LITTLE BITTERROOT LAKE ASSOCIATION

NEWSLETTER No. 4 PLUS Annual Meeting Agenda

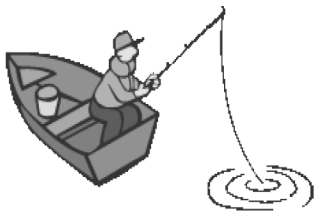
P. O. Box 1003 Marion, MT 59925
http://www.littlebitterrootlakeassoc.org

2023 Annual Meeting Agenda

PLEASE ATTEND
Wednesday, August 2, 2023, 6:00 PM

Marion Fire Dept Community Center

*****Catered Dinner*****



I. CALL TO ORDER:

Welcome: The Association's Purpose is to help educate and demonstrate the importance of good stewardship for Little Bitterroot Lake and the Lake's Watershed. We are an ACTIVE organization and solicit help from the entire community to protect our pristine Little Bitterroot Lake for future generations.

II. ATTENDANCE/DUES:

Sign in sheet for attendance/dues.

III. INTRODUCTIONS:

BOD, Manager of LEAP, SEAP, Support Staff, Key Volunteer, and Guests

IV. 2023 Speaker PLAN:

J. Babcock Sampling Plan/A Planning and Zoning Rep (Verdeen Massie) /DEQ Reps (Tiffany Lydan) / Warden (Wes Owdekoven) / Mt. Loon Society

*****Please Bring This AGENDA To OUR MEETING*****

V. REPORTS:

OUR "ACTIVE" LBLA – SOME HIGHLIGHTS

YOUR CALLS make a difference! Keep communicating with us.

NEW BIG MEMBERSHIP ACHIEVEMENT – Revealed at our Annual Meeting

HEALTHY Financial Report

COMMUNICATION: Sent out 4 NEWSLETTERS so far in 2023

BIG Additional Testing Program - Now SPRING, SUMMER (as usual with Bio Adds) and FALL

NEW "Best in Class" Septic Education and Awareness Program. YOUR DUES AT WORK - A WELCOME ADDITION - Welcome Kate Thomas "OUR latest NEW hire!" She is the manager of our Septic Education and Awareness Program (SEAP)

Our DAM - Our LAKE LEVELS - A Report by Capt Dan on the Dam (1916-1918) , Our water (on Jun 11th we had 49%) , and Who manages/owns it - FIIP…What is CSKT, FIIP (Our lake manager), The NEW Pending Compact, The Flathead Water Management Board?…Follow the "WATER MAZE" - CSKT gets water from the Compact (and gets a "say" regarding the amount) via draws from Hubbard and other reservoirs but has no direct control over LBL. 100+ year-old FIIP on behalf of the BIA maintains Indian land (for irrigation) and controls LBL water draw for Hubbard Res. All lakes like ours typically have "min pool levels" LBL does not according to the Compact. The LBL dam level at 3898' elevation is the lowest draw point vs. the highest dam level possible at 3906.5 ft (That is a range of approx. 8.5 ft - 25,000 acre-ft). Want to make a change – Contact State Rep. Paul Fielder paul.fielder@legmt.gov 406 210-5943 or Sen. Dist 7 Bob Brown bob.brown@legmt.gov 406 242-0141 (SEE Capt Dan's Detailed Article on page 6)

ATTENTION – SOS - Save Our Shoreline – We have witnessed - "lot" clear cutting, shoreline removal within 20 ft of the high-water line, and tree cutting in the Lake Shore Protection zone – See regulation.

BOD CONTINUOUS IMPROVEMENT INITIATIVES-To realize the FULL potential of YOUR contributions! Each BOD member has their specific focus/expertise/responsibilities.

AMAZING SUPPORT BY YOU! Your generosity is Outstanding. We appreciate your super response and comments. What do your contributions enable us to do? A LOT. A few examples: New Noise Signs/ New HIRE and NEW Septic Education and Awareness Program (SEAP)/Keeping Jadin and the Jake Lake on Patrol/Signage/Bigger Sampling NEW Spring and Fall Sampling ADDED + E Coli /School support and much more…

We have built IMPORTANT CONNECTIONS with the LOCAL and STATE Agencies – Sheriff, Wardens, DEQ, FWP, DNRC, Planning and Zoning, a whole page of connections…How we did it and How it works: You call us, We investigate, We process as necessary, and STAY ON IT!

