



Welcome New Board Members

Jim Williams is an award-winning wildlife biologist who has worked for Montana Fish, Wildlife & Parks for the last 30 years. He received an undergraduate degree in biology with an emphasis on marine biology from San Diego State and Florida State universities and his graduate degree in wildlife biology from Montana State University in Bozeman. Jim studied mountain lion ecology for his master's degree on Montana's Rocky Mountain Front and has focused on mountain lion and other wildlife conservation issues in various roles ever since.



Jim Williams

Most recently as the current Regional Supervisor for northwestern Montana, Jim provides leadership and support for parks, wildlife, fisheries and enforcement and administration divisions. Jim has also been working with wildlife biologists in Chile and Argentina on a variety of wildlife conservation projects. In 2018, Patagonia Inc. published his autobiography, *Path of the Puma*, which shares some of those adventures and the story of mountain lion conservation in the Americas. Penguin Random House Audio recently published the audio version of *Path of the Puma* which Jim personally narrated. Jim enjoys swimming and kayaking in Whitefish Lake, mountaineering in Glacier National Park and downhill skiing. Jim and his wife Melora reside in Whitefish in the City Beach neighborhood. (continued on Page 2...)

2022 Projects

2022 will be a busy year for WLI staff. WLI is partnering with the Flathead Basin Commission and Cornell University on a pilot septic leachate study. Starting in spring, staff will be collecting synthetic DNA samples along select shoreline areas of the lake. Samples will be sent to Cornell University where researchers will conduct Polymerase Chain Reaction (PCR) analysis. The goal of this project will determine the effectiveness of this new technology in a lake setting and will be a valuable tool in pinpointing the source(s) of contamination from nearshore areas.

WLI executive director Mike Koopal is also part of a team that was awarded a National Science Foundation Smart & Connected Communities (continued on Page 3...)

Inside this issue of *LakeFront*—

Welcome New Board Members.....	1
2022 Projects.....	1
Wetland Trail—Annual Closure.....	3
Ripple Effect Scholarship Application.....	3
Summer Internship Opportunity.....	3
NMLN Tidbit.....	3
Winter Photos.....	4
WLI Supporters.....	5
Become a WLI Member.....	6

Back issues of *LakeFront* available at www.whitefishlake.org



A 501 (c)(3) Nonprofit Corporation



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

Voice: 406.862.4327
Fax: 406.862.0686
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.

Board of Directors

Andy Feury, President
Hank Ricklefs, Vice President
John Collins, Secretary/Treasurer
Brian Averill
John Muhlfeld
Monica Pastor
Debbie Pierson
Mitch Robinson
Camisha Sawtelle
Mike Shaw
Jim Williams

Science Advisory Committee

Sam Bourret
Melissa Brick
Megan Chaisson
Paul McKenzie
Ryan Richardson
Eric Sawtelle
Erin Sexton
John Wachsmuth

Staff

Mike Koopal: Founder, Executive Director
Cynthia Ingelfinger: Science & Education Director
Carol Treadwell, Ph.D: Finance & Grants Manager

LakeFront is published quarterly by the
Whitefish Lake Institute

Cover Photo:
Whitefish Lake Wonder
Courtesy: Andy Feury

(Welcome New Board Members, continued from Page 1...)

Monica Pastor was raised in Bigfork, Montana and grew up on the shore of Flathead Lake. She graduated from Bigfork High School, and went on to attend Duke University, graduating in 1995 with a dual major in Art History and Religion.

After completing a Master of Arts in the department of Visual Culture, Art, & Theory at the University of British Columbia, Monica returned home to the Flathead Valley, and opened Jest Gallery in 1998, creating a space to showcase contemporary art. She followed this with the opening of Underscore Art & Jewelry in 2017. She also taught art history at Flathead Valley Community College for 10 years.



Monica Pastor

In addition to her focus on the arts, Monica has been active in non-profit work in Whitefish. She has served as a member of the Board of Directors for the Whitefish Community Foundation since 2014, including roles as the chair of the grants committee and scholarship committee. She is also an art editor for the Whitefish Review.

Brian Averill is Owner/Operator of Averill Hospitality, a family-run resort and hotel management company in Montana with the vision of delivering exceptional guest experiences that exceed expectations in every way, every time, at all of their properties.

