

Quarterly Newsletter of the Whitefish Lake Institute

Summer 2023



Registration Now Open!

Reserve your spot today for the Montana Lakes Conference, October 18-20 at The Lodge at Whitefish Lake—it won't be back for another four years! Organized and hosted by WLI, the conference brings together natural resource scientists, academia, businesses, and the public to engage on myriad lake topics.

The conference kicks off Wednesday October 18th featuring a workshop on conflict resolution and management. The workshop is followed by "Community Night" at 5pm which is free to the public and will showcase student posters followed by the popular Science Quencher.

On Thursday October 19th, Andrew Sansom, PhD from Texas State University, Jim Elser, PhD from the Flathead Lake Biological Station and Dan Wickham, PhD from Sludgehammer Group LTD will provide keynote and plenary presentations.

Breakout sessions include; Nutrients, Lake Associations and Citizen Science, Contaminants, Mountain / Alpine Lakes, Managing Native Fish, Ecosystem Resilience, Aquatic Invasive Species, On-site Wastewater Treatment, Education & Outreach, and Aquatic Plants.

Reserve your spot today!





Support WLI via the Great Fish Community Challenge August 10 to September 15!

The 9th annual Great Fish Community Challenge is a charitable giving campaign in which donors can choose to give to any of the 78 participating Flathead Valley non-profit organizations with a single transaction. At the conclusion of the campaign, Whitefish Community Foundation will award a percentage match on the first \$20,000 raised by each participating organization. Nonprofits must raise at least \$10,000 to be eligible for the match.

Since 2015, the Great Fish Community Challenge has raised over \$22 million for more than 85 local nonprofit organizations.

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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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LakeFront is published quarterly by the Whitefish Lake Institute

Cover Photo: Whitefish Lake from City Beach.



NMLN Volunteer Training and Awards

WLI hosted the annual Northwest Montana Lakes Network volunteer training on April 29th at the FWP public meeting room. WLI provided program background, data updates, and water quality monitoring protocols. Montana FWP expert, Scott Freeman, provided information on Aquatic Invasive Species including snails, plants, and crayfish. The training was just in time for the winter ice to leave and the unusually high spring temperatures to kick in! Thanks to all that attended and to FWP for their partnership in this program.

Each year WLI recognizes a lake volunteer for their dedication to monitoring water quality and promoting watershed stewardship in northwest Montana. The 2022 Northwest Montana Lake Network volunteer award went to two outstanding citizen scientists, Susie Bouton and Terry Divoky.



Terry has monitored Halfmoon Lake with her dog by canoe since 1992. She collects baseline water quality data and records and tracks bird and wildlife sightings such as bear, mink, cranes, sunning turtles, fish, and eagles. Being a lake monitor has allowed her to discover many interactions that happen on the lake that she may not have noticed if she

wasn't carefully monitoring the water quality. This includes keeping a close eye on the loons that nest on Halfmoon Lake and the many predators that often prevent the loons from producing chicks. Terry and her husband have lived on Halfmoon Lake since 1988. Terry started the Windflower Native Plant Nursery on their property where she grew Montana native plants for 12 years. Previously she worked seasonally for Glacier, was an elementary teacher in West Glacier School and a school librarian in Columbia Falls. Terry and her husband are now retired and enjoy backpacking, hiking, and traveling, as well as volunteering for several organizations including NW Montana Forest Fire Lookout Association and Gateway to Glacier Trail.



Susie Bouton and her husband moved to Bailey Lake in 1990 and soon after she attended a water quality training to be a volunteer water quality monitor. She has been monitoring water quality on Bailey Lake by canoe since 1993. She stated that "Bailey Lake is small but has a big heart" and over the years has welcomed swimmers and paddlers to its rela-

tively warm water along with a multitude of wildlife and interesting birds. She has 30 years of records to fall back on and laments the demise of our Red Necked Grebes but welcomes the nesting hooded mergansers. Recently, she has been concerned with the algae blooms on the lake and has focused her monitoring efforts on documenting them in Bailey Lake.

On-site Wastewater Treatment Issue Update

WLI has been working on the issue of septic leachate and its effect on groundwater and surface water for over a decade. In 2015, WLI published a report documenting septic leachate along the shoreline area of Whitefish Lake. That report is available on our website www.whitefishlake.org.

