Dock Side

Volume XXVII • Issue #2 Newsletter of the Balsam Lake Protection & Rehabilitation District Fall 2021

BLPRD Long Range Plan Update

by Dale Ulbrich

Every ten years, the Balsam Lake Protection and Rehabilitation District is required to get input from local constituents about the direction of the Long Range Plan for Balsam Lake.

This update is a requirement of the Wisconsin Department of Natural Resources in order to receive state funding, in the form of surface water grants, for protection and rehabilitation projects on Balsam Lake. The grants are a way of avoiding additional taxes on local constituents to fund local projects on the lake.

An amendment to the LRP in 2019 focused entirely on the East Balsam Lake alum treatments for the prevention of algae growth. However, there may be other concerns for future protection and rehabilitation projects on Balsam Lake since the LRP was updated in 2012. It's now time to update our plan and we want your input.

How are we doing? What should we do next?

Ask yourself, how satisfied am I with the direction of our Long Range Plan? Do I have additional thoughts on the direction that the board takes with the update to the LRP? Do I have ideas for additional projects that I would like to have considered for the continued health and improvement of Balsam Lake?

Please complete the enclosed survey

Enclosed with this newsletter is a mail-in survey giving you the opportunity to provide your input on the Balsam Lake Protection and Rehabilitation District Long Range Plan. Alternatively, you can take the survey on-line at: _____.

The survey describes the four main areas the District has focused on since 2012. The four areas are described on page 4. Learn more about the plan, then please complete the survey.

Results of the survey will be shared in the next issue of *Dock Side*. Results and suggestions will be used by the District board to set direction for our 2022 LRP update.

Suggestions will be evaluated on a basis of:

- **value** of improvement to the lake compared to other program options;
- **cost** of the improvement and available funding sources compared to other project options;
- **effort** required for the improvement compared to other program options; and
- **risk** that the project can be accomplished, that its desired goal can be achieved, compared to other project options.

Thank you in advance for your suggestions.

Please return your survey by December 31, 2021.

—continued on page 4

In this issue...

CHAIRMAN'S LETTER

This summer/fall has been an active one for our District commissioners, employees, volunteers, partners, and consultants. Thank you to all!

East Balsam Water Quality / Alum – The improvement of East Balsam basin water quality continues to be documented by our limnologist via summer surveys. Thank you to all who participated at the annual meeting as we are moving forward with government approvals, funding and treatments for Phase 2 in 2022. More information is available in this newsletter courtesy of Commissioner Wilhoit

APM Plan / Harvesting / Herbicide – The advisory committee's new recommendations and our updated APM/AIS Plan were implemented throughout the summer. Thank you to Commissioners Preble and Ulbrich for their work in this regard. More information follows in this newsletter.

Water Runoff / Healthy Lakes – Healthy Lakes native plantings, rain gardens and diversion projects will continue to be partially funded through the District and DNR grant funding in 2022. We received an extension for our unused DNR grant funds that will allow for 75% funding up to $1,000 for approximately 8 projects on a first come, first serve basis. Please contact Tom Kelly at 612-508-0879 if you have interest in reducing water runoff via a Healthy Lakes project.

Water Safety Patrol – We hope everyone valued the return of the water safety patrol on our lake this boating season. Thank you to Commissioner Preble and Chief Thompson for the extensive work needed to make this a reality. Thanks also to the Balsam Lake Homeowners Association for its continued support, as well as to the majority of the municipalities that comprise the shoreland of our lake.

Clean Boats Clean Waters (CBCW) – Thank you to Commissioner Mork and Team Lead Terry Morton for their on-going efforts to protect our lake from aquatic invasive species via the monitoring of boats and trailers prior to entering the water.

Finances and 2022 Budget – Commissioner Schneider developed and received approval for the 2022 budget at the annual meeting. Financial reporting has been elevated by his efforts which is greatly appreciated by the board and I am sure by our district members.

Long Range Plan – The District received confirmation that our plan is up to date given our 2021 amendment to the aquatic plant management plan.

Commissioner Ulbrich is developing a timeline identifying projects that have and not been implemented relative to the plan.

