

# LakeFront

Quarterly Newsletter of the Whitefish Lake Institute

Fall 2022

## Aquatic Invasive Species— 2022 Summary

In 2022, Montana Fish, Wildlife & Parks (FWP) and their partners conducted 98,832 watercraft inspections. Of that total, 19,194 watercraft were considered high risk due to being last launched in a state with a known AIS infestation. The AIS program caught 53 mussel infested watercraft including one in Whitefish on August 30.



*Mussel fouled boat from Minnesota caught in Whitefish on August 30th. The owner had planned to launch the boat in Whitefish Lake.*



*Curly-leaf pondweed from Haskill Creek.*

found curly-leaf pondweed in (continued on Page 2...)

FWP and their partners also conducted 6,200 AIS surveys. FWP completed the majority of the survey work but WLI completed 205 surveys as part of the Northwest Montana Lakes Network and via a partnership with the City of Whitefish. There were 12 new AIS detections in the state—mainly curly-leaf pondweed and Eurasian watermilfoil. Cynthia Ingelfinger from WLI

## Thank You Great Fish Donors!



It takes a village... Flathead Valley residents donated a total of \$5,080,113 to the Great Fish Community Challenge for causes that matter to our community. Whitefish Lake is at the heart of this community. It drives our summer economy, gives us drinking water, supports biodiversity, and cools us on hot summer days. From ancient history to today, communities have come together around water. This summer, Whitefish residents came together to give a total of \$61,410 to support WLI projects. The Whitefish Community Foundation Circle of Giving matched those gifts with \$11,800. Your support keeps WLI programs vibrant and allows us to continue protecting the health of our watershed and our economy!

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Back issues of *LakeFront* available at [www.whitefishlake.org](http://www.whitefishlake.org)



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*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 and Big Mountain*  
Courtesy: *gravityshots.com*



(*Aquatic Invasive Species— 2022 Summary*), continued from Page 1)... in Haskill Creek. WLI coordinated a plant pull effort with FWP. No curly-leaf plants were found from Monegan Road downstream to the confluence with the Whitefish River. All plants pulled were found between Monegan Road and Voerman Road. WLI will continue plant pull efforts in 2023 to gauge the level of success in this control effort.

Environmental DNA (eDNA) is another AIS early detection technique utilized by WLI in partnership with the City of Whitefish. Results from the 2022 field season as reported by the University of Montana Conservation Genetics Laboratory found no dreissenid mussels, Eurasian watermilfoil or curly-leaf pondweed in local lakes. Additionally, eDNA sample results came back negative for additional waterbodies in NW Montana collected for a U.S. Forest Service Resource Advisory Committee grant.

Eurasian milfoil control and eradication efforts continued at Beaver Lake. FWP has taken over jurisdiction of this effort and sent a dive team to pull plants from the lake bottom and deploy bottom barriers near the boat ramp to prevent plant growth.

As part of a Montana Invasive Species Council / DNRC AIS grant, WLI and the City of Whitefish completed construction of an on-demand decontamination station at the City Beach Overflow Parking Area. The portable unit, part of a major gift from the Whitefish Community Foundation, will be kept as a back-up, and will be available to project partners.



*Two Rinnai hot water heaters will drive the new on-demand preventative decontamination station.*

The upper Columbia River drainage remains the last major river system in the continental United States free of zebra or quagga mussels. AIS prevention in the Whitefish area is crucial to protect all downstream waterbodies from drift dispersal. It is important to keep our waterbodies AIS free to afford us high quality recreational experiences, protect the aquatic food web, and to safeguard property values and our tax base.

**Montana's AIS prevention program costs only 3% of what it would cost to mitigate AIS should our state waterways become infested with zebra mussels. Zebra mussels have now been detected in South Dakota at Pactola Reservoir, 70 miles from the border. Colorado has now documented adult quagga mussels, zebra mussel's close cousin.**

If you would like to view FWP data on the status of inspections or early detection surveys, as updated weekly during the inspection season, visit <https://fwp.mt.gov/conservation/aquatic-invasive-species>.

## Science Quencher *Quenching your thirst for science*

Scientists and managers gave presentations on water issues and solutions in the Flathead Valley at the October 14 Science Quencher.

Chris Downs, Aquatic and Physical Science Programs Manager for Glacier National Park, spoke about water quality research in Glacier National Park. Lake McDonald faces many of the same challenges that Whitefish Lake does – nutrient loading suspected from aging septic systems and microplastic pollution derived from discarded plastics and synthetic clothing fibers. The most photographed feature in GNP are the bright, colorful rocks on the shores of Lake McDonald; if trends towards nutrient loading continue, this feature could get muted by periphytic algal growth, similar to what we are seeing on shoreline rocks in Whitefish Lake.

Emilie Henry, Nonpoint Source Coordinator for the Flathead Basin Commission, is leading the charge to protect Flathead waters from nonpoint Source Pollution. From street debris washed down storm drains, to hot spots for septic contamination, Emilie has her finger on efforts to educate and **engage citizens in the protection of the Flathead Valley's** high-quality waterways.

