



Lakeshore Violation Impacts Lake

A lakeshore violation in Beaver Bay highlights how vulnerable Whitefish Lake is to development activities

A lakeshore development project in Beaver Bay started with a lakeshore violation last year for cutting down trees in the lakeshore protection zone. This caused a loss of deep-rooted, soil binding vegetation to buffer the shoreline from erosion among other ecosystem services.

In late May, the WLI field crew observed the landslide that the contractor stated is errant blasted material. The entire hillside is covered by large boulders and fine sediment. The fine sediment reaching Whitefish Lake is full of phosphorus needed by unwanted algae. The precipitated fine sediment is also blanketing the lake bottom causing localized death of aquatic life that live there.

The issue gets muddier with the complex jurisdictional authority on Whitefish Lake involving multiple agencies. The Beaver Bay violation highlights systemic failures ranging from the landowner, contractor, and blasting sub-contractor to jurisdictional oversight and response. Change is needed to lakeshore regulations.



Blasted material covers a hillslope contributing unwanted fine sediment to Whitefish Lake.

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An ineffective silt fence in the lake was replaced with a WLI recommended turbidity curtain to limit fine sediment delivery to the lake.

WLI is working on recommendations to provide a potential amendment to the original 1975 Montana Lakeshore Protection Act. If Montana policy can be improved by increasing accountability and the structure of fines, local lakeshore authorities could have more tools in their toolbox to prevent or manage these unfortunate scenarios.

Whitefish Lake Institute
550 East 1st Street #103
Whitefish, MT 59937

Voice: 406.862.4327
info@whitefishlake.org
www.whitefishlake.org

Founded in 2005

Mission Statement

The Whitefish Lake Institute is committed to science, education, and aquatic resource initiatives to protect and improve Whitefish Lake and Whitefish area water resources today, while providing a collective community vision for tomorrow.

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Whitefish Lake Institute

Local Efforts Curb Aquatic Invasive Species

WLI has been instrumental in the effort to curb local aquatic invasive species. We have focused our attention on Eurasian watermilfoil (EWM) in Beaver Lake and Curly-leaf Pondweed in Haskill Creek. At Beaver Lake, we are cautiously optimistic that EWM can be eradicated and at Haskill Creek our management goal is to prevent Curly-leaf Pondweed from entering the Whitefish River.

Beaver Lake Eurasian watermilfoil

The Beaver Lake EWM control/eradication effort began in 2012 as a multi-agency cooperative effort by deploying bottom barriers near the boat ramp. The bottom barriers were successful in suppressing the largest population patches of the infestation. After the bottom barrier effort, WLI and the City of Whitefish began suction dredge operations via a contractor to remove isolated patches of EWM. Suction dredging involves a diver identification of single plants or plant communities and then suction dredging the plants from the roots to prevent fragmentation.

In 2019, Montana Fish, Wildlife & Parks assumed management of the Beaver Lake EWM issue with support of WLI staff. That year, FWP divers found a small number of EWM plants and utilized a WLI suction dredger for removal. After suction dredging, FWP installed bottom barriers supplied by WLI near the boat ramp. WLI maintained a sediment curtain near the lake outlet to Beaver Creek to minimize the potential for downstream drift of plant fragments to Beaver Creek and Whitefish Lake. That sediment curtain degraded over time and WLI removed it in 2023.

In 2020 and 2021, additional EWM plants were hand removed by FWP divers and bottom barriers were again deployed near the boat ramp. Also in 2020, WLI donated the suction dredge unit to FWP to be used at Beaver Lake if needed, and in other state waterbodies requiring that management technique. In 2022 and 2023, visited Beaver Lake multiple times and no EWM were detected. So far in 2024, a few EWM plants have been detected and removed.

Haskill Creek Curly-leaf Pondweed

In 2022, WLI staff found Curly-leaf Pondweed in Haskill Creek. The infestation appears to be limited to the stream reach between Voerman Road and Monegan Road. No plants have been found between Monegan Road and the Whitefish River. The concern is if plants reach the Whitefish River, they will like expand downstream. WLI and FWP now partner to walk the stream multiple times a year to pull any plants they find.

Northwest Montana Lakes Network

The Northwest Montana Lakes Network (NMLN), coordinated by WLI, collects water quality and AIS information at 41 program lakes in Northwest Montana, many in the Whitefish area. Included in the program are early detection microscopy samples collected for the presence/absence of zebra mussel veligers (larvae). Microscopy samples are analyzed by the FWP lab in Helena. There were no positive findings in 2023 for waterbodies sampled by the program.

