

**Little Bitterroot Lake Association (LBLA)  
Newsletter No. 3 June 2024**



**\*MARK YOUR CALENDARS / EVERYONE IS INVITED / HAVEN'T PAID DUES DON'T WORRY/ FIRST TIME – GREAT!\***

**\*\*Annual meeting – All Welcome\*\***

**AUGUST 7<sup>TH</sup> 6pm Firehall Community Room**

*Welcome to Summer and to Many Welcome Back to Our Lake,*

This third NEWSLETTER of 2024 continues with important information about our lake with the hope you will take time to read it and support our efforts (like our sign at the “Y” says) to:

**“Keep the Lake Pristine for Future Generations”.**

**Because of your generous contributions, both monetary and volunteer labor wonderful things are happening:**

- 1) We have a **NEW LBLA Clean Team** – The BOD has been anxious to bring young people into our efforts. And now we are...I just hired four Marion local kids (Flathead High Schoolers) to work three to five hrs. (yes, we will pay them a decent wage) every Saturday of the entire summer (starting June 29<sup>th</sup>) CLEANING UP the lake and lakeshore. You will see them in their LBLA reflective vests and black hats. Please say hi to them, encourage them, and join in the effort.

*A Special Thank You To*

*Janene Kinniburgh - Bitterroot Screen Printers & Digital Graphics*

*<http://www.bitterrootsp.com> 406 752-1386*

*for the generous contribution of the reflective vests with front and back screen printing*

*(And thanks to Ron Trippet for setting this up)*

- 2) If you are looking for a GOOD summary of information on how to take care of our lake read the next one pager – Our **LAKE ADVISORY FLYER – 2024**. Help us by spreading this key information around...
- 3) Our two pairs of **LOONS** are back! An AMAZING waterbird. Please see **Hemmer’s article**.
- 4) Do NOT use Phosphorus anywhere near our lake. See **The Phosphorus Threat** article.
- 5) We are launching this year’s **Septic Education and Awareness Program**. Kate our SEAP Program manager just had a baby so expect to see her out knocking on doors with a new “little one”. A septic article is in this NEWSLETTER, please read it. We have a lot of old septic tanks that could fail. Take care of yours! Don’t remember the last time you pumped it? DO IT NOW. We have added water bacteria sampling all around the lake – so we are trying to keep a “bacteria watch” of the water at your shore, but it is up to YOU!

*Thank You for your support - Capt. Dan - [CaptainDanNWA@centurytel.net](mailto:CaptainDanNWA@centurytel.net)*

*Please Copy and Share*

## **LAKE ADVISORY FLYER – 2024**

*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 85 decibels within 50ft. Damaging Noise offends critters and neighbors. Children under 12 MUST always wear life vests. 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 \$150.

### ***Please Wash and Fertilize somewhere ELSE***

Use of non-biodegradable detergent is not acceptable 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 contains 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 than 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 1 800-847-6668 (Tip Montana)***

# INTRODUCING YOUR LBLA CLEAN TEAM

We are launching an ALL SUMMER LBL CLEAN UP PROGRAM. Four local Marion kids will be working EVERY Saturday all around our lake – CLEANING UP! Look for their BLACK HATS and YELLOW LBLA REFLECTIVE VESTS. If you see them say HI and thank them for their efforts! Here they are: Kaden Bristow, Owen Snarr, Lucas Nisson and Ash Lee Wager



Mariena

PLEASE FIX THE PICTURES



Waste in the form of trash, litter, and garbage often find its way into our lake. Plastic waste is particularly concerning because of its persistence in the environment. In the Great Lakes, for instance, approximately 86% of litter consists of plastic. Volunteers have collected over 1.7 million tiny pieces of plastic from shorelines across the eight surrounding states in the last decade. Additionally, floating plastic debris similar to the "Great Pacific Garbage Patch" has been found in the Great Lakes, which is an area of trash in the Pacific Ocean estimated to be twice the size of Texas.

Efforts to prevent and remove aquatic trash are crucial for maintaining water quality, protecting plants and animals, and preserving our lake. If you're interested in learning more or getting involved, consider participating in beach cleanups or supporting our **LBLA's CLEAN TEAM**.

