



LakeFront

Quarterly Newsletter of the Whitefish Lake Institute

Spring 2008

Spring Field Sampling Begins

Field sampling began in April at two locations on Whitefish Lake, Lazy Creek, Swift Creek, and Viking Creek. Data collected at these locations will be used by Montana DEQ to create a computer model for non-point source pollution. In addition, the data will become part of the long-term database for future trend analysis.

WLI staff completed a physical profile of Whitefish Lake within a week of when the ice was off

the lake. At that time, the lake was evenly mixed with temperatures ranging from 41F on the water surface to 39F at the maximum depth of 232 feet off of Hellroaring Point.

As temperatures warm, the lake has historically stratified in summer with surface temperatures reaching 70-75F, but the lake bottom stays cold at around 40F.

WLI staff will continue monitoring these long-term study sites twice per month throughout the field season.



WLI Scientist, Chris Ruffatto, measures streamflow on Lazy Creek in April. The headwater elevation of Lazy Creek is low compared to other streams that feed Whitefish Lake like Swift Creek and Hellroaring Creek. As a result, Lazy Creek is less influenced by mountain snowpack, and flows peak about a month earlier.

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Whitefish Lake
INSTITUTE

*Protecting and improving the
Whitefish, Montana area
lake resources*

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Founded in 2005, the Whitefish Lake Institute is committed to acquiring scientific research and engaging the local citizenry to protect and improve the Whitefish area lake resources of today, while providing a collective vision for tomorrow.

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LakeFront is published quarterly by the Whitefish Lake Institute. The opinions expressed in *LakeFront* are those of the authors. We welcome comments and submissions.

Mike Koopal, Editor

Printed on Re-cycled Paper
Logo design by Carbery Creative

Cover Photo:
April 26th 2008, Final Ice Breakup

Team Whitefish takes Third at State Envirothon

Sponsored by the Flathead County Conservation District, four Whitefish High School students competed against thirty schools from across the state in what may be called a Speech and Debate just for Natural Resources. Students, working as a team, endure tests written by resource professionals in Soils, Forestry, Wildlife, Aquatics, and Range management. Once they complete the tests they are given a contemporary problem to solve and proceed to work together for ten straight hours to develop their solution and polish their oral presentation. Students are asked tough questions regarding cattle grazing, timber management, wildlife diversity, soil erosion, preserving water quality, public opinion, and preserving native fisheries.



(L-R) Pat McGunagle, Falina Lintner, Kristy Whisler, and Henry King

This years competitors were Kristi Whisler, Falina Lintner, Pat McGunagle and Henry King. All of them participate in the extracurricular F.R.E.E.F.L.O.W. program at Whitefish High. The program focuses on water quality and land management issues. Students are completing their 14th year of collecting water quality data on Haskill Creek, performing conservation work in the community, and most recently completing a field trip to sites affected by the Flood of 1964.

The Students would like to thank the Flathead County Conservation District, Stoltze Land and Lumber, Whitefish Lake Institute, The Department of Natural Resources and Conservation, Whitefish Mountain Resort, Iron Horse, The City of Whitefish, River Design Group, The Voermans Ranch and the United States Forest Service for their continued professional and financial support. –CR

The Rock has Dropped!

Whereas the official ice off date for Whitefish Lake was April 26th, on March 18, the big rock sitting on the ice of Whitefish Lake dropped into the depths. Two lucky winners correctly predicted the date of the Big Thaw: Susan Hollinshead and Nancy Lipincott. The grand prize winner was randomly drawn from a hat. Susan Hollinshead, Calgary, Alberta, won the top prize and split the pot of \$580 with WLI. Part-time resident Nancy Lipincott of Cincinnati, Ohio won two nights accommodations at The Lodge at Whitefish Lake. The Rock Drop will take place at the same time next year.

Fire Retardant Effects on Zooplankton

At the Montana State Science Fair at the University of Montana, Whitefish junior Kristy Whisler was awarded the Grand Award 4th Runner Up (5th place overall out of 50 competitors) for her work analyzing the effects of fire retardant on Whitefish Lake zooplankton. She presented her findings at the Whitefish High School Science Research Symposium on May 12th. Her full paper is available by contacting the Whitefish Lake Institute.

