Spirit Lake Property Owners Association
Friends of Spirit Lake
SPIRIT LAKE, IDAHO
PROTECT • PRESERVE • IMPROVE

Spirit Lake Report

Periodic Update on Spirit Lake by the SPIRIT LAKE PROPERTY OWNERS ASSOCIATION July 2023 Vol. 9

SLPOA Mission: ***To develop the capacity within our community to provide a sustainable lake habitat that will allow all people who live, work and play within its environment an optimal North Idaho experience.***

50th Anniversary Celebration – SLPOA Board of Directors

SLPOA's Annual Meeting and 50th Anniversary BBQ Party!

The 50th Annual Meeting will be held this year at Timberlake High School

Sign in at 9:00 AM <> Meeting at 10:00 AM

!!! CELEBRATE 50 YEARS OF ACCOMPLISHMENTS !!!

SLPOA will host a BBQ for its members and guests (no host bar available)
Where: Sedlmayer's on Spirit Lake
When: August 12, 2023 at 2:00-4:00 P.M. (After the Annual Meeting)
Enjoy Food – Meet Other Members – Make New Friends – Just Have Fun

Harmful Algae Blooms - Loree Peery, SLPOA Member

Nutrients! How could something with a good name cause us harm?

For the last two summers, you may have noticed, we have experienced Harmful Algae Blooms (HAB's) in Spirit Lake. These appear as cloudy green clusters or mats. When this occurs, the lake is not safe for humans or animals. These blooms can cause rashes, stomach and liver illness, and even respiratory and neurologic problems. It also contributes to a decrease in the fish populations. Not something we want, right? We all look forward to the lake in the summer.

What causes HAB's? The lake is home to algae and other microorganisms all the time. It becomes a problem when there is an overgrowth of these things, specifically the cyanobacteria, or blue green algae. These are the bright green mats you see in the lake the last two summers. An excess of nutrients, nutrient pollution, feed the algae, and cause an overgrowth.

What are nutrients? Nitrogen and phosphorus are a part of all aquatic ecosystems. Aquatic plants need the nutrients, and fish need the plants. When they are present in excessive quantities, they bloom into a problem.

What are the sources of the nutrients? Wastewater from improperly functioning septic systems, stormwater runoff from roofs, roads, and other hard surfaces. Also, lawn fertilizers, yard waste, and ash from fires on the beach. These combined in excess create a load of nutrients into the lake which feeds the algae causing an overgrowth, consuming oxygen which decreases the oxygen content in the lake, and killing fish. This overgrowth of algae, the harmful algae blooms, is also toxic to people and dogs. We all want to enjoy the beautiful lake for recreation, fun, and relaxing activities. If we work together to take care of it it will give back to us many times over for years to come.

Figure 1: HAB on Spirit Lake summer 2021 (Courtesy of Panhandle Health District)

The good news is, we homeowners can all do our part to prevent this. Here are the ways **(Continued on page 2)**:

HABs (Continued from page 1) - Loree Peery, SLPOA Member

Avoid applying fertilizer to lawns near the water. Kootenai County already has a rule in place to help alleviate nutrient runoff. It requires that you have a buffer of native plants above the high water line, and between any lawn and the lake to help filter the runoff. Avoid excavating and installing hard surfaces near the high-water line.

Also remember to inspect your septic system annually. Have it pumped out regularly. (Every 2-5 years for a 3-bedroom home with a 1,000-gallon tank.)