Nanette Nelson, Research Economist at Flathead Lake Biological Station, and the Whitefish Lake Institute teamed up in 2018 to calculate the aesthetic benefit landowners derive from living on or near lakes with exceptional water quality. They found that the price premium supplied by Whitefish & Flathead Lakes to nearby residential properties is \$3 billion and translates to \$25 million in property tax revenue. While this is satisfying to know, it is sobering to think of how much could be lost due to poor shoreline development practices or neglected maintenance of septic systems. Numerous other studies conducted across the United States have shown that when water quality declines, the value of lakeshore properties declines. A reminder that we all should be good water **stewards and help "Keep it Blue."**

John Fraley closed the Science Quencher by presenting fisheries data collected from the headwaters of the South Fork of the Flathead; a location he claims is home to the oldest, biggest, and purest westslope cutthroat trout. Over 30 years of repeated surveys, tagging, and scale counts, John held one spectacular trout in his hands 3 times—at ages 6, 8, and 12 years old. The granddaddy of them all, it had a spiritual effect on John.

Join us for the next Science Quencher in February 2023!

## WLI is Hiring!

**Cynthia Ingelfinger, WLI's** Science & Education Director for the past five years, recently moved on to a new job. We will greatly miss her talent, passion, and dedication **to WLI's mission. We** wish her good luck in her new endeavors!



WLI is currently advertising for two positions; a Program Coordinator and a Limnologist. Limnology is the study of inland waters - lakes, reservoirs, rivers, streams, wetlands, and groundwater - as ecological systems interacting with their watersheds and the atmosphere.

The position descriptions are posted on the WLI website [www.whitefishlake.org](http://www.whitefishlake.org).

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## Whitefish Lake Apparel for Holiday Shopping

Get ready to do some holiday shopping! Whitefish Lake t-shirts and caps are now available from Barefoot Bay. And when you purchase Whitefish Lake apparel between Nov. 25 - Dec 16, 2022, Barefoot Bay will donate 20% of each sale to the Whitefish Lake Institute.

The gear is made using REPREEVE® sustainable material (made from recycled plastic bottles) and features the lake on amazingly textured shirts and hats. These fabrics protect your skin and noggin by blocking harmful UV rays. Visit their website <https://barefootbay.net/#apparel> to view all products available with the Whitefish Lake logo.



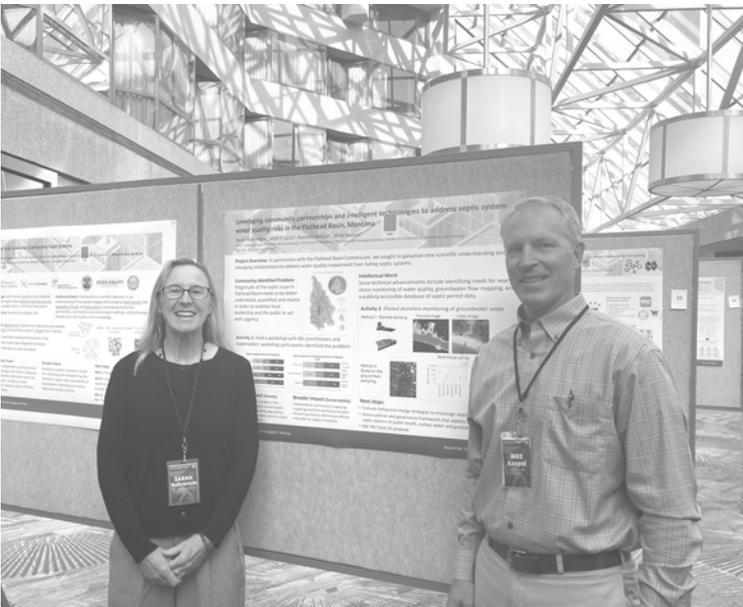
## Fall Photos



Cale Gushalok (R) a post-doc researcher at the University of Regina, and a PhD student handle a sediment core retrieved from the bottom of Whitefish Lake. The project aims to reconstruct historic lake conditions in order to compare them with current conditions.



John Fraley presents on westslope cutthroat trout in the South Fork of the Flathead River at the October Science Quencher.



Sarah Halvorson, Professor of Geography at the University of Montana, and WLI Executive Director Mike Koopal, in front of their poster at the National Science Foundation Smart & Connected Communities Conference in Washington D.C. Sarah and Mike are Co-Principal Investigators along with Nanette Nelson and Matt Church from the University of Montana on a NSF grant titled "Leveraging community partnerships and intelligent technologies to address septic system water quality risks in the Flathead Basin, Montana." The projects four main focal points include; hosting a three-day workshop held at the Flathead Lake Biological Station, evaluating the degree to which data on household-specific impairment of water quality from septic leachate changes behavior with regards to maintenance or replacement, piloting a Flathead Lake shoreline monitoring network to identify septic leachate, and assessing community-based policy and governance frameworks that are currently applied elsewhere.



WLI booth at the Whitefish Community Foundation Great Fish Fun Run and Community Celebration.



University of Regina researchers and WLI staff also collected a sediment core from Tally Lake. Here, Mike Koopal, WLI Executive Director, holds a 63cm core. Laminations are clearly seen in the upper strata and at 43cm, there is a marker that could indicate a landslide plugged the far end of the lake, causing water levels to rise and exit the same end of the lake as the inlet.

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