

FLATHEAD LAKE

Monitor

Newsletter of the Flathead Lakers

Flathead Lake, Montana

Fall/Winter 2019

Clearest Water in Decades

If you spent time on Flathead Lake this summer, you likely noticed how remarkably clear it was.

Our citizen scientists made over 60 water clarity measurements throughout the summer and proved it. Many volunteers ran out of measuring line while dipping their Secchi disks around the lake! In fact, our citizen science Secchi data, as well as FLBS's Flathead Lake Monitoring, showed that Flathead Lake was the clearest in 25 years. Our volunteers were excited to see and participate in recording this unusual year.

We are building an army of people who care about our watershed, and community engagement and interest continues to grow. Our citizen scientists are already contributing directly to Flathead Lake research and meaningful science. The results from our 2018 Secchi Dip-in spurred the expansion of FLBS's Flathead Lake Monitoring Program into



McDonough grandkids dipping their Secchi disk in the 2019 Flathead Lake Secchi Dip-in.

Polson Bay in 2019.

Thank you to our Flathead Lake Citizen Scientists for your participation, dedication,

and passion for our lake and watershed. And, thanks to the Flathead Lake Biological Station for another great partnership.

We look forward to the 3rd Annual Flathead Lake Secchi Dip-in during July, aka lake appreciation month, as well as expanding our monitoring efforts in Flathead Lake and watershed. We will be launching a periphyton study around Flathead Lake, thanks to the support of the Greater Polson Community Foundation, and delving into the importance of periphyton (attached algae) in the Flathead Lake food web, and what it can tell us about water quality. We also hope to initiate a whitefish diet study, so if you enjoy catching and keeping whitefish, or are interested in joining any of our citizen science efforts, contact Hilary Devlin at hilary@flatheadlakers.org or 406-883-1341.

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Visit our web site!
www.flatheadlakers.org



Secchi dipping is a family event! Learn more and get involved at www.flatheadlakers.org.

DIRECTORY

Flathead Lakers: Dedicated to protecting clean water, healthy ecosystems, and lasting quality of life in the Flathead Watershed.

213 First St. W, #208 & 210 • PO Box 70
Polson, MT 59860
Voice: (406) 883-1346
Fax: (406) 883-1357
lakers@flatheadlakers.org
www.flatheadlakers.org

The **Board of Directors** meets bimonthly. We encourage members to attend meetings. Please call the office for the time and place if you'd like to attend a meeting.

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Kate Sheridan 253-1583

Critical Lands Program Director:

Constanza von der Pahlen 883-1341

Education & Outreach Coordinator:

Hilary Devlin 883-1341

Administrative Assistant:

Rosalie Perelli 883-1346

Flathead Lake Monitor

Newsletter of the Flathead Lakers, the *Monitor* is published in print and on the internet. The current issue and many back issues are available in Adobe's Portable Document Format (PDF) and can be viewed at and/or downloaded from our web site (www.flatheadlakers.org).

The opinions expressed in the *Monitor* are those of the authors. We welcome comments and submissions. Copyright 2019, Flathead Lakers, all rights reserved.

Kate Sheridan, Editor

From the Executive Director



New executive director Kate Sheridan after paddling on the Middle Fork of the Flathead!

Greetings Fellow Lakers,

I am excited to introduce myself as the new Executive Director as of August 1 and to carry on the venerable legacy of the Flathead Lakers. I was first drawn to Flathead Lake several summers ago as a pool swimmer looking for a new challenge, and it was love at first sight in Yellow Bay.

Since then, I returned many times to race in Polson Bay and at Big Arm State Park. When I had the opportunity to move back to Western Montana, I knew I wanted to be close to Flathead Lake, and spent the summer swimming, including a circumnavigation of the Marine Trail in July with several Lakers members.

As an open water swimmer, my face is in the lake nearly every day from May to October, and I care deeply about keeping the lake clean, blue, and clear – not only for next summers' adventures, but for future generations.