Abstract

There are millions of gallons of fire retardant dropped onto the forest floor each year. The United States Forest Service is currently examining the environmental implications for aquatic wildlife. The purpose of this research is to investigate fire retardant effects on zooplankton. It was hypothesized that a five percent concentration of fire retardant will kill the cyclopoida and calanoida species of zooplankton found in Whitefish Lake in Whitefish, MT. Zooplankton was collected from the mouth of Whitefish River and various concentrations of Phos-Chek D-75R fire retardant were applied to fourteen milliliters of water from Whitefish Lake containing zooplankton. Mortality was counted at 30 minutes, 3 hours, 12 hours, 24 hours, and

48 hours and the tests were repeated six times to achieve a mean mortality. The results showed that 48 percent of the zooplankton exposed to a 0.384 percent concentration of fire retardant died after a twenty-four hour period, 21 percent of the zooplankton died after twenty-four hours when exposed to a 0.256 percent concentration, and only 9 percent of the zooplankton died after twenty-four hours in a 0.128 percent concentration. A T-test was conducted on the data and it determined the findings to be statistically significant and to be a good representation of the concentrations of fire retardant that would be lethal to zooplankton in Whitefish Lake. These findings show that if Whitefish Lake was exposed to even a very small amount of fire retardant, it would be a major hazard to zooplankton.

Free Interpretive Boat Tours

Join WLI Scientist Chris Ruffatto on Sunday, June 8th, from 10am – 4pm for a free guided tour aboard the Lady of the Lake Classic Cruiser as part of “The Summer Opens” at The Lodge at Whitefish Lake.

Other activities during the open house include:

- Spa at Whitefish Lake Chair Massages
- Boat Club Food and Drink Specials
- Demonstrations and Information Provided by Local Activity Vendors and Outfitters Including:
 - Lakestream Fly Fishing • Wild River Adventures
 - Sportsman Ski Haus • Glacier Outdoor Center
 - Glacier Guides/ Montana Raft Company
 - J&L Rentals – 4 Wheeling

Please call The Lodge at Whitefish Lake (406)863-4022 to sign up for the Lady of the Lake boat tours. RSVP by May 24th. Space is limited—make your reservations today.



Earth Day– WLI Style

WLI staff spent Earth Day training volunteers to become “lake watchers” for the Whitefish to Eureka Lake Volunteer Monitoring Program. This program, in it’s first year, is a partnership between Montana FWP and WLI. Volunteers will monitor 20 lakes between Whitefish and Eureka.

Volunteers will collect basic limnological data on their lake roughly twice a month and send their results to WLI to be entered into a database, interpreted and reported on. Volunteers are also being asked to be on the lookout for invasive species such as zebra and quagga mussels, New Zealand mudsnails, and Eurasian watermilfoil. If they suspect these exotics in their lake, they will immediately report this to FWP or WLI.



WLI Scientist Chris Ruffatto demonstrates how to use lake sampling equipment during one of the training sessions for lake volunteers.

Thank you to the following volunteers:

Lost Coon– Terry Nelson

Skyles– Cathy Lai

Murray and Dollar– Richard and Nevada Kramer

Upper Whitefish and Upper Stillwater– Peter and Cheri Arronsson

Lower Stillwater– Cliff and Susan Kawulok

Dickey, Murphy and Big Therriault– Pat Price and Kenny Kendall from Murphy Lake Ranger District

Tetrault– Carol Blake

We are still looking for volunteers to monitor the following lakes:

Whitefish Area:

Spencer

Tally

Bootjack

Stryker Area:

Bull

Fish

Glen

Eureka Area:

Black

Sophie

If you are interested in becoming a volunteer, or know someone that might be, please contact WLI.



Mike Koopal, executive director of WLI spent an afternoon last week dissecting fish for all Whitefish 4th grade classes.

Thanks to a mini-education grant from Montana DEQ, the students also had a chance to view the zoo-plankton of Whitefish Lake under a microscope with a video feed to a TV screen. The dissection is done each spring for the 4th graders..



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