## Loon Education and Awareness Program

Have you seen loons on the lake? They're back! We started seeing them during the last week of April – since the ice was off about three weeks earlier than last year, they came back sooner so hopefully they'll have more opportunities to nest on the lake this year. Last Fall, the LBLA had signs printed and posted around the lake, reminding boaters that LBL is a loon nesting habitat. As a reminder to everyone, loons' nest at the water's edge, and are often flushed off their nest by unsuspecting boats and kayakers. If you come across a loon on a nest, please avoid it, and contact us so we can mark it to alert others that a nest is present (see email below). This year, we will be participating in the loon survey in mid-July (the exact dates haven't been published yet) conducted by the Montana Loon Society. If you are interested in participating in the survey, please contact Mike and Shirley Hemmer at [mshemmer@littlebitterrootlakeassoc.org](mailto:mshemmer@littlebitterrootlakeassoc.org)

# The Phosphorus Threat

The “P” stands for phosphorus. It is one of the most polluting substances in lakes across the United States and is a serious potential threat to Little Bitterroot Lake.

Presently, phosphorus levels in Little Bitterroot Lake are stable, but with leaking septic systems, new development of property surrounding the lake, large tracts of “disturbed bare land”, excessive invasive noxious weeds, and overuse of phosphorus in fertilizers on grasses and other plants, the threat to Little Bitterroot Lake becomes very real.

If we educate ourselves, and care about keeping Little Bitterroot Lake clean and pristine, and act proactively we can contain the potential hazards of phosphorus pollution in our lake. *This short essay will give the reader a basic, easy to understand approach about fertilizers and their dangers to the lake in what is actually a very complicated complex bio-chemical subject.*

Most property owners try to eradicate and control invasive noxious weeds and replace them with grasses and other plants. These plants need nutrients for their survival. There are many nutrients found in the natural ecosystem, but the most important ones for healthy plants are in the form of Nitrogen (nitrates, nitrites, ammonia), Phosphorus (phosphates), and Potassium (apatite, potash). *Nitrogen (N)* is used by plants in a process called photosynthesis to produce chlorophyll, which aids in plant growth and greens up lawns, and for aquatic plants nitrogen makes the water look green. *Phosphorus (P)* is important in the development of healthy roots and is also important during seeding. *Potassium (K)* aids in the general health of plants, the formation of chlorophyll, and in disease immunity. In small quantities these nutrients are good for the overall health of the Little Bitterroot Lake ecosystem. Environmental problems in the lake begin when fertilizers containing excessive amounts of these nutrients end up in the lake.

Nitrogen, phosphorus, and potassium are the most important ingredients in any fertilizer. If the proper fertilizer is selected and used in small amounts, they may have a low impact on the lake, but over fertilization of grasses and plants can have devastating environmental effects on any lake, including Little Bitterroot Lake. The pollution problems created by fertilizer used by unknowing property owners around Little Bitterroot Lake could be catastrophic to the environmental integrity of the lake.

## **The following is a worst-case scenario for a future Little Bitterroot Lake**

Dissolved nitrogen and phosphorus in fertilizers are leached from fertilized grass and plants from rain and snow melt into the lake. Soluble phosphates containing phosphorus is also released into the soil from the decomposition of grasses and other plants, then leached into the lake by rain and melt water from snow. Aquatic plants which include blue green algae and invasive noxious Eurasian watermilfoil absorb these nutrients into their cells providing growth and other important plant functions. The environmental problems involving phosphorus,

begins when the lake becomes over-loaded with intolerable levels of dissolved phosphorus (phosphate, PO<sub>4</sub>). Aquatic plants absorb dissolved phosphorus like sharks in a food frenzy. The result of this pollution produces blue green algal blooms and a proliferation of all aquatic plants in the lake. It is estimated that one pound of phosphorus can produce about 500 pounds of blue green algae! The lake becomes eutrophic, that is the lake is over saturated with nutrients, especially phosphorus. When a lake is in the eutrophic state, aquatic plants deplete dissolved oxygen to very low levels resulting in negative unwanted shifts to the natural aquatic plants and animals which inhabit the lake. If the phosphorus pollution is extreme natural desired species rapidly decline or disappear from the lake while undesirable species thrive. Water clarity would greatly decrease taking on an unhealthy green appearance along the shoreline. Fish would often be seen belly-up in the water, dead or fighting for oxygen. In addition, once a lake is heavily polluted with phosphorus it is extremely difficult to get phosphorous levels back to normal, often showing phosphorus pollution retention periods greater than fifteen years!