This edition of *The Monitor* celebrates our accomplishments of the summer – and the past decade to ensure Flathead Lake continues to be the cleanest, bluest freshwater lake in the country. The arrival of the new decade will bring new challenges, but you won't catch us hibernating this winter – we're in the process of planning and preparing to make 2020 the best year yet.

I look forward to meeting you all at our monthly Science on Tap events or around the lake – free feel get in touch by the number listed here.

Here's to keeping Flathead Lake blue!

– *Kate*



The Flathead River Conservation Project is Funded!

We did it! A special thanks to our members, friends, and partners who helped raise the funds needed to conserve a critical piece of habitat and associated farmland along the Flathead River.

Your special donations to our spring appeal, or at one of several fundraising events this summer, helped us reach what seemed like an insurmountable dream. Your support speaks to

a broader understanding of our watershed's threats, and how important it is to protect key wetlands, floodplains, and other critical lands upstream to sustain clean water in Flathead Lake.

Over the past year, the Flathead Lakers and Flathead Land Trust raised \$128,000 from private funds needed to receive a federal grant of \$513,000 from the Natural Resource Conservation Service. Many local groups and foundations provided funding and support, including MT Fish, Wildlife, and Parks; Flathead Valley Trout Unlimited; and multiple foundations.

The funds will allow us to protect 155 acres of vital wetlands, floodplains, and farmlands along the Flathead River, just upstream from the lake, that help sustain our clean water and natural heritage. With funding in hand, the Flathead Land Trust has started to work with landowners Bob Danford and Terri Peterson to permanently



protect the Flathead River Conservation Project by next summer.

Protecting the wetlands, fish and wildlife habitat, and important farm soils not only provides important benefits for the community, but it also helps the landowners and future generations continue farming their rich agricultural land. The project is part of a larger network of privately and publicly protected lands

along the Flathead River that help sustain the clean water that flows through our lake and watershed. Over the past 19 years, the Flathead Lakers have worked with Flathead River to Lake Initiative partners to protect over 6,000 acres of these critical areas along our rivers.

Special thanks to our donors who understood the importance of our work in the larger Flathead Lake watershed, and the landowners who commit their land to protecting these values for future generations. *Thank you!*

To learn more about our collaborative River to Lake Initiative program, check our website's "Saving Critical Lands" page, at flatheadlakers.org/programsissues/saving-critical-lands, or our River to Lake Initiative website at www.flatheadrivetolake.org.

State of the Lake is Blue, Mussel-Free and Monitored

The state of Flathead Lake continues to be blue and mussel-free. We know that because FLBS monitors Flathead Lake every year for nutrients, water quality, invasive mussel eDNA, and more. We are lucky to have the BioStation keeping a watchful eye on the state of the lake and watershed.

Director of the Flathead Lake Biological Station, Dr. Jim Elser, described the important role that monitoring has in protecting Flathead Lake, and in answering just how blue or how we know it's mussel-free. We are also lucky to have a growing pool of citizen scientists helping and playing an active role in Flathead Lake monitoring and research.

The data collected during the 2018 Flathead Lake Secchi Dip-in helped argue the need for additional water quality monitoring in more areas of the lake. Dr. Elser explained that, with the support of the Flathead Lakers and the results of our citizen science monitoring around Flathead Lake, the FLBS's Flathead Lake Monitoring Program was able to expand into Polson Bay. Data collected this spring and summer show that Polson Bay gets a 'head start' on temperatures. What else will we learn about Polson Bay?

Dr. Elser also introduced the lake's changing stoichiometry, and the imbalance between phosphorous and nitrogen in the system. The amount of nitrogen in Flathead Lake continues to increase, while phosphorous is decreasing over time. This is because the amount of phosphorous coming into the lake is not changing, and current wastewater treatments are more effective at removing phosphorus than nitrogen. Flathead Lake phytoplankton are then imbalanced, and feeding on a 'diet of donuts.' Researchers at FLBS are investigating if and how this imbalance could matter to the Flathead Lake food web.