Generations of the Averill family grew up in Montana and are proud to showcase the heritage and the beauty of their home at our unique properties. The Averill's have been a part of Montana's hospitality industry since the 1940s when Les Averill created The Flathead Lake Lodge with the vision of bringing western culture and a personal touch to hospitality. Today, they strive to give guests the same special memories they have from growing up in Montana – from its rugged beauty and diverse wildlife, to its fun adventures and embracing community.



Brian Averill

Averill Hospitality's mission is to provide true western hospitality in spectacular settings. They create warm, welcoming environments so guests automatically feel a sense of belonging when staying at one of their hotels, enjoying all the comforts of home in a luxurious and contemporary atmosphere. Averill Hospitality's goal is to create spaces with a spirit of fun, adventure and community, where connections are forged and souls nourished.

Special thanks to **Greg Gunderson** and **Ed Lieser** whose dedicated service to WLI through the years has helped grow the organization to provide many natural resource and community benefits. After serving multiple consecutive terms, both Greg and Ed stepped off the board of directors at the end of 2021.

2022 Projects, continued from Page 1...

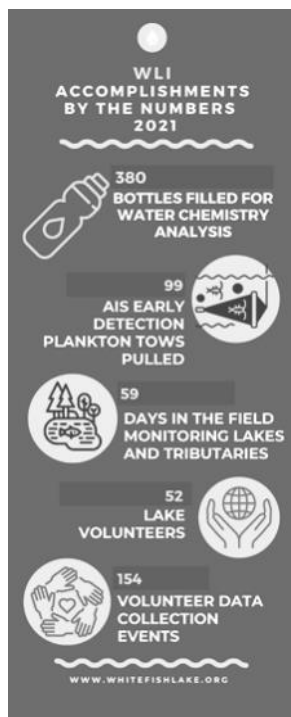
grant. One aspect of the grant will be to hold a workshop at The University of Montana, Flathead Lake Biological Station June 9-10. Experts from around the country will discuss solution strategies to the septic leachate issue.

In 2022, WLI and contractors will also put a huge effort into organizing and analyzing components of WLI's comprehensive dataset. Included this effort will be to finish exporting WLI's dataset to a national database so other researchers can access the data, and to develop computer software script to statistically analyze and display data.

By utilizing the expertise at The University of Montana, Flathead Lake Biological Station, WLI will receive a report on the pelagic biological community of Whitefish Lake. This will include information on zooplankton and mysis shrimp.

We're also working on a lake water budget project that will quantify volumetric loading from streams and take into account lake evaporation and consumptive use from water users. The effort will include a predictive model based on climate. In 2021, a water pressure sensor was installed in the lake to continuously monitor lake elevation. In 2022, a surface temperature sensor will be installed in conjunction with another project underway to deploy no-wake buoys.

All of the work described for 2022 is in addition to our long-term baseline monitoring of the lake and tributaries, and WLI's coordination and management of the Northwest Montana Lakes Network (NMLN) that engages citizen scientists to collect data for 41 lakes in northwest Montana.



Wetland Trail— Annual Closure

We hope you are enjoying your treks at the Living Wetlands Interpretive Nature Trail in the Averill's Viking Creek Wetland Preserve! Please remember we are nearing the annual **March 15 to May 1 trail closure**. This closure will help maintain the structural integrity of the trail, protect native vegetation, and avoid potential spring wildlife/human conflicts. Until then, enjoy your winter walks along the trail.

Ripple Effect Scholarship Application Reminder

WLI offers three types of scholarship opportunities to qualified students. The scholarship program can award students in three categories including 1) a \$500 scholarship for tuition to a high school student as they enter college, 2) an internship (see below) for an undergraduate student in the summer after their sophomore or junior year, and 3) WLI's support of a graduate thesis or dissertation. Appropriate courses of study for consideration in the scholarship program include: biology, ecology, environmental science/ studies, hydrology, or other fields related to water quality as approved by WLI staff. For more information, see our website www.whitefishlake.org under *Education Programs*. The **deadline for applications is April 15**.

