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Idaho mines harm Yellowstone fish, ISU report states

Two of the West's largest remaining populations of Yellowstone cutthroat trout face sharp declines due to contamination from phosphate mines in Southeast Idaho, Idaho State University professors say.

Rob Van Kirk, a professor who specializes in mathematical models of aquatic ecosystems, and Sheryl Hill, a biology professor, on Thursday released a study that predicts a precipitous fall of the prized game fish in some streams and an overall decline in populations in the region.

They said contamination comes from selenium leaching out of waste rock from the mines.

Selenium is a naturally occurring mineral that is healthy in small levels but can build up to toxic levels.

At phosphate mines, it leaches out of waste rock and accumulates in stream, where it goes through the food chain from plants to insects to fish.

"The bottom line is there are (selenium) concentrations in fish that are high — high by anyone's standards, not just cherry picking standards — and that indicate a high risk of population declines," Van Kirk said.

The Bozeman, Mont.-based Greater Yellowstone Association — whose stated mission is to protect the lands, waters, and wildlife of the Greater Yellowstone Ecosystem — paid the university about \$8,600 to produce the report. The organization is trying to collect data on how phosphate mines are effecting fish and wildlife, spokesman Marv Hoyt said.

The Blackfoot and Salt rivers drainages in Southeast Idaho contain two of the six largest remaining populations of Yellowstone cutthroat, Van Kirk said.

The population has already suffered major setbacks in what was its main habitat, Yellowstone National Park, following illegal introduction of lake trout to Yellowstone Lake. The U.S. Fish and Wildlife Service last year declined to list the species, though the selenium threat was considered.

"There were some concerns that were identified," said Wade Fredenberg, native fish coordinator with the wildlife service. "I don't want to trivialize it, because in those drainages it might be serious, but the point is we're not going to cease phosphate mining in every drainage that contains Yellowstone cutthroat trout."

Southeast Idaho contains large formations of phosphate rock. Phosphate is used for agricultural chemicals and fertilizer. Mining began in 1907 and increased significantly after World War II.

According to the coalition, the area has three operating phosphate mines and up to 26 closed mines.

The main operators are Boise-based J.R. Simplot Co., Monsanto Co. of St. Louis and Agrium Inc. of Calgary.

Fred Zerza, a Simplot spokesman, said the report was one of several designed to derail the company's planned expansion of its Smoky Canyon mine.

"This would be another in a succession of those," Zerza said, "to discredit the efforts of the company to develop the mine."

He said the company has made efforts to control selenium contamination with water and fish monitoring systems as well as rerouting one stream away from waste rock.

Researchers found that fish in the Salt and Blackfoot drainages contained an average 9.81 micrograms of selenium per gram of body weight, which they say is more than 2 micrograms above the point where fish populations start declining.

Four streams had concentrations above 20 micrograms, Van Kirk said, including East Mill Creek, a tributary to the Blackfoot River.

The Idaho Department of Health and Welfare has warned parents to limit the number of fish children eat from the creek because of the high selenium concentrations. But Van Kirk said selenium has killed most fish in that stream.