Our NEW Loon Education and Awareness Program – Mike and Shirley Hemmer - Contact at mshemmer@littlebitterrootlakeassoc.org

NEWSLETTER No. 4 Articles

2022 Lake Sampling Executive Summary

Little Bitterroot Lake was sampled on August 3-4, 2022, which was the *24th sampling event since 1999*. Routine sampling for field and nutrient parameters was conducted on seven lake sites and two stream sites. In 2022, four additional near-shore sites were sampled for field and nutrient parameters and bacteria (total coliform and *E coli*). The lake outlet (Little Bitterroot River) was sampled for attached algae. Depth profiles were recorded at the lake center by Whitefish Lake Institute on July 12, 2022.

Water quality in Little Bitterroot Lake was very good in 2022, with low concentrations of nutrients and no detection of chlorophyll-a in the water column. Nutrient concentrations have generally been low since consistent monitoring has been occurring since 2010, although elevated concentrations were exhibited in 2011 during a high precipitation year. Water temperatures were relatively cool in 2022 and a cooler spring with prolific rain helped keep algae from thriving in mid-summer. As a result, chlorophyll-a concentrations were the lowest on record in 2022 in both analytical and field data. Total phosphorus was slightly elevated in 2022 when compared to 2021, possibly because less algae was growing in mid-summer to consume the available nutrients. Nitrogen concentrations were slightly lower in 2022 than 2021 but near the long-term average.

One benthic algae sample was collected in 2022 from the Little Bitterroot River which was slightly above average (5.0 vs 3.3 mg/m2) but did not reach nuisance levels. Documenting observable patches of algae is important for identifying areas with potential nutrient impacts, such as failing septic systems.

Bacteria sampling was added in 2022 and samples were collected at 10 locations, including 8 near-shore sites, the inlet stream, and the outlet. *Data indicates that Herrig Creek is the highest source of bacteria to the lake,* and elevated concentrations of total coliform and E coli were also recorded in Herrig Creek Bay. A sample collected near the south boat ramp also *exhibited higher concentrations of E coli* than the rest of the lake, which could be due to human or animal activity in that area. Bacteria sampling will be continued during future sampling events so that spatial and temporal trends in bacteria concentrations can be evaluated, and a baseline can be established.

Water quality parameters such as calcium and alkalinity indicate that Little Bitterroot Lake has low potential for colonization by invasive mussels based on water chemistry; however, *invasive mussels have been detected in lakes with lower concentrations than those measured in Little Bitterroot Lake*.

The trophic state index for Little Bitterroot Lake suggests eutrophic conditions could exist due to elevated concentrations of total nitrogen, but measurements of total phosphorus and chlorophyll-a indicate oligotrophic conditions with low biological productivity and very good water quality. Little Bitterroot Lake has typically been phosphorus-limited, meaning it has an inadequate amount of phosphorus compared to the amount of nitrogen needed to support algae growth. Based on this observation, *Little Bitterroot Lake is more likely to experience algae blooms with the addition of phosphorus since concentrations of nitrogen are already relatively elevated (DO NOT USE PHOSPHOROUS!).* However, nutrient concentrations can vary significantly, and efforts to reduce inputs of both phosphorus and nitrogen should be encouraged to help maintain the water quality of Little Bitterroot Lake and limit algae growth.

Overall, Little Bitterroot Lake has shown excellent water quality throughout its monitoring history. Nutrient and chlorophyll-a concentrations are low, algae blooms are rare, and field data indicate suitable ranges of temperature, dissolved oxygen, and pH to support a viable fishery. Little Bitterroot Lake also displays excellent water quality when compared to other regional lakes. 41 lakes are presently monitored annually through the Northwest Montana Lakes Network (NMLN), including 11 lakes with surface areas greater than 500 acres (WLI, 2022). Among the large lakes monitored, Little Bitterroot Lake ranked 7th lowest in nitrogen concentration and 7rd lowest in phosphorus concentration in 2021.