Summer Internship Opportunity

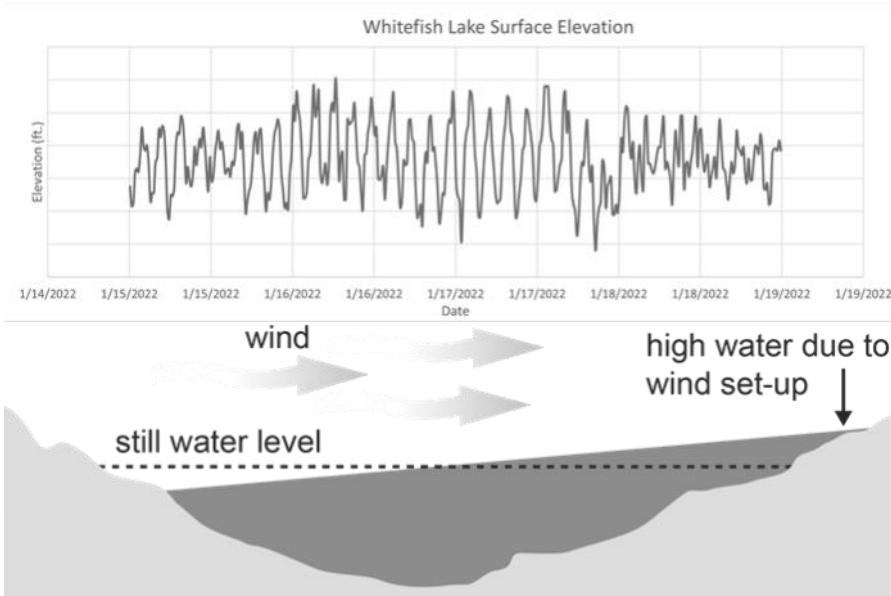
One of the most important aspects of WLI's educational programming is to encourage and mentor students. WLI has hosted college interns dating back to 2007. Thanks to our Ripple Effect Scholarship Fund, a \$1,500 stipend towards tuition is awarded to an undergraduate university student who completes a successful summer internship with WLI.

WLI interns learn about streams, rivers and lakes, watershed processes, limnological data collection, and data processing and analysis. The intern also learns about—and participates in—the daily functioning of a small non-profit corporation. WLI attempts to match the intern with special projects that are in their interest area. One intern can be accepted each summer. Internship **applications are due March 15**. To learn more about the internship and application process, please visit www.whitefishlake.org.

NMLN Tidbit

WLI is currently working to analyze select data from the 41 lakes in the Northwest Montana Lakes Network (NMLN), including some historical data going back to the 1990s collected by project partners. Temperature and Secchi disc measurements (a measure of water clarity) are showing statistically significant trends. As expected, lake temperature is increasing. One unexpected finding is that water clarity is improving. Typically, as more development and watershed activities occur, more nutrients are delivered to the lake which then drives algae production reducing water clarity. So why are the lakes getting clearer? We think that the increased temperatures in the lake are killing certain temperature sensitive algae. That working hypothesis is supported by existing scientific literature.

Winter Photos



WLI's newly installed lake elevation probe is already revealing useful information. We've documented that Whitefish Lake is subject to wind-driven seiches. Wave action creates a standing wave that oscillates back and forth. The graph above shows this phenomenon over a four day period in January when Whitefish Lake levels varied up to approximately 0.2 feet on a daily basis. The photo above and the cover photo for this LakeFront issue show where the seiches lifted and lowered the ice creating a pumping action over a hole, forming the concentric rings. In 2022, a surface temperature logger will be installed and real-time lake data will become available for the public on our website. Illustration courtesy of NOAA via the National Park Service. Photo courtesy of WLI Board President Andy Feury.



Whitetail bucks shed their antlers in winter. High testosterone levels are required to keep the antlers attached. After the rut, testosterone levels drop and the antlers loosen and drop.



This spike bull elk checks for scent before crossing a log in the Averill's Viking Creek Wetland Preserve, owned and managed by the Whitefish Lake Institute.



These two whitetail bucks look very similar and were mistaken as the same individual at first. Upon close examination of the antlers, you can see slight differences. Like the spike bull elk in the above photo, they checked scent patterns on the log. If you look closely in the left photo, you can see a fragment of camouflaged clothing entwined in the bucks antlers.