Is this what we want for Little Bitterroot Lake? The answer is an obvious - NO. Can Little Bitterroot Lake realistically change like the lake depicted above? This is a scary - YES. Water quality monitoring of Little Bitterroot Lake by Water & Environmental Technologies since 2004 shows that although phosphorus levels in Little Bitterroot Lake are presently low and stable, nitrogen levels have “significantly risen” since 2012. Nitrogen levels in the lake are presently high enough for rapid algae growth in the lake, but by itself probably will not produce algal blooms, even with more additions of nitrogen. There is also a relationship between nitrogen and phosphorus concentrations. Increased nitrogen levels in Little Bitterroot Lake have not yet produced large algal blooms and by itself probably will not, but if phosphorus levels increase as nitrogen levels continue to increase, a tipping point will soon be reached limiting any further addition of phosphorus to the lake. The lake becomes what is termed a “phosphorus limited lake”. Little Bitterroot Lake is presently phosphorus limited. Increased concentrations of nitrogen in the water decreases the amount of phosphorus the lake can hold to reach its tipping point limit and any increase in phosphorus could directly cause algal blooms in the water to explode. Oxygen levels in the lake would also decrease (eutrophication) having negative effects on the lake. Little Bitterroot Lake is approaching that limit.

What can individual property owners proactively do to decrease or at least help stabilize increased phosphorus in Little Bitterroot Lake? One very important thing we all could do to help in this serious developing problem would be to choose the correct fertilizer to use when fertilizing property. Choose a 0 % phosphorus free fertilizer. The way you can tell if the fertilizer is phosphorus free is by the 3 numbers on the label on the fertilizer bag. For example: 20 – 0 - 5. These numbers indicate the % by weight of the nitrogen (N), phosphorus (P), and potassium (K) in the bag of fertilizer. In this example, a 100 pound bag of fertilizer would have 20 pounds of N, **0 pounds of P free**, and 5 pounds of K in the fertilizer. The middle number needs to be zero. REMEMBER: USE PHOSPHORUS FREE FERTILIZER. The remaining 75 pounds would be inert filler ingredients.

What else can we do to protect Little Bitterroot Lake? Use fertilizer in small amounts as instructed. Fertilize less by the lake – better yet DO NOT fertilize by the lake! Limit the number

of times per year in which you fertilize to once per year or in some years not at all. The best time of year to fertilize is around Easter (spring) or shortly after Labor Day to October (fall). Avoid fertilizing in summer. Try to purchase organic insoluble nitrogen fertilizer that is phosphorous free because they decompose into soluble plant nutrients much slower than soluble chemical nitrogen fertilizers. Plant bushes and shrubs close to the lake to decrease and slow the flow of water runoff. Remove grass clippings and other decomposing organic plant material because it decomposes into soluble phosphorus phosphate harmful to the lake. Encourage your lake friends and neighbors to buy phosphorus free fertilizer. Encourage agricultural/country stores or other stores which sell fertilizer to stock phosphorus free fertilizer to help protect and save our area lakes from the dangers that phosphorus pollution creates.

In summary, there are many environmental issues attacking Little Bitterroot Lake. Phosphorus in fertilizers is one of these serious problems that we as individual property owners can eliminate and control if we proactively select and properly use phosphorus free fertilizer if or when using fertilizer on our property. Knowledge and awareness of these environmental issues is important if we expect to make a cohesive proactive plan to protect Little Bitterroot Lake. Why should we wait for Little Bitterroot Lake to suffer the same environmental problems that so many lakes in the Midwest and eastern United States have been affected by? **Make the right choice (if you must fertilize): use phosphorus free fertilizer.**

**SOURCES OF INFORMATION FOR GREATER DETAIL**

Little Bitterroot Lake Water Quality Monitoring Program 2020 Annual Report, Water and Environmental Technologies, Butte, Montana  
The Montana Lake Book, 3<sup>rd</sup> Edition, 2017, Whitefish Lake Institute  
Ted Peters, Director, Geneva Lake Environmental Agency (GLEA), Phosphorus Free Fertilizer, 2009