To improve or maintain water quality in Little Bitterroot Lake, efforts should be made to reduce sources of nutrients, such as limiting application of fertilizer, maintaining septic systems, keeping a vegetated buffer area, and reducing shoreline erosion. Little Bitterroot Lake is phosphorus limited, meaning that additional inputs of phosphorus are more likely to cause undesirable algae blooms. Fertilizers with little or no phosphorus are recommended to help maintain good water quality. This can be accomplished by selecting fertilizers with a zero as the middle value (i.e. 16-0-0). Little Bitterroot Lake has routinely shown excellent water quality; however, *nitrogen concentrations have been steadily increasing since 2012, which is a common trend for lakes in developed areas. Maintaining and not overloading septic systems is a key practice for reducing nutrient inputs into Little Bitterroot Lake.*

Notes: The routine sampling program was continued in 2022 and data continues to show low concentrations of nutrients (nitrogen and phosphorus) and algae. Chlorophyll-a was undetected at near-surface samples in 2022. The lake also shows low potential for colonization of invasive mussels based on present water chemistry.

Warnings: Concentrations of total nitrogen have shown a slight increase since 2012, and the ratio of nitrogen to phosphorus (N:P ratio) continues to increase. This indicates that chronic loading of nitrogen continues to happen within the watershed, which is likely associated with an increase in human development or the effects of aging, unmaintained, or overused septic systems.

Cautions: *Isolated patches of algae growth continue to be identified throughout the lake*. The cause of these localized outbreaks cannot be identified without an extensive study, but *they are likely caused by nutrient loading from failing or overused septic systems. These spots have been monitored visually for several years, and their continued presence has raised concern among the lake association.* Bacteria data from 2022 indicate that Herrig Creek is a source of bacteria to the lake and values may exceed state standards. The source of bacteria may be non-human in origin, although Herrig Creek should be further evaluated for bacterial sources in future sampling events, as well as increased near-shore sampling for bacteria.

LOONS

A sensitive, critical, and unique resident of Little Bitterroot Lake

LOONS need SPECIAL CARE to survive.

They need *your* HELP.

If you see markers indicating loon nesting areas, please stay out of the marked area.

Living with Loons in Montana - Loons typically begin to arrive on their nest lakes around mid-to-late April. The first order of business is to establish a territory then attract a mate. This is done during the last weeks of April and early in May – then nesting begins. Most loons in Montana are nesting by mid-May, which means eggs begin to hatch one month later in mid-to-late June. Some pairs that begin nesting later, or who lose their first nest and try a second time, will have eggs hatching into early July.

The first four weeks are the most critical in a young loon's life. This is the time when they are covered in downy feathers and are unable to maintain their internal body temperature. It is when the chicks are completely dependent upon their parents, so adults spend most of their time catching fish and feeding the chicks. This is also when chicks are learning to dive, so the typical way a loon avoids danger, diving, is not an option for them. Once the young loons reach four weeks of age, they have molted into their first set of feathers and can maintain a regular body temperature, and they are able to dive and are catching some of their own food.

Once the young become self-sufficient, adults begin spending less time with them, as they prepare to leave on their fall migration. The young loons stay behind until almost ice-up, feeding and gaining strength to make the southward flight themselves.

Therefore, the most important time for loons, in terms of ensuring successful reproduction, is from May through mid-to-late July. This is when adults are sensitive to intrusions at the nest site, and, later, when young are most dependent on the parents. Any sustained disturbance during the nesting season or during the early stages of chick-rearing can be detrimental to a loon pair's nest success for that year.

Because loons lay only two eggs per nest, and usually only have one or two (if the first nest is lost) opportunities to lay eggs each season, even one year of disturbance can have negative effects on an area's loon population over the long-term.

What can we do?

All of this does NOT mean that we cannot use a lake during the prime of summer. It simply means that we must be mindful of the fact that we share the lake with others – people and wildlife.

Here are some things we can do to help loons while enjoying the lake ourselves:

Observe loons from a distance with binoculars or a spotting scope rather than trying to get close to them.