Environmental DNA (eDNA) analysis offers a complimentary detection technique without the need to identify an actual individual plant or animal. WLI utilizes eDNA laboratory analysis conducted by the University of Montana for zebra mussels, EWM, and curly-leaf pondweed. Results from 2023 revealed no invasive species in any samples.

In 2024, WLI began a three-year contract with the U.S. Forest Service to collect eDNA samples on Hungry Horse Reservoir, Ashley Lake, Tally Lake, Upper Stillwater Lake, Holland Lake Lindbergh Lake, Lion Lake, Swan Lake, Echo Lake, and Van Lake.



This year the Great Fish Community Challenge celebrates 10 years of raising funds for local nonprofits and causes that matter to Flathead Valley residents. WLI is fortunate to have been chosen to participate in the challenge for all 10 years!

We are excited to participate in the 5-week fundraising campaign (Aug. 8 - Sept. 13) this year that inspires community-wide giving and builds awareness about the critical work of eighty Flathead Valley nonprofits. WLI is raising funds to protect Whitefish Lake and the lakes of northwest Montana with a goal of raising \$75,000.

We get part of our drinking water from the Whitefish Lake and it drives our local economy. Everyone can agree that it's a resource worth protecting. At WLI, that's our mission! On a typical summer day, the Whitefish Lake Institute's science team is out collecting samples from lakes across northwest Montana. The day starts with a visit to WLI's storage unit to pick up instruments, sampling equipment, and boats. After a full day on a lake, samples are shipped to the laboratory. With hundreds of samples analyzed each year, detailed record keeping is required. Our Limnologist uses complex computer code to create charts that display long-term trends in water quality. Staff scientists then write reports to the community, partners, and agencies that detail water quality status along with recommendations for protection.

The combined costs of WLI's water quality monitoring, Aquatic Invasive Species protection programs, wetland nature preserve upkeep, and education programs are over \$175,000 annually. Consider putting WLI into your donor basket during Great Fish Community Challenge and help protect our lake. The donation portal is open on the Whitefish Community Foundation website whitefishcommunityfoundation.org.

COME JOIN IN ON THE FUN!

The Great Fish Fun Run and Community Celebration will be Sept. 7th, 9am-1pm at Depot Park in Whitefish. The Great Fish Awards Celebration will be Tuesday, October 22, 5-7pm at the Wachholz College Center in Kalispell.

Did you know...

31 mussel fouled watercraft have been intercepted in Montana by FWP and its partners in 2024 to date

There are no known infestations of zebra or quagga mussels in the state

New Science Advisory Committee Member

Richard Menicke is the former geographer for Glacier National Park. He managed the park Geographic Information System (GIS) program and applied that information to park management and related research and education programs. He retired from his position this past January.



Richard received his BS in Forest Management from Texas A&M University and his MS in Environmental Science and Regional Planning at Washington State University. There, his thesis married GIS and non-point source water pollution modeling to assess watershed health. Richard is also the Whitefish High School cross country and track and field coach.

Revised WLI Website

WLI recently revised our website www.whitefishlake.org to better inform our membership, the public, and partnering agencies of our work. New information on the webpage includes the "State of the Lake" that highlights key water quality parameters. Management agencies and local government will be able to easily download our data which is free to anyone or any entity. The website also makes it easier for our donors to make a contribution to support our work.



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WLI ED Mike Koopal presented lake information and lake issues to the Little Bitterroot Lake Association in Marion, Montana



Western Montana Conservation Commission ED Casey Lewis speaks at the Flathead Lake Biological Station during the US EPA press event announcing large toxics reduction grants in western Montana.



Whitefish resident Charlie Abell was invited to speak at the Western Montana Conservation Commission meeting in Kalispell. Charlie and Bob Brown of Whitefish were instrumental in passing the 1975 Montana Lakeshore Protection Act.



Durae Belcer, WLI Program Coordinator collects an AIS early detection sample from Upper Stillwater Lake as part of the Northwest Montana Lakes Network (NMLN).



WLI Finance & Grants Manager Carol Treadwell and Limnologist Cassie Roberts staff our booth at the 2023 Great Fish Fun Run. Come talk to us at this year's event on September 7 at Depot Park.



WLI ED Mike Koopal operates a drill rig near Whitefish Lake. Why is that? You'll have to keep reading LakeFront to find out why!

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