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## Leviathan Mine pollution slowing

By Andy Bourelle

The toxic mix of acid and dissolved metals the Leviathan Mine has been releasing into tributaries of the Carson River for decades is slowly but steadily

decreasing, according to a new environmental report.

The concentration of toxic runoff in nearby waterways could someday go below levels that would create a health concern, said the draft Leviathan Mine Public Health Assessment completed by the California Department of Health

Services.

The assessment said California and federal officials are making progress in

containing the toxic runoff, but the stream contamination is not expected to

drop dramatically in the near future.

"The remediation is making progress and getting better," Greg Braun, author of the draft, said Monday. "I don't know if that trend is going to continue. It

could plateau and maybe they wouldn't be able to find the other sources (of

pollution) for several years."

Another possibility, Braun said, is that a severe winter might overflow the

containment ponds on the property, discharging more pollution into the streams.

"There's no predicting what will happen," Braun said.

Located 25 miles southwest of Gardnerville in the mountains of Alpine County, the Leviathan Mine for years has leaked acidic water full of dissolved metals. The pollution has drained into creeks and the Carson River, discoloring the streams and rendering portions of the tributaries unable to support aquatic life.

Leviathan and Aspen creeks touch the mine directly and feed into Bryant Creek, which, after 7.8 miles, feeds into the East Fork of the Carson River.

The pollution has long worried downstream users, such as Douglas County leaders and the Washoe Tribe of Nevada and California.

California's Lahontan Regional Water Quality Control Board has worked since the 1980s to contain the toxic drainage and has made substantial progress since 1999 in not only containing the runoff but also removing the toxic substances, such as arsenic, from the polluted water, Braun said.

However, officials have failed to contain all of the toxic liquid on the property.

In May 2000, after the urging of leaders from Douglas and Alpine counties as well as the Washoe Tribe, the U.S. Environmental Protection Agency declared the mine a Superfund site, among the nation's most hazardous.

"The problem hasn't been cured, but I think they've made some major strides in lowering the level of toxic substances going into the creeks," Douglas County Commissioner Kelly Kite said.

Braun, a research scientist with the California Department of Health Services, said the public health assessment is the latest step in the Superfund process. The agency is taking comments on the draft assessment through June 4.

The goal is be to help cleanup efforts.

One likely result would the posting of signs near polluted waterways to deter people from drinking, swimming or eating fish from the streams.

However, officials don't know how far downstream the toxic runoff goes or whether it reaches the Carson River.

"Could it have an impact (on the Carson River)? Certainly, probably more historically than today. What's the degree of impact? Unknown," Braun said.

Compared with other Superfund sites, there isn't a lot of historical information about the impacts from the mine, which lies among forests at an elevation of 7,000 feet, Braun said. What effect the pollution might have had on hikers, fishermen, off-highway vehicle drivers or other people who have been in the area remains unknown.

"Leviathan Mine is a little unusual in that it's very remote. A lot of the sites tend to be in industrial, urban areas," Braun said. "It's hard to know who's up there, when they're up there and for how long. It's hard to guess people's behavior."

The Leviathan Mine was first used in 1863. Comstock workers mined it for copper sulfate to process silver in Virginia City until 1872.

In the 1950s, Anaconda Corp. bought the mine to produce sulfur with open-pit, strip-mining methods -- a type of operation know for causing water-quality problems.

Mountain water runoff trickling through the excavation waste piles and mine tunnels transform into what officials call "acid-mine drainage" -- sulfuric acid containing dissolved metals that are toxic in liquid form.

Leviathan Creek and the other polluted tributaries have been stained orange.

Void of vegetation, the 250-acre mine property resembles a pale, barren moonscape. Viewed from an aircraft, the Leviathan Mine looks like a large white scar in the otherwise green forests of Alpine County.

"It's a major environmental disaster," Kite said. "Any step we can take to help get it cleaned up works to our benefit."