If you find nesting areas around the lake, tell us! We will mark them with buoys that say, "Loon Nesting Area - Please Stay Away."

Stay 200 feet away from loons on nest or on the water whenever possible.

Give islands and marshy areas of a lake a wide berth to avoid disturbing loons on nests.

Post Loon Alert signs at public boat launches to let visitors know that loons use the lake and that the people who live there care enough to protect them.

Protect or restore important loon nesting and chick rearing areas on a lake.

Use alternatives to lead fishing tackle made from materials such as bismuth and steel.

It only takes one lead sinker or jig to p oison a loon. Loons can be very tolerant of human recreation and even raise young successfully on lakes that have regular recreational use. But people using the lake need to be mindful of the loon's presence and have the courtesy to give them some space. If we do this, we will be fortunate enough to have loons return to our lakes year after year, and we can be sure that the loon's call we hear floating on the morning mists, or the evening air is one of life and harmony and not a sounding of the alarms that something is wrong.

Contact LBLA "Loon Education and Awareness Program" (LEAP) Managers Mike and Shirley Hemmer for more information. mshemmer@littlebitterrootlakeassoc.org

Information from Loon Watch at Sigurd Olson Environmental Institute, Northland College, Ashland, WI 54806

Little Bitterroot Lake Association
Septic Education and Awareness Program (SEAP)

For all of us who have septic systems on Little Bitterroot Lake, we have the responsibility to keep them running in good order. A failing septic system can spread leachate (treated water that still contains polluted water) into groundwater, contaminating the lake as well as drinking water sources. Not only does this cause algal blooms in the lake that cause fish kill, but it can also cause illnesses in humans and pets, especially in people with weakened immune systems, pregnant women, children, and the elderly.

The Septic Education and Awareness Program (SEAP) is here to guide and provide you with access to financial and educational resources to properly maintain your septic system. A representative of the Little Bitterroot Lake Association, Kate Thomas, will be going door-to-door with a survey to determine the level of awareness on septic maintenance around the lake. She will also be providing homeowners with educational materials and information on how to request financial resources to help mitigate maintenance costs.

Our DAM - Our LAKE LEVELS

A Report by Capt Dan LBLA on the Little Bitterroot Lake (LBL) Dam.

Before the Dam was built in 1916-17 (enlarged in 1918) LBL existed at a lower lake level. The DAM built a level of water capacity that could be managed. The purpose was primarily for irrigation. If the dam ever failed, the lake would return to a level much like it was in 1915.

The dam's drain height is 8.5 ft tall. 8.5 ft of water measured over the entire lake is 25,000 acre-ft. On Jun 11th, 2023, we had 49% Dam Reservoir Capacity in the lake, (which is approx. 12,500 acre-ft of water). If after Jun 11th; 12,500 acre-ft of water drains out via the dam, without being refurbished, then the dam will bottom-out. Once the dam capacity has exited the lake the only way to get more water out of the lake would be to pump it over the dam. (Allegedly such pumping over the dam event was attempted years ago, and your association stopped it - More on that story later).

Who manages/owns the water capacity of LBL? Short Answer (for over the last 100 years) is the Flathead Indian Irrigation Project of the Flathead Indian Reservation (FIIP). But it is not quite that simple – please see additional explanation below.

Definitions, Contact Information and Web Sites (for more detail):

CSKT - Confederated Salish and Kootenai Tribes of the Flathead Reservation (406 885-2888)
BIA - Bureau of Indian Affairs: protects trust assets between the United States and Native American Tribes
FIIP - Flathead Indian Irrigation Project: manages irrigation canals and reservoirs related to the Flathead Reservation (406 745-2661)
DNRC - MT Dept of Natural Resources and Conservation: Oversees the states natural resources including issuing and managing water rights in Montana
FRWMB – The Flathead Reservation Water Management Board: – implements the CSKT-MT Compact including issuing water rights on the Flathead Reservation (406 201-2532)

- Flathead Reservation Water Management Board (mt.gov)

CSKT-MT Compact – The Compact: a water rights agreement between the State of Montana, CSKT, and the United States.