We continue to encourage our members to review the current long range plan posted on our web page blprd.com. There is a wealth of information developed by the District over the years that have led to many of the initiatives mentioned above.

THANK YOU for your participation and support. Enjoy the winter season wherever you will be. ●

— Tom Kelly

BALSAM LAKE BEAUTY SHOT??

Contact us

Please contact the commissioners with any questions, comments or concerns you have. Commissioners meet on the third Saturday of the month, starting at 8:30 a.m. at Polk County Business Center, lower level conference room. You are welcome to attend the meetings.

2021 Meeting Schedule	2022 Meeting Schedule	
November 20	January 22	**July 16 Annual Meeting**
December 18	February 18	August 20
	March 19	September 17
	April 16	October 15
	May 21	November 19
	June 18	December

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First season's end...

Water Safety Patrol

With the end of the boating season, the BLPRD Water Patrol will be ending its initial season.

History

Last fall, representatives of the BLPRD, the Village of Balsam Lake, Townships and the Balsam Lake Homeowners Association held meetings to discuss a water patrol on Balsam Lake.

During the winter, the BLPRD held meetings with the various parties to get approvals for a Water Patrol on Balsam Lake. Public comments were heard at a meeting on May 15th. At the May meeting of the BLPRD, the board approved a resolution to create the Balsam Lake Water Safety Patrol.

A budget for the water patrol was created, and approved. The proposed budget will be reimbursed at about 75 percent through a grant. The Balsam Lake Homeowners Association will fund the difference annually.

The BLPRD Board appointed Commissioner Rod Preble to be the Water Patrol Coordinator, and Tommy Thompson to be the Chief of the Department.

Patrol Hours/Results

Year to date, Chief Thompson has spent approximately 150 hours patrolling Balsam Lake, with five citations, and eleven written warnings.

Examples of citations written include:

- No Boater Safety Certificate
- Expired Registration
- PWCs operating too close to shore/other boats
- Wake Zone violations
- Allowing riders on decks/gunwales
- Education and communication

Chief Thompson issued numerous verbal warnings to educate boaters on boating regulations/laws.

With one of the main purposes of the Water Patrol being to educate and communicate, Chief Thompson would like to offer a Water Safety Program in the future to meet the kids on the lake and establish a relationship with them. The BLPRD Board supports Tommy doing a program beginning next season.

Thanks to BLPRD Chair Tom Kelly, Commissioner and Water Patrol Coordinator Rod Preble, Chief Tommy Thompson, the Balsam Lake Homeowners Association, and all who made this happen. Chief Thompson enjoyed being back on the waters of Balsam Lake and looks forward to the next boating season. ●

Boater safety certificate

Anyone born on or after January 1, 1989 must pass a boater safety class to operate a motor boat in Wisconsin and carry a boater education card.

"Chief Thompson escorts the Stanley Cup!"

Continued from front page... Balsam Lake Long-Range-Plan

Since 2012, the Long Range Plan has focused on four main areas:

Improve / Maintain Nutrient Level & Water Clarity

Preservation/Restoration Natural Shoreline Vegetation

Protect/Maintain/Improve Fish & Wildlife Habitat

Manage Native & Invasive Plants/Species

1. Improving and maintaining nutrient levels in the lake to enhance water clarity

Projects, like the alum treatment, are proving to be effective in removing available phosphorous fertilizer from the water in lake thus helping to prevent or limit water-clouding algae blooms. Other projects like, land set aside programs have re-purposed pasture land to avoid phosphorous rich field runoff from entering the creeks that feed the lake, helping to limit nutrient-rich runoff that can feed weeds and algae in Balsam Lake.

2. Preservation and restoration of natural shoreline vegetation

An example of this is the rain garden at the highway 46 boat launch. In the past, heavy rain run-off from the parking lot poured directly into the lake. With the installation of the rain garden, rain water contaminated with oil, salt, and other pollution from the parking lot are diverted into the rain garden and limited from flowing directly into the lake.

