. The reason for applying herbicide in the cold temperatures has to do with the CLP's early germination characteristic. CLP out competes native aquatic plants by beginning to grow under the ice. It develops thick mats early, choking out the native aquatic plants. In 2012 a late application of the herbicide in East Balsam killed everything, CLP and native plants.

2. The bid documents directed herbicide application in calm wind. The applicator reported that the wind was 3 - 5 miles per hour at the time of the application and increasing. The application may have been impacted by increases in wind as turbulent water tends to dilute the application concentration. Water samples taken directly after the application indicated that the concentration levels of herbicide Aquathol K did not reach the levels required to kill the CLP.

To be effective applications of Aquathol K needed to reach concentrations of 1.25 to 1.5 parts per million (ppm) depending on the depth of the targeted weed bed and it needs to have sufficient time in contact with the plant for uptake. We had an independent person following behind the applicator collecting water samples at various times after the application. Those samples were tested by the lab for concentrations of the herbicide and the results clearly indicated the concentration levels were not achieved.



Wind was likely the cause of the failure. The adverse affect that wind can have on an application has to do with the turbulence it causes to the water at the time and shortly after an application. Aquathol K is a contact herbicide. It begins as dipotassium salt which breaks down into carboxylic acid. Carboxylic acid works by interfering with the plant's respiration. The herbicide concentration needs to be maintained long enough

for the plant to absorb enough of the product for it to be lethal to the plant. The wind was reported at 3 - 5 miles per hour out of the southeast during the application and climbed through the day. It is likely that the wind significantly impacted the application in its entirety as was observed.

The applicator stated that he had trouble maintaining the application within the areas identified as CLP beds. It is hard to quantify if this comment. But it seems to mean that the herbicide was not applied where it should have been. It is known that the application did not reach the required concentrations. This was supported by the sampling that occurred directly after the application. This explains why the herbicide was not effective in killing any CLP.

Moving forward we will be sampling herbicide concentrations as we did last June. But lab results take time. Before we have the lab results we would expect to see the plants begin to respond in 2 - 5 days. We should see the CLP drop out of the water column in 3 - 4 weeks after the application of the herbicide. ■

Clean Lakes Midwest Inc. Chosen to Treat Curly Leaf Pondweed in East Balsam

We have also chosen Clean Lakes Midwest Inc. as our new CLP applicator. Commissioner Loren Johnson and Carl Holmgren contacted past clients of Clean Lakes and clients have reported satisfaction with their performance. The area targeted for treatment this year is the large CLP beds located in East Balsam. The actual date of the treatment is dependent on the weather, in particular the ice out date. Typically the treatment occurs in May. There will be a notification in the County Ledger. We anticipate a good result with CLP treatment in 2014. It is important that you avoid the application area for three days after the application process as it is necessary to prevent mixing. ■



A Letter from the Chairman

Ray Sloss, Chairman, BLPRD

The Balsam Lake Protection and Rehabilitation District experienced several accomplishments last year. I have indicated those accomplishments with a “thumbs up.” We did experience one challenge where the outcome wasn’t what we expected. That is a “thumbs down.”

County I Bridge 👍

The navigation lane between the Mill Pond and Balsam Lake was significantly improved with the completion of the County I bridge project. The new bridge replaced a physically crumbling and narrow bridge that did not serve us well as it impeded navigation. The new bridge can easily accommodate a boat or pontoon with the bimini top down. The project was completed on time and during a period when lake usage was low. The total cost of the bridge of \$486,396.50 was shared between three units of government, the Lake District, the village and the county. We would not have been able to handle the cost of this project without partnering with the Village of Balsam Lake and Polk County. That successful partnership between three units of government has resulted in an investment that will serve us and our children for the next 100 years.

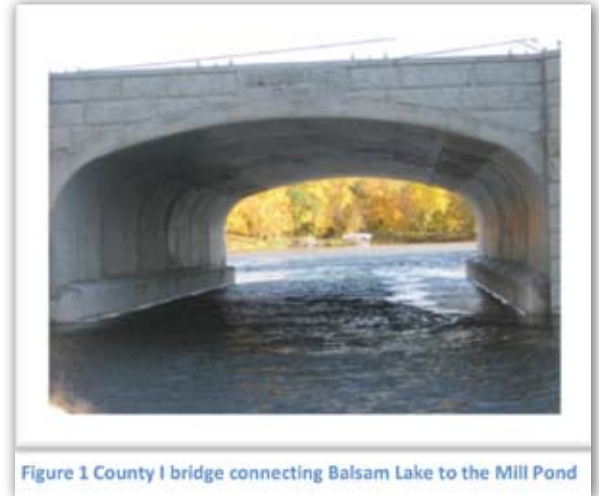
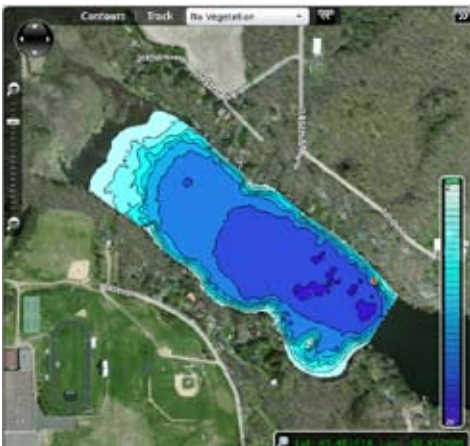


