

# **‘Elevated’ levels of mercury found at Mill City site**

**Wendilyn Grasseschi, Mammoth Times, 5-29-14**

A toxic and carcinogenic heavy metal, mercury, has been detected near the Mill City Stamp Mill area in Old Mammoth at levels high enough to trigger a cleanup effort but the mercury is not likely to pose a risk to Mammoth’s drinking water supply—nor to people accessing the Mill City area for recreational purposes, scientists said Tuesday.

“We found mercury in very excessive amounts in some soil samples adjacent to the Mill City Stamp Mill, but I don’t want the take-away from this to be that Mammoth’s drinking water is threatened,” said Dr. Marc Drew on Tuesday, May 27, at a talk sponsored by the Sierra Nevada Aquatic Research Laboratory (SNARL) at the Green Church.

“Mammoth gets most of its water from Lake Mary, which is above the mill, and the water district does a very good job testing its water for mercury, so this is a problem that needs to be solved, but it is not a reason to freak out.”

The source of the mercury in the soil appears to be the old, stamp mill which was active for a short time in the 1800s and used the mercury to process the gold ore found at the site.

The site is located near the end of Old Mammoth Road where it connects to the Lake Mary Road and near the western end of the Mammoth Rock Trail. Locals know it for the still-intact big, iron flywheel, which was once used for the 20-stamp mill.

Much lower levels of mercury were found in Mammoth Creek below the Stamp Mill, Drew said, but only during intermittent periods, such as during high flows in the spring, he said. The mercury identified by Drew and the cadre of scientists who did a two-year study of the water quality of Mammoth Creek is not the kind of mercury that accumulates in fish tissues; methyl mercury, he said.

Drew is a scientist who directs the Eastern Sierra Region’s office of CalTrout, a nonprofit dedicated to preserving the area’s streams and other waters in order to support a healthy native trout and other aquatic species population.

He said he and a group of scientists, including Dan Dawson, who directs SNARL, were first motivated to do water quality testing of Mammoth Creek because the state had put the creek on a list of “impaired” streams in 2008 due to what the state said was elevated levels of nutrients, manganese, phosphorus, nitrogen and mercury.

While the other contaminants noted above were cleared as problems—they were found only in very low levels—during the two-year study, the levels of mercury found at the site do require attention and further study even though the mercury does not appear to present an immediate health threat, he said.

Dawson, too, said the mercury issue was something to take care of, but not to be unduly alarmed about. “You would have to dig in the soil near the Stamp Mill and cover yourself with dust from the contaminated area to suffer health effects,” he said. “Even if the mercury we found was methyl mercury, which can accumulate in fish tissues over time—and it is not—you would have to eat hundreds of fish to get enough mercury to be a problem.”

The same goes for the mercury found in the some samples of the creek taken below the stamp mill. “You would have to drink hundreds of gallons of water to get contaminated,” he said. “No one does that.”

That doesn’t mean the area will not be cleaned up, however.

The mill site cleanup is considered to be one of the highest priorities this year for the Inyo National Forest, which manages the public land the mill site is on, according to Drew.

The presence of a dangerous heavy metal legally triggers a fast response from the forest; he said, including more testing and eventually, once the extent of the contamination is known, a full cleanup of the site.

The Inyo National Forest recently released a news story about the issue, as reported in last week’s Mammoth Times.

“Additional sampling is required to fully delineate the nature and extent of contamination that may be present as a result of historic mining activities at the site,” the forest service said.

“The forest service will be conducting a site investigation this spring and summer to determine the full nature and extent of contamination and to better assess the degree of risk to recreational visitors, nearby residents, and to the environment and what actions may be needed to mitigate these risks.

“While we do not know the nature or extent of mercury contamination, we want to share the information we currently have with residents and visitors to the area,” said Ed Armenta, forest supervisor.

The state’s “impaired” listing triggers action by the state until the “problem” contaminants are identified and cleaned up and Drew, whose organization is concerned with all water quality issues that might affect its mission, said he applied for and received a grant in 2012 that allowed CalTrout to test the 18 miles of Mammoth Creek.

It was this study that indentified the Mill City site as the likely source of the mercury found in the creek but only, Drew said, after a bit of scientific sleuthing.

“We were finding elevated levels of mercury in certain sites below Lake Mary but only during peak runoff times,” he said. “Eventually, we began to realize that the mercury was likely pooling in lower parts of the creek after spring runoff, then being flushed out the following spring by the higher water volume and sent downstream where we were detecting it.”

It took some time and some targeted testing to find the ultimate source of the mercury contaminant, but when the team discovered highly elevated levels of mercury in the soil near the mill site, the mystery appeared to be solved, Drew said.

Mammoth Creek is considered to be a tributary of the Upper Owens River. It begins at the base of Duck Pass and collects snowmelt from the Lakes Basin, the Sherwins and all the area along the creek’s drainage area, before it enters the Owens River a few miles north of Crowley Lake.

“More testing of the site, the water and fish is in order,” said Drew. He said he hopes the testing will also involve testing fish for possible methyl mercury residue.

The forest service will continue testing the site this summer, including areas surrounding the nearby summer homes.