3. Protection, maintenance, and improvement of fish and wildlife habitat

The Healthy Lakes program is an example of protecting, maintaining, and improving fish and wildlife habitat. With this program, those in the District are eligible to have plantings paid for in areas around lake shoreline and creek tributaries to the lake. These native plants are not only attractive, native flowering plants, they provide habitat for birds, butterflies, and pollinating insects important to the ecosystem. More importantly, these plantings, when adjacent to the shoreline, provide a natural protective barrier preventing leaves and grass clippings from entering freely into the lake. The decaying leaves and grass clippings not only fertilize unwanted algae and an over-abundance of weeds, the decaying materials prevents fish, snails, and other natural lake wildlife from reproducing in the sand and gravel bottom of the lake to maintain a healthy fish population.

Native plantings along the shore can control runoff to the lake.

4. Management of native and invasive plants and species

The Clean Boats Clean Waters program is a good preventative measure that helps to educate boaters about how they can help prevent the introduction of invasive species like zebra mussels and Eurasian water milfoil into Balsam Lake. These invasive species can disrupt ecosystems; they are present nearby lakes. Other management practices, such as harvesting and chemical spraying, work to control curly-leaf pondweed in the lake.

Talking with boaters at the Town Landing.

How are we doing?

Complete the survey enclosed with this newsletter and let us know how we're doing. Thank you in advance for your suggestions—they will be used by the District board to set direction for the 2022 update to the Balsam Lake Long Rang Plan. Survey results will be published in the spring issue of *Dock Side*.

Please complete and mail your survey before December 31, 2021, or complete the survey online at _____.

New grant application submitted..

East Balsam Alum Treatment

The Balsam Lake Protection and Rehabilitation District annual meeting was held July 17, 2021, at Unity High School. During the meeting a presentation was given by John Holz from HAB Aquatic Solutions; HAB applied the first alum treatment to the East Balsam basin.

John discussed the results from the first treatment and the findings from the group hired by BLPRD to monitor the lake. All of the findings were consistent with expectations for the first of four alum treatments and the results were consistent with other area lakes that have applied alum.

After the presentation a vote was taken to authorize the BLRPD to secure a loan for the second phase of the alum treatment project. The vote was in favor of proceeding with phase 2, provided the BLRPD secured a grant from the state in the amount of $200,000. The request for the grant money was submitted on November 1, 2021 and the response from the state is expected in early spring, 2022.

The HAB Aquatic Solutions barge injects alum into East Balsam Lake.

Unfortunately, in August 2021 there was an algal bloom in the East Balsam basin. This bloom was created by a number of factors and was short-lived. It was not consistent with the types of algal blooms that were experienced in the past, prior to the first alum treatment.

The University of Wisconsin Stout was notified of the bloom and returned to the lake to take samples. They concluded this was not a blue-green type of bloom that occurred in prior years, and noted that having a bloom after alum is applied for the first time can occur. This was discussed in prior years at the annual meeting by Bill James, who studied the East Balsam basin and who mentioned there is the possibility for a bloom after only one treatment.

The recommendation was to continue with the prescribed future treatments.

The second alum treatment is scheduled for June 2022; after completion, sixty percent of the total prescribed treatment will have been completed. ●

Aquatic Plant Management/Aquatic Invasive Species Update

The district implemented three new initiatives this season as a result of the updated Aquatic Plant Management/Aquatic Invasive Species Plan.

The decision process developed by the APM/AIS plan committee to spray herbicide on curly-leaf pondweed beds was utilized to arrive at the not-to-spray decision this season. Size and density (rake fullness) are the primary criteria in this decision process.

The committee also developed an initiative to monitor zebra mussel presence in our lake. Thankfully we do not have zebra mussels as of this writing, documented by ongoing lake inspections by our lake biologist and an annual survey by the National Park Service and Wild Rivers Conservancy. Commissioner Ulbrich implemented a zebra mussel veliger monitoring tool for the landings on our lake which will be inspected periodically by our lake biologist. A veliger is a microscopic, early stage zebra mussel.