Whitefish Lake Institute Supporters

Sustainer (\$20,000 and above)

The Lodge At Whitefish Lake-Averill Family

Fellow (\$5,000 and above)		
Atkinson, Richard & Carol Collins, John & Anne <i>Gregory, Joe & Cindy</i>	Hoag, Jim & Anna Jones, Bill & Ann <i>Pastor, Monica</i>	<i>Schlinger Family Foundation</i> Shaw, Mike & Marie Shennan, Janna & Jamie
Abell, Charlie & Susan Blake, Rick & Alicia Brister, Tara & Matthew Burke-Feldman Family Fund Grenier, Charles & Teresa <i>Gustafson, Mike</i>	Ila B. Dousman Fund, Inc. InvesTech Research- Jim & Lisa Stack LaTourelle, Pat <i>McCann, Paul & Janice</i> <i>Muhlfeld, John & Stephanie Sunshine</i> Quinn, Tom & Teresa	Raudabaugh, Joseph & Beverly <i>Reich, Victoria</i> River Design Group Rowntree, Walter & Laura Reynolds <i>Ryan, Bill & Bev</i> <i>Sullivan, Rick and Judi</i>
Visionary (\$500 to \$999)		
Blair, Ric & Dawn Bulkley, Brad & Ann Campbell, Luther & Dorothy Chickering, Nick & Karen <i>Cleveland, Gail & Bruce Tannehill</i> Covey, Mike & Stacey Cowett, Mark & Connie	<i>Erickson, Bart & Carole</i> First Interstate Bank <i>Fleming, Don & Joann</i> Forestration, Inc. Glacier Bank <i>Houston Point HOA</i> Jenson, Mike & Barb	Kramer Family Fund Lion Mountain Homeowners Lull, Steve Mance, Mark & Katherine Callahan Mayo, Janet Montalban, Cora Belle <i>Repke, John & Beth</i>
Benefactor (\$250 to \$499)		
637 Nature Trail, LLC Anderson, Julie <i>Anderson-Montgomery Consulting Engineers</i> <i>Bayne, Bill & Betsy</i> Blake, Cameron & Sandy Gray Bryan, Kirk <i>Bucher, Charles and Sandra</i> <i>Center For Native Plants</i> Daniels, Matt & Kate Dietz, Susie <i>DM Miller Properties, LLC</i>	Fletcher, Greg <i>Frost, Michael & Patti</i> <i>Gordon, Richard & Cheryl Watkins</i> <i>Grady, Dave & Linda Engh-Grady</i> <i>Hauf, Ron</i> <i>Haymon, Robert & Barbara Krausekhopf</i> <i>Hildner, Richard & Suzanne Daniell</i> Johannes, Amy Koopal, Jack Koopal, Mike & Mae Kovach Family Trust	Little Bitterroot Lake Association <i>Losleben, George & Connie Johnson</i> Lyon, Lawrence & Yvette Meagher, Nathan and Kristy Merrick, Colleen Nelson's Ace Hardware <i>North Country Builders, Inc.</i> <i>Pelphs, John & Melissa</i> Richardson, Ryan Ritter, William and Kristen Robinson, Mitch & Jennifer
Leader (\$100 to \$249)		
Abell, Koel & Lazette Abell, Tarn & Marybeth Akey, Lin and Kathy Anderes, Elise & Stefan Appelgren, Brent Bailey, Michael & Kathleen Bauch, Duane & Valerie <i>Bennett, Bob & Caryl</i> Brueggeman, John Chadwick, Doug & Karen Reeves <i>Chauner-Niendorf, Cyndi</i> Christian, Steve & Doreen Coyne, Wendy Cuffe, Mick & Lanette Curtis, Walt & Lori <i>Danczyk, Gary & Annell</i> Dennis, Antonia & Ian Eckert, Will <i>Ennis, Felicia</i> Erickson Torgerson, Courtney	Flag Nor Fail, Inc. Fletcher, Sue <i>Gersh, Judah & Tanya</i> <i>Graf, Dick and Gayle</i> <i>Gunderson, Greg & Catherine</i> Gunderson, Karen <i>Harding, Tom & Sue</i> <i>Hartlieb, John & Kathi</i> Hartman, Dewey & Sandra <i>Heinrich, Klaus & Joaquina</i> Heinziq, Dennis & Iona McMillan Kibbe, Jim & Marion King, John & Maureen Knechtel, Murray & Deb Bartlett Koopal, Craig & Ann Koopal, Steve & Debbie Longley <i>Labrie, Bill & Alice</i> <i>LaChance, Tom & Cindy</i> Larson, Steven & Karen <i>Lieser, Ed & Susan</i>	Malletta, Sue & Joe Martin, David & Lynne Metcalfe McCartney, Sierra & Brett Svetlik McDermid, David McIntyre, Curt & Sherry Moll, Sue & Gaylen <i>Monzingo, Betty</i> Moore, Pixie Moore, Shawna & Jamie Morqan, Devonna Morrison, Sharon National Parks Realty Of Montana LLC Neff, Samuel & Ruth Peschel, John & Laura <i>Pierson, Debbie & Mike</i> Rothberg, Marty <i>Rowles, Roger & Val Konnerup</i> Sanderude, Scott and Julie Sawtelle, Bill & Linda Sawtelle, Cami & Eric