Figure 1 County I bridge connecting Balsam Lake to the Mill Pond



Little Balsam Bathymetric Mapping 👍

We mapped the lake bottom of Little Balsam. Commissioner Dave Wagner researched and purchased for the Lake District sophisticated equipment that uses depth ranging sonar and global positioning satellites to collect position specific data which is uploaded to become a bathymetric map (<http://files2.contourinnovations.com/ReportOutput/62a226ad-2bde-479d-acbe-33520422e73b/report.htm>). We know that the Northwest end of Little Balsam has been accumulating fill. This project is the first step in documenting the current condition of the basin. We will continue to document changes as this data is what is needed to support our request to return the basin back to its original condition in the future.

CBCW 👍

The Clean Boats and Clean Water (CBCW) project on Balsam Lake continues to be a model sought after by other Lake Districts. We know that others visiting our lake have been on surrounding lakes that contain zebra mussels, Eurasian water milfoil and other aquatic species that we do not want in our lake. The CBCW program monitors that traffic at the entry points of the lake, the boat landings. The effort of the team helps to ensure that boaters going into and out of Balsam Lake do so with clean contaminate free equipment.

CLP Treatment 👎

We had one learning experience last year in treating curly leaf pondweed (CLP). The application failed to suppress any CLP in the treatment area. Fortunately we were treating a much smaller area than we usually treat. But the failed effort did cause us to take a hard and critical look at all aspects of the project. We had emphasized the critical aspects of the application with our new contractor, and we expect much better results.

(cont'd)

Where we are going from here?

Raskin Bay

Raskin Bay is a low energy bay that has accumulated silt over the years. Many Shoreline residents cannot access the lake through the Raskin Bay silt. The Commissioners met with our Wisconsin's DNR representative to discuss this problem and learned that he would support limited removal of the silt as necessary to provide lake access to those currently without lake access provided that the Lilly Pads that grow in the bay are not molested. There may be one additional concern in Raskin Bay stemming from past practices. Residents use to self treat the vegetation with copper sulfate compounds. This may have created a hazardous waste problem. As such core samples and soil testing will need to be performed.

East Balsam Basin

The East Balsam Basin is our largest project and greatest challenge. It has gained importance since being placed on the state's impaired waters listing. This occurred because of the high phosphorus and high chlorophyll levels in the basin. We continue to gather data on this project. Core samples will be collected; a bathymetric map will be produced and flow rates will be verified. The Commissioners are also in the early stages of evaluating several possible methods to correct or mitigate the condition. It is a long term project and we will have an interesting presentation at the annual meeting.

We had one disturbing report of an East Balsam Shoreland owner allowing water from their washing machine to dump into the lake instead of their sewage collection system. Phosphorus is currently one of our greatest concerns. I am using the all inclusive "our" for these practices degrades the lake quality for all of us.



Figure 3 East Balsam tell tale algae bloom

East Balsam is exceptionally vulnerable to pollution as it already has high phosphorus levels. It takes three years for the water to turn over in the basin. The ratio is 1:300; one pound of phosphorus becomes 300 pounds of algae. Balsam Lake is a great recreational lake. It is our responsibility, each of us, doing the right thing all the time to keep this natural resource beautiful and robust and for the generations following us.

Budget Discussion and Annual Meeting

The Commissioners begin an important evolution as we assemble a budget for 2015 and prepare for the annual meeting. Our meetings are open and we do accept public comment. The budget meetings are held in the Polk Business Center lower conference room. Budget discussion will occur May 19th and June 21st at 8:30 a.m. The annual meeting will be held at Unity School auditorium on July 19th convening at 8:30 a.m. ■

Consider the Beauty of the Night Sky

I have done it with the kids, gaze at the night sky watching for shooting stars, the Big Dipper, the Little Dipper and Orion's Belt. The night sky is so much more vivid at the lake as compared to the cities. The night sky at the lake is a stunning view with several thousand stars visible on a clear, moonless night. It is worth protecting.

Dark Sky lighting fixtures are designed specifically to limit and reduce the "over spill" of light that diminishes our dark, night skies and ability to see stars. When designing outdoor lighting, consider specifying Dark Sky compliant fixtures. I did.



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Balsam Lake Protection & Rehabilitation District
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Balsam Lake, WI 54810

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2014 - 2015 Meeting Schedule

April 19, 2014
May 17, 2014
June 21, 2014

July 19 - Annual Meeting
August - No Meeting Planned
September 20, 2014
October 18, 2014
November - No Meeting Planned
December 20, 2014
January 17, 2015
February 21, 2015
March 21, 2015

Polk County Business Center
Lower Level Conference Room
Third Saturday of the Month
Meetings begin at 8:30 a.m.

Commissioners

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