Also initiated this summer was a meandering survey of the shoreline identifying the presence of all invasive species by our lake biologist. At this time we have identified curly-leaf pondweed, an aquatic plant, and purple loosestrife, a wetland plant, as invasive species present in and around Balsam Lake. ●

Purple loosestrife grows 3 to 9 ft. tall, crowding out native plants in wetlands.

Curly-leaf pondweed, turion, Potamogeton crispus. *The plant typically flowers, fruits, and produces turions in June before dying back in mid-summer. Turions fall into the lake sediment and can germinate into new plants.*

Does Balsam Lake Have Zebra Mussels?

by Dale Ulbrich

What are zebra mussels?

Zebra mussels are a species of mussel native to fresh waters in Eurasia (Turkey). Their name comes from the dark, zig-zagged stripes on their shell. Zebra mussels arrived in North America in the 1980s, carried in ballast water that was discharged by European ships into the Great Lakes. They have spread rapidly throughout the Great Lakes region and into the eastern Mississippi drainage, carried by live wells, holding tanks, and water remaining in the bottom of recreational boats. Zebra mussels have been found in Texas, Colorado, Utah, Nevada, and California. Currently Balsam Lake does not show signs of being infested, however, Deer Lake, just ten miles from Balsam has been impacted with zebra mussels.

An adult zebra mussel.

Why should we care about zebra mussels in Balsam Lake?

Zebra mussels negatively impact ecosystems in many ways. They filter out algae that native species need for food. They also attach to and incapacitate native mussels. It may sound like a good idea to have the mussels filter the water of algae, however algae is a primary food source for the smallest animals in the lake that make up the primary food source for a healthy fish population, including bluegills, sunfish, and crappies, which in turn are the prey for game fish like bass and walleye.

Zebra mussels attach to hard surfaces such as boats, docks and lifts, and other native mussels. Plate monitors can attract zebra mussels if they are present in the lake.

What we can do to stop the spread of the invasive zebra mussel

Today, Balsam Lake, through its Clean Boats, Clean Waters program, monitors incoming boats for invasive species. During these inspections, boats, trailers, and other recreational equipment are checked to remove all visible mud, plants, or animals. But zebra mussels in microscopic form can survive undetected in water held in boats and other equipment.

We're asking for your cooperation to drain all water from live wells, bait buckets, and all other water from boats, engines, and equipment before launching and upon leaving a water body. As homeowners, take special precautions and wash all parts of your boat, paddles, and other equipment that have been in contact with water from area lakes, taking care to not allow the wash water to flow into Balsam Lake or storm sewers. Drying boats and trailers in the sun for five days before launching is another preventative measure.

What more can we do?

Are inspections enough to prevent zebra mussels from entering Balsam Lake? Through CBCW monitoring at our landings, we've learned that about one boat per week enters Balsam Lake after having been in Deer Lake where zebra mussels are present.

In early August 2021, the District board chose to start monitoring for zebra mussels at all six public boat launches: East Balsam, Hwy. 46, Idelwild, Little Balsam, Town Beach and East Forest _____, using simple, plexiglass platforms that provide a surface for zebra mussels to attach to if they are present in the lake. The monitors are suspended into the water by cables mounted at the end of the boat launch docks.

Each launch has two monitors. One is checked and cleaned monthly by Matt Berg, research biologist, to detect the presence of young or adult zebra mussels. The second is left in place for the entire season, giving small mussels time to develop and be more easily identified if they are present.

Two plate monitors are installed at the end of the docks at six Balsam Lake public landings to detect the presence of zebra mussels.

So far, so good

So far the monitors have shown no signs of zebra mussels. They will be installed again next spring when the boat launch docks are installed. Since remediation for zebra mussel infestations are not very effective, the BLPRD Board is considering additional actions to reduce the likelihood of infestation, such as a boat washing station. Additionally, the BLPRD will invite fishing tournament organizers to help offer solutions to protect the fishing habitat, such as avoiding lakes in their tournament schedule with known invasive species infestations.

With a little cooperation, we all can contribute to protecting a healthy fishing habitat and in the enjoyment that Balsam Lake can provide. ●

The Clean Boats and Clean Waters program by all accounts had another successful year.