The economics of a mussel invasion in Montana was the focus of a study this year by FLBS research economist, and Flathead Lakers board member, Nanette Nelson and commissioned by the Montana Invasive Species Council. The report estimated that a mussel invasive could cost Montana \$234 million per year in recreation, infrastructures, and irrigation costs, as well as an estimated loss of \$497 million in lakeshore property values.

So, Flathead Lake is blue and mussel-free, and let's work together to help keep it that way. Thank you to Dr. Jim Elser for his 2019 State of the Lake Address.

Cow Creek Restoration to Reduce Pollution Destined for the Whitefish River

This October, the Flathead Lakers helped our River Steward Partners plant over 1,300 trees and shrubs on two properties along Cow Creek, a tributary of the Whitefish River.



Hilary Devlin, Flathead Lakers' Education and Outreach Coordinator, helps plant at Cow Creek.

Over a decade ago, the Whitefish Lake Institute identified Cow Creek as a major source of pollution to the Whitefish River, which ultimately flows downstream into Flathead Lake. Last year, the Flathead Conservation District secured funding from the MT Department of Environmental Quality to help remediate the problem. A riparian buffer was created by planting trees along the creek, and installing fencing to keep livestock away from the creek. Planting native trees and shrubs along with livestock fencing helps to reduce the amount of pollution headed to Whitefish River and beyond. Over time, the plants will also provide shade to the creek and help reduce water temperatures in the summer, which can reach 75° F.

Restoration Ecologist Franz Ingelfinger, with MT Fish, Wildlife, and Parks and a key partner in our River Steward Program, helped implement the project. The state agency also provided plants for the projects. The Flathead Conservation District, Whitefish Lake Institute, Whitefish High School Free Flow Club, and Flathead Lakers' staff and volunteers worked along a MT Conservation Corps Crew planting trees – during two weeks of bone-chilling weather. *Thank you!*



Hailey Graf, Flathead Conservation District Resource Conservationist and Cow Creek restoration project coordinator planting trees.



Constanza von der Pahlen, Flathead Lakers' Critical Lands Program Director, planting native trees and shrubs at Cow Creek.



Angel Rosario, retired federal employee, gives back to the community by volunteering and planting trees at Cow Creek.

A Summer of Tremendous Support From the Flathead Lakers Community

This year, the Flathead Lakers' community has helped support the important work we do around, and for the benefit of, the Flathead watershed in so many ways, from community grants for long-standing and up-and-coming programs, to running and paddling for clean water! We are grateful for our community.



Students reflect on what they have learned and express it through art.

over 20 years ago, and every year around 400 local students participate and learn how to be future watershed stewards. The program helps enhance the students' sense of place and connection to the Flathead watershed, as well as their sense of responsibility for it.

The Flathead Lakers' budding citizen science program, in partnership with the Flathead Lake Biological Station, received its second grant from the Greater Polson Community Foundation. Our first grant from foundation helped kick off our now annual Flathead Lake Secchi Dip-in.

This coming summer, thanks to the Foundation and our citizen scientist volunteers, we will study periphyton around Flathead Lake. Periphyton is the light brown or green slime covering rocks in the shallow waters. Periphyton is a complex mixture of algae, bacteria, microbes, and detritus, and is a vital part of a lake's ecosystem. We are

Our student watershed education program *Becoming Watershed Citizens* was awarded a Festival of Youth Grant from the Polson Rotary this summer. This grant will help us update lessons and trunk materials to include scientific advances, new technology in science and the classroom, online resources, and updated materials and equipment.

The Flathead Lakers created our watershed education program



Flathead Lake Secchi Dip-in sample site locations.

excited to expand our monitoring program to include important ecological components.

Thank you to both the Polson Rotary and the Greater Polson Community Foundation for funding our programs.

In August, the communities of Bigfork and Lakeside hosted paddling and running events in support of clean water and Flathead Lake, and the work of the Flathead Lakers and their chambers of commerce.

