

Lahontan Regional Water Board

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a Water News

<u>California Regional Water Quality Control Board, Lahontan Region Neutralizes</u> Acid Mine Drainage at Leviathan Mine

ALPINE COUNTY, CALIFORNIA —The California Regional Water Quality Control Board, Lahontan Region has neutralized all acidic drainage contained in evaporation ponds at Leviathan Mine. Problems caused by non-neutralized acidic drainage include the creation of acidic conditions in receiving waters and elevated metal concentrations, which can be toxic to fish and other aquatic life.

Leviathan Mine is an inactive sulfur mine that was listed as a Superfund Site in May of 2000. Superfund status means that the U.S. Environmental Protection Agency qualified Leviathan Mine as among the most contaminated sites in the country.

"Working with the local community, we were able to make great advances in the operation of our treatment system, and reduce overall costs. We expect even better performance next year," said Regional Board Executive Officer Harold Singer.

To date, the Board has treated more than 10,000,000 gallons of pond water laden with heavy metals, including: iron, aluminum, arsenic, nickel, and copper. The ponds receive a continuous flow of acidic drainage from remnant underground tunnels. The tunnel drainage can be characterized as an acidic solution containing elevated concentrations of iron, aluminum, arsenic, nickel, and copper.

In addition to pond water treatment, the Board continues to: 1) implement an extensive monitoring program that includes monthly water quality sampling and continuous flow recording at locations above, inside, and below the mine site, 2) revegetate disturbed land areas, and 3) conduct infrastructure assessments and maintain site facilities.

The State of California acquired Leviathan Mine in 1984 to clean and abate water quality problems caused by historic mining. Historic mining at the mine included underground and open pit extraction of sulfur. These activities resulted in the exposure of pyrite, contained in the native soil, to air and water. Exposure of pyrite to air and water causes the generation of sulfuric acid, referred to as acid mine drainage (AMD).

As AMD travels through the soil at the mine, it dissolves and carries metals contained in the native ground. The acidic and metal rich AMD eventually discharges to nearby creeks (Leviathan and Aspen) causing significant adverse impacts. Aspen Creek flows into Leviathan Creek, Leviathan Creek flows to Bryant Creek, and Bryant Creek flows across the Nevada state line and into the east fork of the Carson River.