- For more information: https://dnrc.mt.gov/Water-Resources/Compacts/Flathead-Compact
- Story and history of the Compact and the Ordinance: The CSKT Water Compact has been enacted (arcgis.com)

Running the water "MAZE":

1) CSKT has reserved water through negotiations outlined in the Compact. CSKT has no direct control over lake levels of LBL.

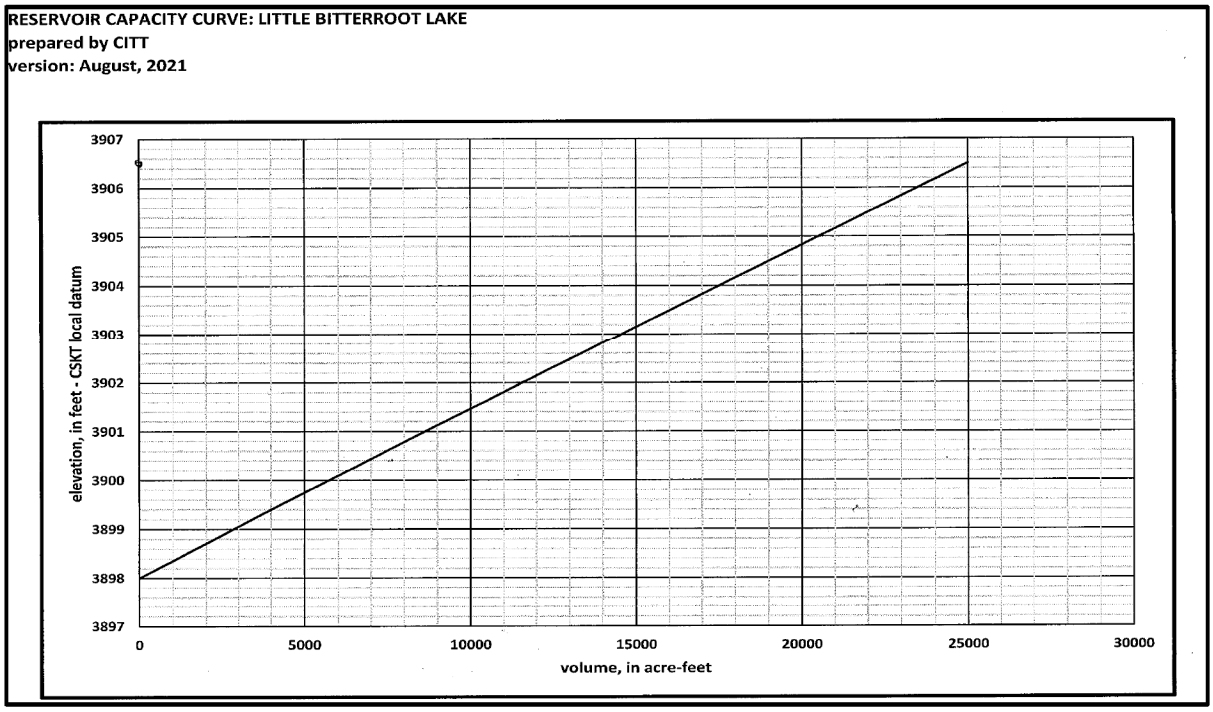
2) Several reservoirs on and associated with the Flathead Reservation have "minimum pool levels" set forth by the Compact, including Hubbard Reservoir. LBL feeds Hubbard and Hubbard is managed by FIIP. The Compact outlines a minimum reservoir level for Hubbard Reservoir (and other reservoirs). A minimum pool level was not established for LBL through the Compact.

3) In 2022, CSKT installed a monitoring system on LBL. Anyone can view the lakes level at any time via a web Portal https://cskt.aquaticinformatics.net/Data. Just change the parameter field from "discharge" to "Lake/res elevation."

4) Max and Min DRAWS- The LBL dam bottom level is 3898' elevation (above sea level). That is the lowest draw point vs. the highest dam level possible at 3906.5' (That is a range of approx. 8.5' – and totals 25,000 acre-ft of water). This means that if the lake level drops below 3898' elevation, then it is not due to losing water via the dam. Other factors, such as yearly precipitation and weather, can impact lake levels.