DNR reported that the six velliger traps, set to detect the presence of zebra mussels at the public landings and elsewhere around the lake, tested negative.

Anyone who remembers what Lake Michigan looked like in the 1960s compared to today can understand the filtering power of zebra mussels.

Decades ago, Lake Michigan teemed with nutrients and green algae, casting a brownish-green hue that resembled the mouth of an inland river rather than a vast, open-water lake.

In analyzing satellite images between 1998 and 2012, researchers at the Michigan Tech Research Institute were surprised to find that Lakes Michigan and Huron are now clearer than Lake Superior.

In a study published late 2017, the researchers say limiting the amount of agricultural and sewage runoff in the lake has had an immense impact in the levels of algae in the lake. However, the emergence of invasive mussels, which number in the trillions in Lake Michigan, have the ability to filter the entire volume of the lake every four to six days, this an environmentally greater impact.

CBCW Statistics by Balsam Lake Public Landing for 2021

	Landing monitor paid hours	Boats entering the lake	Boats used on other lakes*	People contacted
Village Beach	1,046	1,561	289	6,372
46 Store	1,142	1,602	226	5,983
East Balsam	504	114	23	983
Little Balsam	359	96	13	242

*Boats used on other lakes in the previous five days

In summary, of the 3,051 hours in which the landing monitors worked, 3,373 boats entered the lake; 551 of these boats, approximately twenty percent, were used in other lakes within the previous five days. This is important to note because the life span of a zebra mussel is approximately five days out of water. Over 13,000 people were contacted by monitors at the landings this year.

East Balsam CLP/ Harvesting Update

Extended Season

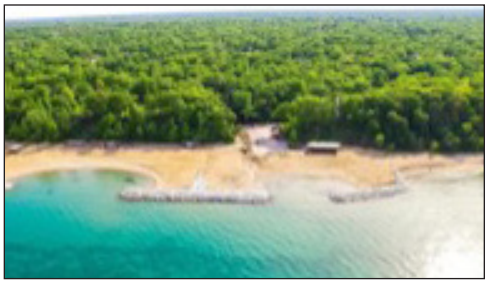
This year, ice-out on the lake was at the end of March—two to three weeks earlier than average.

May 1st of this year Matt Berg, Lake Biologist, conducted a curly-leaf pondweed pretreatment survey. He found that plants were relatively stunted—the warm spring temperatures had affected their growth. (CLP grows best in cool temperatures.) This of course set the native plants up for a barn-buster year. We harvested approximately 60 acres of CLP in June and July.

Mechanical problems with the harvester in late June prevented its operation for several weeks. We managed to harvest the Main, Little Balsam and East Balsam basins' CLP beds by mid-July and continued with navigation harvesting through early August. Late season CLP growth and navigation harvesting was handled in late August and early September.

We were fortunate to not have to spray herbicide on CLP beds in East Balsam this year as our newly established herbicide treatment criteria deemed it unnecessary. Harvesting of these beds have reduced their density and size, resulting in less need for CLP spraying of East Balsam in recent years. We do not spray CLP beds in our other basins as doing so would be ineffective given the water flow.

Hats off to our harvesting team for a successful season despite the mechanical delay. Congratulations to Commissioner Rod Preble and Operations Team Lead Don Coddington on their execution during this challenging harvesting season.



> Lake Michigan 1998 and 2012

Dock Side

Balsam Lake Protection & Rehabilitation District
P.O. Box 202
Balsam Lake, WI 54810

SURVEY ENCLOSED
PLEASE REPLY BY DECEMBER 31, 2021

Zebra mussels negatively impact ecosystems in many ways. They filter out algae that native species need for food and they attach to—and incapacitate—native mussels.

Clean, Drain, Dry… every water body, every time. Before launching and before leaving the water access:

CLEAN off visible aquatic plants, animals and mud from boat, trailer and all equipment.

DRAIN motor, bilge, live well and any other water-containing devices.

DRY everything for at least five days before reuse or disinfect.

NEVER MOVE water, fish or bait from one body of water to another.

stopaquatichitchhikers.org