Sponsor (\$50 to \$99)		
Apanii-Butterfly Aronsson, Peter & Cheri Askevold, Gerald & Sally Jo Baldwin, Matt & Sadie Bansak, Tom & Anne Baracker, Jerry and Sharan Barham, Michael & Kristi Behron, LLC Birch Hills Homes Bisharat, Ibrahim & Martha Bruzek, Bill & Judie <i>Burg, Bill & Kay</i> Cavin, Ben <i>Chauner, Linda</i> Cohen, Connie Corwin, Bill & Christina Cox, Besty & Woody Crites, Andy & Wendy <i>Curtis, Kitty & Stewart Stadler</i> Dakin, William & Sarah <i>Daniels, Scott & Karen</i>	DeHerrera, Jimmy & Michaelan Eckstrom, Andy & Jennie Elser, Monica & Jim Fanning, Michael & Jill Ferrington, Alan & Joyce Flathead Urology- Dr. Jon Mercer Follett, Doug & Ann Garside, Susan Gehri, Richard & Glenda Gordon, Rob & Karin Hilding Griesel, Doug & Rebecca Briber Haller, Bruce & Kaye <i>Harrison, Gil & Ruth</i> Hartman, Melissa Hodge, Bill Holmquist, Brett Holt, Chris Hope, Kendra <i>Hunt, Leslie & Will</i> Huston, Mary Hyer, Gary & Jill	<i>Ingelfinger, Franz & Cynthia</i> Jopek, Mike & Pam Gerwe <i>Kavanagh, John</i> Kemp, Craig & Holly Kirk, Phil & Lesia Kohnstamm, Betsy & Dan Kuhl, Tanner & Stephanie Larsen, Arnold & Karen <i>Lawson, Bob & Dyan</i> Lewis, Casey Linne, Mitch & Gail Love, William & Catherine Madler, Marianne Magone, Larry & Barb Manning, Brian & Denise Menicke, Richard & Jennifer Asebrook Moore, John & Janice <i>O'Neil, Christy</i> Packard, Rick and Janet Paslawsky, Andrew & Kim Sands Patterson, James & Lari
Current Grantors & Research Funders		
Cadeau Foundation City of Whitefish	Montana Fish Wildlife & Parks Flathead Conservation District	Soroptimists of Whitefish Upper Columbia Conservation Commission
		Whitefish County Water District Whitefish Community Foundation

Active Members who have donated for 10+ years since 2005. Active Members who have donated for 5-9 years since 2005.



Whitefish Lake INSTITUTE

550 East 1st Street #103
Whitefish, MT 59937



Whitefish Lake Institute Membership Coupon

Yes! Please enroll my membership in the Whitefish Lake Institute, and send me the quarterly newsletter *LakeFront* to keep me informed of the current projects underway and issues being addressed by the Whitefish Lake Institute.

My check is enclosed

Visa  MasterCard  Discover 

Account #:

Expires: _____ 3-digit CVV code: _____

Name _____

Address _____

City _____ State _____ Zip _____

Email _____

Please check your membership category:

- Sustainer \$20,000 and above
- Fellow \$5,000
- Guarantor \$1,000
- Visionary \$500
- Benefactor \$250
- Leader \$100
- Sponsor \$50



Your Contribution is 100% tax-deductible.

501 (c)(3) non-profit corporation



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

Voice: 406-862-4327 ♦ Fax: 406-862-0686

www.whitefishlake.org

Great Gift Ideas from WLI-

visit our website www.whitefishlake.org or stop by the office to get a bumper sticker, various publications, a map, and other items.