5) Want to make a change – Contact State Rep. Paul Fielder paul.fielder@legmt.gov 406 210-5943 or Sen. Dist. 7 Bob Brown bob.brown@legmt.gov 406 242-0141.

6) See Reservoir Capacity Curve: Little Bitterroot Lake



Please email me with any questions, edits, or comments – CaptainDanNWA@centurytel.net
(Capt Dan) Dan Handlin - President Little Bitterroot Lake Association

VI. BOD and SUPPORT STAFF – YEAR IN REVIEW

BOD and Support Staff Members will weigh in on their *areas of responsibility.*

Secretary report: Buck Measure Annual minutes from 2022 reviewed.

Treasury report: Tyler Apgar

Buck Measure Community Reach out Program – Focusing on School Children.

Robbie Torgerson All that is LBLA – Historian/Common Sense Guide/ Future Thinker

Mike LaRoi Septic Education and Awareness

Tonia and Tyler Apgar Road clean-up, Newsletter Editing, Treasury Report.

Ken Crippen Newsletter Writing, Communication Editing and Membership.

KEY STAFF

Kate Thomas – Manager SEAP

Jadin Doerr – Manager LBLA

Jake Bean – Lake Caretaker

OUR CONTRACTOR for LAKE TESTING

John Babcock John will Brief our LAKE Sampling RESULTS and PLAN for 2022

VOLUNTEERS at LARGE

Mike and Shirley Hemmer New Loon Education and Awareness mshemmer@littlebitterrootlakeassoc.org

Laurie Shotnik Brief our LAKE Sampling through the Volunteer Network RESULTS and PLAN for 2022.

Concerns, Comments and Suggestions

Your Board of Directors are all voluntary, and endeavor to represent you in the best ways that we can. We had some excellent and important problem reporting by concerned citizens last year. ACTION was taken…We are always open to your concerns, comments, and suggestions, so please provide them to any of the following:

List of Board Members with email addresses below

Dan Handlin	President/Treasurer	dhandlin@littlebitterrootlakeassoc.org
Rob Torgerson	Vice President	rtorgerson@littlebitterrootlakeassoc.org
Buck Measure	Secretary	bmeasure@littlebitterrootlakeassoc.org
Tonia & Tyler Apgar	Members at Large	tgardner@littlebitterrootlakeassoc.org
Grant Syth	Member at Large	gsyth@littlebitterrootlakeassoc.org
Mike LaRoi	Member at Large	mlaroi@littlebitterrootlakeassoc.org
Ken Crippen	Member at Large	kcrippen@littlebitterrootlakeassoc.org

Some of our serious Threats and Challenges:

- Invasive Water Species
- Septic System Age and Viability
- Increasing public use and abuse entering the lake from the south and north
- Water Quality
- Lake Level Challenges
- Transient Camping
- Noxious Weeds
- Algae
- Shoreline Erosion
- Lot over use
- The threat to Home Values should Pollution or AIS affect our Lake.
- Protecting our Loons

How LBLA is battling our Challenges:

- Expanded Spring/Fall Lake Water Sampling to determine the health of our lake.
- *NEW*Septic Education and Awareness Program (SEAP)
- Summer Boat Launch Volunteers Program/Stop Aquatic Invasive Species Initiative
- *New* Algae/Bacteria Septic Source Sampling (NEW DO Meter purchased)
- Grade School Grant and Support Initiative
- 200 FT No Wake Initiative
- Noise Problems Addressed with Signs and Newsletter
- Weed Control Education and Management Newsletter
- Monitoring VRBO/Airbnb Conditional Use Permits
- *NEW*Expanded Clean Up Heroes – Picking up Trash and Investigating Contamination
- Lake Etiquette and Safety Initiatives
- Lake Education and Awareness – Road Signs, Newsletters and Community Events
- Loon Education and Awareness Program
- Natural and Non-natural Fish Species Research
- Maintaining Key Contacts/Relationships with ALL the Organizations that Affect our Lake.
- Actively fielding your many calls and working diligently on your concerns
- Full on Rehabilitation and Reorganization of our 35+ years of LBLA Paperwork and Historical Docs