If you are interested in learning more about our lake ecosystem and algae blooms, please check out the resources below

https://www.epa.gov/nutrientpollution/where-occurs-lakes-and-rivers

https://www.kcgov.us/222/Building-Ordinances-Statutes-Rules

Kootenai County codes 8.7.110 and 8.7.111

Research: Effectiveness of Stream Buffer Rules - Robin Kirby, IEP Forester

First, a quick primer on the hydrologic cycle: As the snow melts in the peaks of Mount Spokane, water percolates through the tree canopy to the forest floor which is covered in litter material composed of leaves, decaying wood and other organic debris. This water then seeps into the soil, and eventually trickles down into the groundwater below the soil surface. The cold groundwater may flow into bedrock or to the surface causing water to flow out of the mountain side, becoming an initiation point for a headwater stream. These small streams flow down a draw making a journey down to the lower elevations and into larger streams such as Brickel Creek or Fish Creek that support fish populations. These larger streams, in turn, feed into Spirit Lake and Twin Lakes, respectively. Abiotic factors (i.e. soil types, topography, and weather) as well as biotic factors like forest cover and wildlife all affect the timing and amount of flow in these systems.

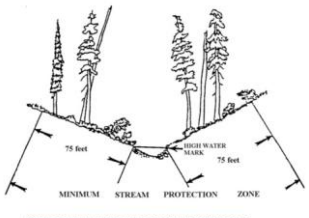

Figure 2: Idaho Class I Stream Protection Zone

Each state has specific regulations within their respective Forest Practices Act to protect water quality. The Washington Department of Natural Resources (DNR) and Idaho Department of Lands (IDL) enforce timber harvest rules pertaining to land immediately adjacent to streams, called "riparian areas". The rules in both states prescribe the width of these riparian areas, commonly call stream buffers, and the number and size of trees to be left within the buffer during timber harvest activities. The purpose of these stream buffer rules is to minimize the impact to water temperature and sedimentation and provide large organic debris (dead trees from windfall, which are important fish habitat structures) for both fish-bearing and non-fish-bearing streams. The stream buffer rules are dependent on the stream type or classification - bigger streams, or ones with fish presence, have wider and more stringent stream buffers. For instance, in the state of Washington, a Type "F" stream meets the physical criteria to provide habitat for fish and requires a 90-110' stream buffer that allows for limited harvest. In Idaho, a stream that can spawn, rear, or support the migration of fish is a "Class I" stream which requires a 75-foot buffer - also allowing for limited harvest. Smaller, headwater streams are classified as "Np" (Non-fish perennial) and "Ns" (Non-fish seasonal) in Washington and classified as "Class II" streams in Idaho. These smaller streams also have prescribed limitations on width and harvest activity - 50 feet in Washington and 30 feet in Idaho. The analogy to these rules in the home-building sector are "setbacks", or regulations pertaining to how close you can build to a body of water – all designed to protect water quality. It should be noted that there are little to no analogous regulations in the agriculture sector in either state - you can graze cattle or plow furrows of corn next to a fish stream…if you want to.

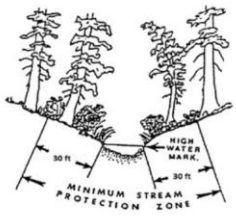

Figure 3: Idaho Class II Stream Protection Zone

So, are these rules and regulations effective at protecting water quality? **(Continued on page 3)**

Stream Buffer Rules (Continued from p 2) - Robin Kirby, IEP Forester

From a scientific perspective, it is difficult to ascertain concrete answers with so many variables, overlayed with subjective terms like "protect", "minimize", and "water quality" (and the often-over-looked timescale).

To further the science, Inland Empire Paper Company, University of Idaho, Utah State, Washington Department of Natural Resources and other entities are all participating in research to evaluate the effectiveness of Washington's Type "Np" stream rules (called the Eastside Type N Riparian Effectiveness, or ENREP). The research will help determine whether the current rules are effective by measuring and monitoring different stream parameters such as temperature, sediment, and aquatic macroinvertebrate populations.

