



WLI's 10 Year Anniversary Gala
Whitefish Lake—Sparkle and Shimmer 2015!!

Friday, July 17th will be a very special celebratory Whitefish Wine Auction and the Whitefish Lake Institute's Ten Year Anniversary Gala. We are most excited to announce that the extraordinary, history making TV journalist Connie Chung will be the Master of Ceremonies for this year's event!



Master of Ceremonies
Connie Chung

We've combined all of the elements of our usual two-nights into one remarkable evening. Guests will enjoy wine tasting with Montana distributors *Fun Beverage, Inc.*, *George's Distributing*, and *Intermountain Distributing Company*; Wine Sponsor *Foley Family Wines*; and other select wineries. The *Barrel Stove Combo* will entertain guests with their part jazz, part dance, part highball-swilling-international-spy-taking-time off-to-go-camping style music. And wonderful *Hors d'oeuvres* will be masterfully prepared by the Chefs at The Lodge.

We have a fabulous line-up of Live and Silent Auction items with some real surprises...so bring those funds you've saved for supporting the one organization that works to protect the water quality of Whitefish Lake. Dress in your best "Sparkle & Shimmer" attire and join us from 6:00 to 10:00 PM at The Lodge at Whitefish Lake. Tickets available at www.whitefishwineauction.org or by calling 406.862.4327.



We are thrilled to have been selected to be a part of the *Great Fish Community Challenge*, an exciting new community fundraising program coordinated by the Whitefish Community Foundation. The Challenge kicks off June 9 and will end September 18. Your contribution to the Whitefish Lake Institute via the Great Fish Challenge at the Whitefish Community Foundation will be matched at the end of the giving period from its own Great Fish Fund. This is a great way to leverage your gift to us. The campaign will culminate with a celebratory Community Fair and 5K Color Fun Run in Depot Park on September 12. The Whitefish Lake Institute needs your support, so...

Remember us in the Great Fish! Go to www.whitefishcommunityfoundation.org

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Founded in 2005—Celebrating 10 Years

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

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Cover Photo:

A lone skunk cabbage emerges along the bank of Viking Creek in the Averill's Viking Creek Wetland Preserve

Whitefish Area Water Resources Report & Community Forum

Long-term conservation requires a baseline of scientific, cultural, and historical knowledge of an area; an understanding of its physical, biological, and chemical dynamics; and a program to monitor changes from the baseline. With these elements in place, adaptive management plans and education programs can be developed and implemented. On behalf of the City of Whitefish, WLI is drafting the first ever *Whitefish Area Water Resources Report: A Status of the Whitefish Lake Watershed & Surrounding Area*. This report will analyze the data and information collected since 2007 through WLI's core monitoring program and will assimilate historical data from project partners, resulting in a complete water quality status report and a scientifically comprehensive foundation for long-term water quality management of the Whitefish Lake Watershed & Surrounding Area. This project is imperative for the ecological health of the Watershed as it provides baseline knowledge, identifies known and potential concerns, and offers recommendations to the conservation management organizations responsible for the health of the watershed.

On May 20th, the City of Whitefish, lead contractor Anderson-Montgomery Consulting Engineers, and report researcher and drafter—WLI held a community forum and an open comment period to gather concerns and thoughts through a survey from individuals in the area covered by the report. Results of the survey will be included in the report. The final report will be delivered at the end of 2015, and a public-friendly report will be available to the public in Quarter 1 of 2016.



The Whitefish Area Water Resources Community Forum was well attended where valuable public input was gained.

Editor's Note:

Lucas Ritzdorf (story on page 3) stopped by the WLI office to present his science fair project. Lucas and his dad are Northwest Montana Lakes Volunteer Monitoring Network volunteers on Ashley Lake. WLI staff were impressed with his project and recognized other lake monitoring applications that could be conducted with his invention, especially at small remote lakes.

Local Student Builds Lake-monitoring Boat

—By Lucas Ritzdorf

Lucas Ritzdorf, a seventh grader at Kalispell Middle School, decided to create a water-quality-monitoring vessel as his science fair project last winter. According to Lucas, it is a continuation of last year's project, during which he made a conductivity sensor and programmed a Raspberry Pi microcomputer to calculate the amount of salt in a sample. With it, he became a Broadcom MASTERS semifinalist in 2014.



Lucas Ritzdorf and his lake monitoring boat.

The Remote Aquatic Sensor/Probe Vehicle (or RAS/PV) is a small boat, a little over two feet long, built and programmed by Lucas. It uses a small GPS module and a Raspberry Pi to navigate to multiple user-selected points, then tests the water for conductivity, total dissolved solids, salinity, and specific gravity using a conductivity sensor and control circuit.