Please Copy and Share

LAKE ADVISORY FLYER – 2023

The Little Bitterroot Lake Association (LBLA) BOD asks you to be a good neighbor and "actively" take care of YOUR LAKE. "READ and SHARE" The Flyer below with your friends, guests and renters. TALK TO THEM about this important information. *YOU can make a difference!*

Boating regulations found in the FWP Montana Boating Laws Booklet 2021

Did you know? All must observe a 200 ft. NO WAKE ZONE from shore. Wakes blast docks, boats, destroy loon nests and shorelines. Motorboats and PWC max noise levels are 86 decibels within 50ft. Noise offends critters and neighbors. Children under 12 MUST wear life vests at ALL times. Be safe! Don't get a ticket! A person convicted of violating Montana's boating laws or regulations may be fined up to $500. Our assigned Warden visits Little Bitterroot Lake every week or so in the season and is known to have handed out various fines including some for 200ft NO-WAKE fines for $140.

Wash and Fertilize somewhere ELSE

Use of ANY detergent is totally unacceptable in or near our LAKE! DO NOT wash your boat at the boat launch. DO NOT take baths in our lake. Detergents of any kind hurt our lake! DO NOT use fertilizers near the lake, especially those with Phosphorus! Phosphorus makes algae. Algae contain toxins!

PROTECT Our Loon Species

If you harass our two Loon Pairs bad things happen: They will get spooked easily and leave LBL, with shore wakes you will damage their nests and kill their babies, with the use of pesticides and fertilized you will poison the chicks. These are very sensitive and beautiful creatures. Treat them with respect. Do NOT get closer than 200 Ft.

Septic BEWARE

Failing SEPTIC systems can infect our lake with FECAL BACTERIA. Every year check the sludge level. PUMP as necessary. If your system is over 25 years old, it must be monitored. CHECK IT! Do NOT overtax your system, i.e. if you have 50 people using a system designed for 3 bedrooms you may be POISONING our lake – GET A PORTA POTTY! Some people drink our lake water. Many of us swim in it!

Aquatic Invasive Species (AIS) A DANGEROUS THREAT TO YOUR LAKE!

If someone brings a boat with Eurasian Zebra or Quagga Mussels from an infected lake to ours, the mussels will rapidly multiply and kill our lake's fish and marine life. How? One tiny mussel (smaller that your fingernail) removes nutrients (fish food) from over a liter of water per day. This will leave nothing for the fish to eat. Mussels multiply rapidly and have no natural predators in North America. One mussel produces a million eggs. So far there is no treatment to stop them. Adding to the challenge Eurasian Weeds grow rapidly and will take over the shoreline. *Property values will decrease 13 to 22% if our lake becomes infected!*

***"ATTENTION" become an* ACTIVE BOATER an ACTIVE RESIDENT**

Times have changed DO NOT be a Passive Boater. If you see a boat from OUT of our AREA (check their license plate) … TALK to them: ASK if they have been exposed to AIS - ASK if they have been inspected? If necessary, TELL them it is a* $10,000 fine for transporting AIS! If you observe AIS, you MUST tell us!!!Take a picture of their car and boat license. We will put divers in the water if necessary to eradicate the infestation…*You MUST CALL 1 800 Tip Montana

ANNUAL DUES MIN Requested $50

THANK YOU FOR YOUR MONETARY SUPPORT AND ADDITIONAL CONTRIBUTIONS

You are making a HUGE DIFFERENCE!

Remember, your contributions, whether large or small are tax deductible because we are organized under Section 501(C) (3) of the Internal Revenue Code.

ALL HANDS-ON DECK DUES/CONTRIBUTION FORM

PLEASE MAIL BACK TO: LBLA - PO BOX 1003 - MARION, MT. 59925

NAME _____ **CONTRIBUTION AMOUNT** _____

MAILING ADDRESS _____

EMAIL ADDRESS _____

PHONE NUMBER _____ **CELL** _____

COMMENTS and IDEAS _____