Despite an impressive storm the night before and no electricity



in parts of Bigfork, participants of the 5th Annual Poker Paddle were not discouraged and enjoyed a window of beautiful weather. Thank you to Rebekah King, Steve Rosso, the Bigfork Area Chamber of Commerce, our volunteers and participants, and our event and silent auction sponsors for their support.

The following weekend, the 4th Annual Flathead Lake 5K run in Lakeside drew a large crowd of runners and walkers (and a pony) on a chilly Saturday morning. The Lakeside community's enthusiasm kept us all warm. We are grateful to the event sponsors, volunteers, participants, and Lacy Ritcher for organizing such a great event!

There are many ways to support the Flathead Lakers, from being a new, long-time, or sustaining Flathead Lakers member or volunteer, to participating in our community events and programs like the Lakeside 5K Run, Science on Tap-Flathead, or our citizen science program. Thank you for the ways you choose to support us.



Chilly weather did not dishearten participants of the 4th Annual Flathead Lake 5K Run on August 17.

Lakers Present Stewardship Award to Our Long-serving Executive Director

The Flathead Lakers established our Stewardship Award 21 years ago to recognize dedicated service to protecting the quality and beauty of Flathead Lake and its watershed. This year, the Flathead Lakers present our award to someone who has been a tireless advocate for Flathead Lake water quality, who dedicated her life to seeking solutions to tough challenges, and to making a difference for our lake. As a partner said, “protecting Flathead Lake isn’t a job for her. It is a passion.” Robin’s vision for protecting Flathead Lake and its watershed is reflected in many successful initiatives and programs that she developed and supported, which addressed tough pollution threats, strengthened water quality protections, as well as empowered kids and adults through education. “Robin has not only championed the lake itself, but anticipated and responded wisely to larger implications, particularly with



Constanza von der Pahlen presents the 2019 Flathead Lakers Stewardship Award to Robin Steinkraus.

what is happening upstream.” A long-term partner and writer, Ben Long, wrote: “There is no more jaw-dropping scene on Earth than cresting the hill at Polson or above Elmo and seeing Flathead Lake in all its glory. That glory would be forever marred if we let Flathead Lake become polluted. Whenever we look at The Big Lake, we should remember the tireless efforts of Robin. Robin understands that a lake is not just a body of water but it exists in a setting of land and people. To protect the lake, we need to connect the water to the land and to the people. Robin showed us all how to do that with a combination of intelligence, compassion, persistence, and optimism. That’s a powerful combination. Thank you Robin!” Robin’s work is a great gift to all of us and future generations. The Flathead Lakers were honored to give our Stewardship Award to Robin Steinkraus, for the wonderful legacy she has given us.

- Constanza von der Pahlen

A Legacy of Love and Passion for Clean Water and the Flathead Watershed

Water is vital for life; love is also vital for life. “Water connects us. It runs through our bodies and through time just as it runs through rivers and lakes. It brings us joy and bonds us to our family, friends, and community. It inspires us to protect it and all the blessings it provides,” said 2019 keynote speaker and long-serving executive director of the Flathead Lakers, Robin Steinkraus, as she invited us to reflect on what Flathead Lake means to us.

“The Flathead Lakers is a community. It is our community. And it is founded on love. We are connected through our shared love of this special place, our lake and watershed. We value its clean water, healthy habitat, fish and wildlife, wild places and open spaces, and its spectacular natural beauty.”

Robin has spent the last 34 years championing for clean water and the Flathead watershed. During Robin’s tenure with the Flathead Lakers, she worked with 64 board members, 14 presidents, 9 staff members, and 17 partnerships, all of which have had an important role in her work and our community.

She reminded us of the important successes that our Flathead Lakers community has had in protecting our waters and watershed, such as mitigating the impacts from Kerr Dam,

preventing coal mining in the headwaters of the North Fork in British Columbia, the conservation and restoration of critical lands around Flathead Lake, and aiding the effort to prevent invasive mussels from getting to Flathead Lake.