The purpose of building the RAS/PV is to provide a viable alternative to commercial water-quality measurement systems. Lucas assisted WLI staff member Josh Gubits during his annual data collection at McGilvray Lake, which helped him decide that the RAS/PV should be more efficient than manual sampling. Thus, the design criteria were that the prototype must be: 1) able to measure something about the water that it is in, 2) able to navigate to multiple sampling points, and 3) affordable enough for the general public to purchase.

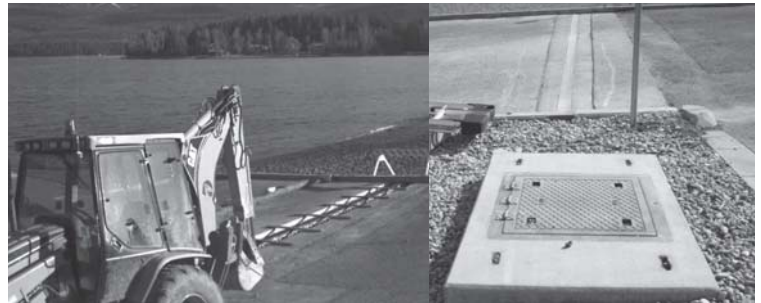
Lucas has taken first place in his category in every fair that he has participated. The county and state competitions were significantly larger than the KMS science fair, but he was able to qualify for Broadcom MASTERS ("Math, Applied Science, Technology & Engineering for Rising Stars"), the national-level middle school science and engineering fair. Lucas hopes that he will make it into the top 30 competitors nationwide for the finals in Silicon Valley, California.

Project Snapshot – City Beach

WLI and the City of Whitefish have recently partnered to address water quality issues and concerns at City Beach.

Many swimming areas on lakes are located next to boat ramps based on cost efficiencies or space limitations. It is common for boat owners after trailering their boat at the end of the day to pull it up on the ramp and drain the transom plug. As a result, any petroleum products contained in the bilge water drains directly to the lake.

Findings from a WLI study detailed gasoline constituent (particularly benzene) loading levels between the boat ramp and the swimming area that were abnormally high in relation to other sites in the lake. The study results prompted the Whitefish City Council to approve the installation of a trench grate and mitigation device as recommended by WLI to protect the health of recreationalists swimming at City Beach and for general water quality.



Left– A Backhoe sits idle as concrete cures during the trench grate installation. Right– the completed trench grate and treatment device.

The City of Whitefish and WLI are also partnering to provide a boat inspection station at City Beach to prevent the spread of Aquatic Invasive Species (AIS).

The Inspection station will be staffed from 10:00am-7pm beginning June 12th, and will be in operation seven days a week. The goal of having trained inspectors at City beach is to prevent AIS from entering Whitefish Lake and to distribute educational information to watercraft users about the economic, recreational and ecological impacts AIS can have on a waterbody. The primary message to boaters is to "Inspect, Clean, Drain and Dry" all watercraft before launching in any waterbody.

In April, Josh Gubits attended the Level II Watercraft Inspection and Decontamination Certification Course at Lake Mead in Nevada offered by the Pacific States Marine Fisheries Commission and the Western Regional Panel on AIS. Josh is now certified to train watercraft inspectors, which he will do for the Parks and Recreation employees that will be operating the City Beach boat inspection station in 2015.

Educational Program Highlights



WLI coordinated an electro-fishing effort with FWP Region 1 Fisheries Biologist Kenny Breidinger and Whitefish High School Project FREEFLOW. In the morning, six students helped survey Walker Creek and Cow Creek. The Cow Creek survey was conducted to determine if future restoration efforts scheduled to begin this fall by WLI will improve the fishery. The stream has been heavily impacted by livestock in that reach. In the afternoon, six other students helped survey Viking Creek. Above— Kenny Breidinger and two FREEFLOW students survey Cow Creek. Below— Annika Hilding measures a brook trout from Viking Creek.



Mrs. Koopal's 2nd grade class stopped by the office after their field trip to Stumptown Historical Society to give a goofy face pose.



All of the Whitefish Middle School 5th graders visited us at the Averill's Viking Creek Wetland Preserve to field journal, learn about aquatic invertebrates and for a tour of the wetlands. In addition, this year, we partnered with Wild Wings Recovery Center to show some of the birds of prey found in the wetlands. Lori Curtis welcomes the group.



88 2nd graders from Ruder Elementary in Columbia Falls visited us for half a day at the Averill's Viking Creek Wetland Preserve to learn about the wetlands at 4 stations. Josh Gubits demonstrates how to do the "Mayfly Mambo."



Whitefish Community School visited us at the Viking Creek Wetland Preserve to learn about aquatic bugs, amphibians and to have a scavenger hunt. Case Koopal shows his classmates a brook trout fry.

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Whitefish Lake INSTITUTE

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Sixth Annual

Whitefish Wine Auction
 July 17, 2015
 a ten year anniversary gala

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