Lake Institute gathering data for TMDL model

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By RICHARD HANNERS / Whitefish Pilot

The Whitefish Lake Institute has spent the last year and a half as a project partner with the Department of Environmental Quality (DEQ) collecting data for a computer model describing nonpoint source pollution in the Flathead Basin. The work will be used by DEQ to establish a total daily maximum load (TMDL) for the Flathead area.

Institute director Mike Koopal said they regularly collect data from two locations on Whitefish Lake, five creeks that feed the lake and their weather station. The institute's Hydrolab probe measures temperature, dissolved oxygen, pH, conductivity, photosynthetically active radiation and oxidation-reduction potential.

"At this time of year, the lake is vertically stratified into three distinct layers based on temperature," Koopal said. "We chart out those layers in the field and then collect a discrete water sample from the middle of each layer for laboratory analysis. The laboratory measures nitrogen, phosphorus, organic carbon, suspended sediment and other parameters."

The tributary work mirrors that of the lake but also involves measuring the volume of water entering the lake.

"The whole idea is that we know what goes into the lake, what comes out and how the lake cycles nutrients," he said.

DEQ personnel will field-check the data and zero in on problem areas.

"If the model says eroding banks on Swift Creek are a serious problem, they will focus on that," Koopal said.

Data on impacts by septics around Whitefish Lake hasn't been collected since 1986, he said, but the institute will start collecting that data this fall, in part to repeat the 1986 study.

A fluorometer will be used to look for whiteners used in laundry detergents, and water samples will be analyzed for fecal coliform. DNA analysis will also be conducted to determine if fecal coliform samples are from humans or animals.

The institute will present a public forum on its work next June. Representatives from the Flathead Lake Biological Station and DEQ may also be present.