## Loon Education and Awareness Program

Have you seen loons on the lake? They're back! We started seeing them during the last week of April – since the ice was off about three weeks earlier than last year, they came back sooner so hopefully they'll have more opportunities to nest on the lake this year. Last Fall, the LBLA had signs printed and posted around the lake, reminding boaters that LBL is a loon nesting habitat. As a reminder to everyone, loons' nest at the water's edge, and are often flushed off their nest by unsuspecting boats and kayakers. If you come across a loon on a nest, please avoid it, and contact us so we can mark it to alert others that a nest is present (see email below). This year, we will be participating in the loon survey in mid-July (the exact dates haven't been published yet) conducted by the Montana Loon Society. If you are interested in participating in the survey, please contact Mike and Shirley Hemmer at [mshemmer@littlebitterrootlakeassoc.org](mailto:mshemmer@littlebitterrootlakeassoc.org).

## **LBLA Septic Education and Awareness Program (SEAP)**

**We have a Septic Education and Awareness (SEAP) Program! “Managed by Kate Thomas” We will go door to door and help you fully understand: your septic, your lake responsibilities and explain what we can do to help you protect our LAKE from failed septic systems!**

**This program is the “best” in the state of Montana. We have a full database of all septic systems with their age and type of construction and a fully interactive program with all lake owners!**

With your help - Little Bitterroot Lake will have the best defense against lake contamination because of all our efforts and our NEW SEAP Program.

### **What’s going on down below?**

As we sit back and enjoy the serene and priceless views of our lake, we should also take a moment and think about why the lake is so pristine and what we can do to preserve this treasure. Most people don’t like when conversations ‘go into the sewer (or septic)’ .... now is the time for all of us to have *that* conversation. This is a serious topic and we must take responsibility before it is too late.

For all of us who have septic systems on Little Bitterroot Lake, we have the responsibility to keep them running in good order. We have many options to choose from, from professional inspections (and maintenance) to annual ‘do it yourself’ checkups. If the homeowner finds that their system is malfunctioning or suspect it, it will be necessary for them to contact a licensed professional with the necessary skills and equipment to repair the system. Septic system repairs in most cases require a permit from the local health jurisdiction and must conform with state and local public health codes that regulate septic system repair. If you choose to inspect or maintain your septic system, you do so at your own risk and are personally responsible for your own safety. You may be exposed to health hazards including, but not limited to, infectious diseases, hazardous gases, and electrical shock. Sewage carries harmful bacteria, viruses, and parasites that can cause infection and illness, especially in people with weakened immune systems, pregnant women, children, and the elderly. Now, think for a moment if this applies to any of us swimming, fishing or drinking water exposed to a malfunctioning septic system!!!

We in the Little Bitterroot Lake Association are taking this seriously. Over the next few months SEAP communications about the health/wellness of our lake, surrounding area, and steps we all can take to keep this area one of the most pristine locations in the country will be delivered. We must all be stewards of our lake. If for some reason the lake displays signs of severe septic leachate right off someone’s shore, we will all see it and it will become an eyesore and mean major repairs are in order.

NEWS ALERT: Because of your support and contributions, we are now able to sample in the Spring, Summer, and Fall. This will give us a much better understanding of how our lake is being influenced by septic leachate and coincide with our 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 LBLA 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.*

**Little Bitterroot Lake Residents PLEASE take care of your SEPTIC SYSTEMS!**

**Septic systems older than 15 years are at increased risk of failure and leachate!** Septic leachate occurs when treated water still contains pollutants like nutrients or pathogens. This polluted water can contaminate groundwater and compromise drinking wells, as well as contaminate surface water bodies such as Little Bitterroot Lake.

This can cause illness in humans and pets as well as harmful algal blooms in the lake that cause fish kill (see picture) and diseases in recreators.

The Little Bitterroot Lake Association is here to guide and provide you with access to financial and educational resources to properly maintain your septic system!





## Maintaining Your System

**Septic systems should be inspected at least every 3 years and pumped every 3-5 years.** Systems should be pumped more frequently with increases in people using the system, amount of wastewater generated, and volume of solids in the system (such as a garbage disposal). Having a smaller septic tank also increases the frequency of pumping.