Robin also cautioned us of the very real threats of climate change, which is the biggest danger to water, watersheds, ecosystems, communities, and people everywhere. She believes that, with our community’s support, the lake will continue to receive the care that it deserves, and that the Flathead Lakers can be part of the solution in these challenging times.

“May each of us find our path to take courageous action to protect our waters.”

In closing, Robin again invited us to look inward, “feel your love, our shared love, for this lake, the clean waters that flow through it, and the life, the beauty, the connections they sustain. Give thanks for the land and water, for our community, for our biotic community, and for the protectors who came before and those who will come after us. Recognize the challenges and find solace, strength, and joy in the beauty of our watershed connections. May each of us find our path to take courageous action to protect our waters.”

Thank you, Robin, for your thoughtful words, passion, and dedication through the many years you worked towards clean water, healthy ecosystems, and a lasting quality of life. We are grateful.

A small monthly gift can have a big impact on local student watershed education

Instead of making an annual membership gift, please consider becoming a sustaining member of the Flathead Lakers by making a budget-friendly, automatic monthly contribution online by visiting our website www.flatheadlakers.org and click the JOIN/DONATE button.

Your support of only **\$5 a month** provides local students in our Becoming Watershed Citizens education program with supplies and equipment like watercolor paints and brushes, insect and invertebrate guides, and sampling equipment. Over the past 20 years, our program has provided thousands of local students hands-on watershed education lessons and experiences... outside, along the beautiful shores of Flathead Lake. The program helps enhance the students' sense of place and connection to the Flathead watershed, as well as their sense of responsibility for it.

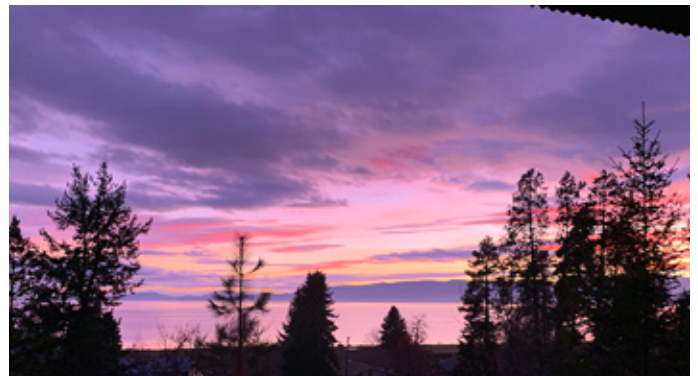
Help sustain this program and more by becoming a Flathead Lakers Sustaining Member.



Students get an up-close look at macroinvertebrates.



Fifth graders inspect a mussel mount from Lake Mead.



Beautiful sunset over Flathead Lake, from down in the Cellar at FLBC.

YES! I want to be a member of the Flathead Lakers!



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Please consider becoming a Sustaining Member. Just click on the Join/Donate button at the top of our website, flatheadlakers.org, and join or renew your membership with a monthly donation.

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lasting quality of life in the
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Science on Tap-Flathead

New Digs and New Night Brings an Exciting Upcoming 5th Season

Since December 2015, Science on Tap-Flathead has brought fun, approachable science to our Flathead Lake community. We are grateful for our partnership with the Flathead Lake Biological Station and the Flathead Lake Brewing Company, as well as all the captivating speakers we've had over the past four years.

Our 5th season brings a few changes to our community event. We are so excited to now have Science on Tap-Flathead, on the first MONDAY of each month, down in the Cellar at the FLBC Pubhouse. We have a reserved seating section with 48 seats located front center stage, as well as lots of free,



open seating available on the night of the event. **There is room for up to 100!** Food is available to order, along with 14 brews on tap and a full bar.

Join us on Monday, December 2 for our next event. The presentation begins at 6 pm, and the Cellar opens for service at 4 pm. Visit our website www.flatheadlakers.org for more information about the topic and presenter, and to save your seat!



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