The research targets a variety of watershed types located in the Springdale, Sacheen Lake, Brickel Creek and Fish Creek sub-watersheds. These are paired-watershed studies, which means for each sub-watershed harvested according to the rules, there is an adjacent sub-watershed that is left unharvested as an "experimental control" – IEP is participating in three of the four total paired-watershed studies. Researchers will be able to identify the magnitude of the change between the harvested and unharvested control by measuring a variety of parameters 2 years prior to harvest, during harvest, and 2 years post-harvest – a total of five years. This information will help to identify the relationship between the observed changes in the resource condition and the forest management activity, and the effectiveness of stream buffers. The instruments for the study will remain in place for a total of 5 years. The Brickel and Sacheen Lake watersheds started monitoring in 2020, while the Fish Creek watershed started in 2021. It's hard to say when the research will be peer-reviewed and published, but it is likely to be in 2025 or 2026. There is an effort to extend the research timescale to capture the broad climate range over time.

This research takes a lot of coordination, time, cost, and no small amount of patience. The foresters at IEP are excited to participate in this important research. We hope to show some of you this interesting work during our annual Forestry Tour this September 8th.

Membership News – Jerry Peterson, SLPOA Board of Directors

!!! Membership Renewals Down !!!

For some unexplained reason 40% of our 2022 members have yet to renew their membership for 2023.

Spirit Lake Property Owners Assoc. is a non-profit 501c3 organization, with all officers & board members volunteering their time. In addition, a number of volunteers assist with specific projects. We support environmental conservation projects that benefit everyone such as Brickel Creek bank restoration to reduce silt, improve fish habitat to increase the fishery, milfoil removal, lake debris cleanup, monitor & sample the lake water quality monthly, publish 3-4 newsletters per year, hold annual meetings, and of course our current project to replace our failing dam to improve water level control.

We utilize our reserves to help supplement some of the projects that are beyond our normal operating costs. So far this year we have had to spend twice as much as we have brought in through membership fees.

At the current rate of $40 per year, I would say "it's a bargain." None of us would think twice about spending $40 to maintain our lake homes or docks, so why not our lake? We know many of you have made generous donations to the Weir Project and that is very much appreciated. However, those funds are dedicated. Therefore, the ongoing operations of SLPOA depend on regular membership dues.

We have been in existence for 50 years, but without the support of members like you it will not go on forever! If you haven't renewed your membership, please do so now at: *friendsofspiritlake.com* or by mail: SLPOA – PO Box 363, Spirit Lake ID 83869. **Thank you for your continued support!**

Want More Lake News?
Get more news at the Annual Meeting on August 12, 2023, 9:00 AM at Timberlake High School, or visit the Friends of Spirit Lake website at www.friendsospiritlake.com

Friends of Spirit Lake
Spirit Lake Property Owners Association
PO Box 363
Spirit Lake, ID 83869

Lake Cleanup A Success – Paul Sturm, SLPOA Board of Directors

On June 3, 4 and 5, SLPOA conducted a lake cleanup of mostly floating debris, logs, and dock parts. The purpose was to make the lake safer for navigation and recreation as well as remove debris that could be environmentally harmful. Needless to say, not every piece of debris could be collected and removed, but a large amount was removed.

Bullhead, LLC, was the contractor that removed and disposed of the material. The cost for this was $8521.00 (a bargain in my view) paid from your lake association dues and donations. None of your Wier donations were used for this project. Thanks goes to Bullhead, LLC for adapting to the unexpected and providing the community with a reasonable cost as a service to us all. Great care was taken to keep non-degradable material (foam, etc.) from getting into the lake.

Boondocks, LLC, assisted, along with volunteers to locate and ferry material to the City Boat Launch site. Boondocks, LLC, was especially helpful in staging the material on Saturday so that it was accessible to the excavator on the beach. Boondock's fee was $1620.00.

Volunteers assisted with managing traffic, dismantling dock parts, cutting up logs and cleanup at the City Boat Launch site. We are grateful for the several volunteers that showed up and helped over the three days.

Board News Bulletin

Dustin Thiers, the new owner of Boon Docks, has joined the SLPOA Board. In addition, he has made a generous donation to SLPOA. We look forward to Dustin's insights and experience informing the Board.