Drainfields should be inspected for cracked pipes and failure due to rust, frost, heavy loading, excess water from runoff or irrigation, and roots. Improperly treated wastewater can be toxic for children and pets.

Adding large solid waste items (diapers, cigarettes, grease, etc.) can clog the system. Adding large amounts of household chemicals, gasoline, pesticides, paint, and detergents can kill the microbes in the system that treat the wastewater.

Michigan State University's Michigan Septic System Education has stated that overloading the system drastically increases the chance of failure. This is caused by running multiple appliances at once and having more people using the system than what it is rated for. **A 1-3-bedroom house is intended to accommodate 1000 gallons for 4-5 residents. Housing more people or throwing a party floods the septic system and overwhelms the capacity of the tank and drainfield.** Microbes cannot break down waste products while the system is being flooded, causing sewage backups and untreated effluent into the drainfield.

**If you are throwing a large gathering or housing more than 4-5 people in your home or on your property, consider these steps to minimize septic failure:**

- Rent a portable restroom
- Inspect and pump the tank and drainfield prior to the gathering
- Do food prep and other water extensive cooking ahead of time
- Reduce extra water inputs from laundry and dishwashers a few days before the party
- Ensure external water inputs such as rain gutters and irrigation lines are directed away from the drain field

**Remember it is much more expensive to replace an entire failed system than it is to repair small issues discovered during routine inspections.** Maintenance service typically costs around \$250-\$500.

**You may be eligible for a 50% reimbursement (up to \$200) for pumping and inspection of your system through the Flathead Basin Septic Maintenance Reimbursement Program, funded through a Department of Environmental Quality federal grant. New funding and guidelines for the grants will occur on or about July 1, 2024**

<https://lakecountyconservationdistrict.org/septic-maint-reimbursement/>  
or Call Caroline McDonald at 406 747-0895

## Symptoms of a Failing Septic System

- Backups in toilets and sinks when flushing or doing laundry
- Bright green grass over drainfield
- New vegetation downstream of drainfield
- Foul odors
- Pooling of water or muddy soil around system, in the crawlspace, or basement

- Over **14,000 watercraft** have been inspected so far this season with **16 mussel fouled vessels** intercepted to date. See table below for details (some heading our way):

Number	Date	Station	Boat Description	Origin Location	Origin State	Destination	State
1	3/10/2024	Anaconda	Pontoon	Crystal Lake, MN	ND	Ephrada	WA
2	3/16/2024	Anaconda	Outboard	Unknown	MI	Colville	WA
3	3/20/2024	Dillon	Outboard	Lake Mead	AZ	Bozeman	MT
4	3/28/2024	Anaconda	Ski Boat	Cass Lake	MI	Kelowna	BC
5	4/2/2024	Dillon	Outboard	Lake Havasu	AZ	Missoula	MT
6	4/7/2024	Anaconda	Outboard	Unknown	TX	Seattle	WA
7	4/11/2024	Dillon	I/O	Lake Havasu	AZ	Lethbridge	AB
8	4/19/2024	R1 Office	Sailboat	Lake Hefner	OK	Somers	MT
9	4/20/2024	Wibaux	I/O	Unknown	MN	Seattle	WA
10	4/23/2024	Dillon	Wakeboat	Saguaro Lake	AZ	Wasilla	AK
11	4/25/2024	Wibaux	Cabin Cruiser	Unknown	MI	CDA	ID
12	5/1/2024	Anaconda	I/O	Unknown	MN	Sagle	ID
13	5/3/2024	Wibaux	Outboard	Otter Trail Lake	MN	Fort Peck	MT
14	5/4/2024	Dillon	Pontoon	Lake Elsinor	CA	Bigfork	MT
15	5/5/2024	Wibaux	Pontoon	Waconia	MN	Three Forks	MT
16	5/10/2024	Dillon	Pontoon	Unknown	AZ	Somers	MT



## ALL HANDS ON DECK CONTRIBUTION FORM

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

NAME \_\_\_\_\_ CONTRIBUTION AMOUNT \_\_\_\_\_

MAILING ADDRESS \_\_\_\_\_

EMAIL ADDRESS \_\_\_\_\_

PHONE NUMBER \_\_\_\_\_

CELL \_\_\_\_\_

COMMENTS and IDEAS \_\_\_\_\_