The Flathead Basin Commission (now Western Montana Conservation Commission) developed the Flathead Basin Septic Risk Model to visually display the risk of underperforming onsite wastewater treatment systems in the Flathead Basin. The model incorporates both physical landscape characteristics and the age and density of existing septic systems, where data allowed. That model can be found at flatheadbasincommission.org.

The Flathead Basin Commission also partnered with Cornell University to determine the utility of Synthetic DNA as a source tracking tool for septic leachate near lakes. Of the six landowners along Whitefish Lake and Lake Mary Ronan who voluntarily participated in the study, the synthetic DNA from all homes eventually showed up in lake water samples.

WLI also participated in a National Science Foundation Smart & Connected Communities grant that explored the topic, including a workshop held at the Flathead Lake Biological Station in 2022. Recently, pharmaceutical and personal care product sampling equipment was deployed in Whitefish Lake and Flathead Lake (results pending).



WLI Limnologist, Cassie Roberts, prepares to deploy a pharmaceutical and personal care products sampler in Whitefish Lake.

Senate Bill 383, introduced by Sen. Hertz (R) during the recent Montana legislative session called on Montana DEQ to investigate model rules and look at a statewide septic database. The bill passed the Montana Senate Natural Resource Committee but was tabled by Finance and Claims.

Mike Koopal from WLI also serves on the Montana Water Pollution Control Advisory Council where there is active discussion with Montana DEQ regarding individual on-site wastewater systems and the issue of septage (the solids pumped from individual systems or public vault toilets, etc.).

Summer Intern Experience -by Niko Hunter

Entering my summer internship with Whitefish Lake Institute, I didn't know exactly what to expect. Despite my high expectations and brief previous experience with the organization through FREEFLOW (the environmental club at Whitefish High School), I couldn't have possibly anticipated the breadth of experience that I was about to gain.

The summer kicked off focused on educational programming. I was immediately thrust into giving presentations about water quality to kids aged 2-14. While it took a short while for me to gain confidence, Durae and Mike were excellent mentors, and I found that learning through experience allowed me to retain information much more quickly than in a classroom setting.



Niko with a young participant at WLI's educational programming at the Whitefish Library.

I also spent many early summer days in the field collecting data on Whitefish Lake and its tributaries. Learning the data collection process was extremely rewarding, and the guidance of the WLI team helped me understand the workflow.

Montana Fish Wildlife & Parks and the Flathead Lake Biological Station additionally played a large role in my internship, demonstrating the importance of organizational partnerships in the field of environmental science. I attended an aquatic invasive species prevention training at the Bio Station, and I was given the opportunity to spend a few days with FWP spawning fish and conducting field work.

The final portion of my internship has consisted of the Northwestern Montana Lakes Network, a research project that involves surveying 41 lakes in the Flathead Valley and beyond. This has been one of my favorite aspects of the summer, as it has served as a culmination of everything I've learned thus far while allowing me to explore and experience myriad beautiful lakes in the region.

I could not be more grateful for the time I've spent with WLI. I have yet to hear of an internship opportunity that includes as wide a breadth of experience as the one I just received, and the amazing team only served to make everything even better. Upon my return to Columbia University this fall I am going to feel academically rejuvenated and experientially enriched, and I know I will carry this experience forward into the future of my educational and professional journey.

Summer Photos



Former WLI Summer Intern Mary Webb, now a science teacher at Columbia Falls High School, with her daughter in the Averill's Viking Creek Wetland Preserve.



These two white-tailed deer bucks didn't seem to be nervous of humans on the trail in the Averill's Viking Creek Wetland Preserve.



WLI Executive Director Mike Koopal talked about "The Mystery of Tally Lake" to Flathead Audubon at their annual Warbler Weekend.



Retired WLI Science & Education Director Lori Curtis and her husband Walt helped out with upkeep at the Living Wetlands Nature Trail in the Averill's Viking Creek Wetland Preserve.



WLI Program Coordinator, Durae Belcer, heads out to monitor one of the 41 lakes in the Northwest Montana Lakes Network.



WLI Summer Intern Niko Hunter with a stick bug collected during the annual 5th grade educational outing attended by Whitefish and Kalispell schools in the Averill's Viking Creek Wetland Preserve.

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