Leviathan Mine Superfund Site

U.S. Environmental Protection Agency • Region 9 • San Francisco, CA • January 2017

History and Timeline

Background

Leviathan Mine is an abandoned open-pit sulfur mine. The mine is located approximately 25 miles southeast of Lake Tahoe high on the eastern slope of the Sierra Nevada mountain range, in a remote portion of northeastern Alpine County, CA surrounded by national forest and private land. The acid mine drainage (AMD) from Leviathan Mine has historically contaminated a nine-mile stretch of the Leviathan-Bryant Creek watershed, impacting Leviathan, Aspen, and Bryant Creeks, as well as the East Fork Carson River. In 2000, the U.S. Environmental Protection Agency (EPA) added the mine and the impacted areas (the "Superfund site") to the National Priorities List (NPL). The NPL is the list of the most complex, uncontrolled hazardous waste sites throughout the United States that threaten public health and the environment.

The historical activities from the Leviathan Mine have created AMD, impacting the surrounding environment. Sulfuric acid is created when water (rainwater, snowmelt and subsurface water) interacts with rocks containing sulfur-bearing minerals. The resulting highly acidic water moves into the surrounding environment, such as the groundwater, surface water and soil, and may have harmful effects on humans, animals and plants.

Although a long-term cleanup plan has not been developed, early cleanup activities are being conducted to reduce the discharge of untreated AMD. Since the summer of 2001, interim treatment systems have greatly improved the water quality of the Leviathan-Bryant Creek watershed.

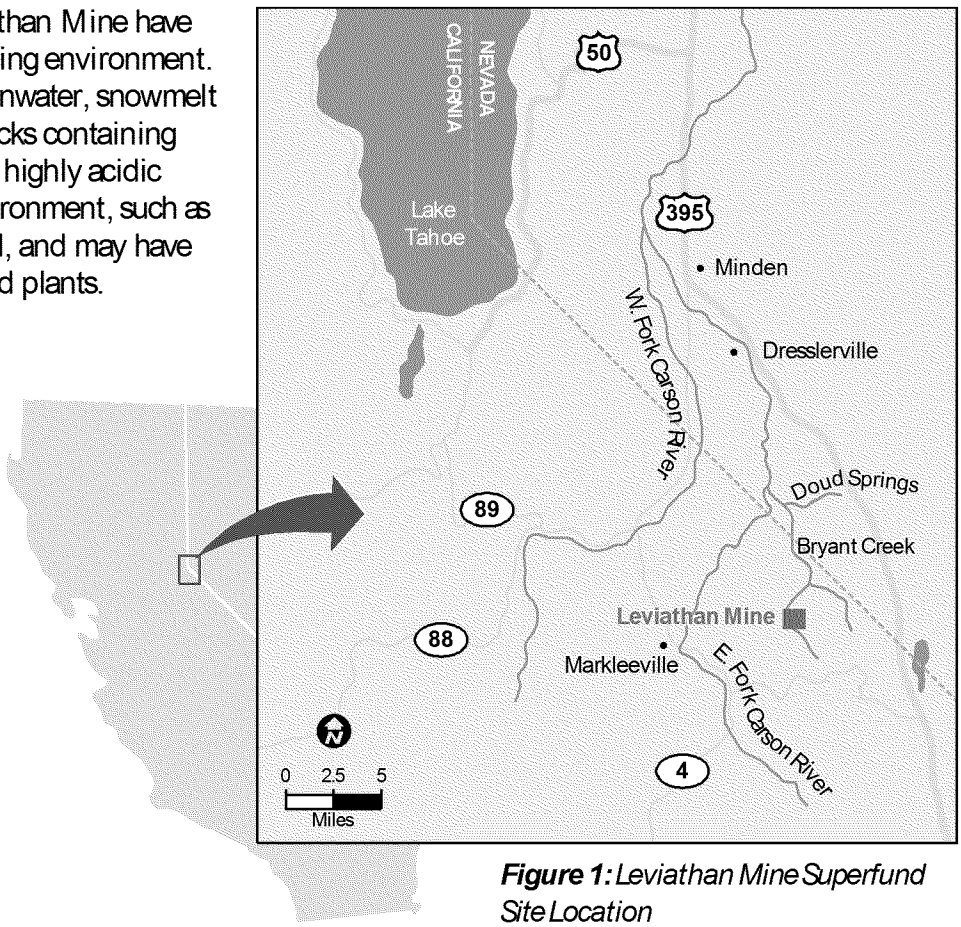


Figure 1: *Leviathan Mine Superfund Site Location*

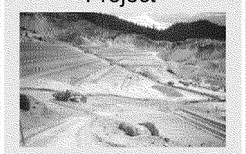
Acid Mine Drainage (AMD)
When highly acidic water that is rich in metals moves (or drains) out of a mined area into the environment

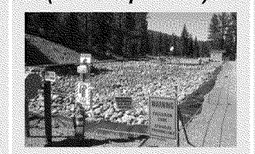
Timeline for the Leviathan Mine Superfund Site

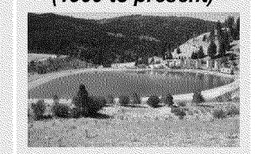
1863-1872	1873-1935	1935-1941	1952-1962	1977	1984	1985	1996	1999	2000
Underground mining for copper	Inactive	Underground mining for sulfur	Open pit sulfur mining by the Anaconda Company Fish kills reported in 1952	Atlantic Rich f ield Company purchased Anaconda	California Regional Water Quality Control Board (RWQCB) acquired the site to address water quality.				EPA added the site to National Priorities List (NPL)

Early Interim Actions (Summary)

2001 - 2009	2009	2014	2015	2016	2017	2018	2019	2020	2021
Lime treatment system	High-density sludge treatment system *(2009 to present)*		Results of revegetation efforts, July 2015			Pollution Abatement Project	Aspen Seep Bioreactor *(1996 to present)*	Pond water treatment system *(1999 to present)*	







RI/FS* Sampling Schedule

2014	2015	2016	2017	2018	2019	2020	2021
RI Field Sampling	Workplans & Sampling RI Field Sampling Evaluate Data & Identify Gaps	RI Field Sampling Evaluate Data & Identify Gaps	Evaluate Data & Identify Gaps** Resample to Fill Data Gaps**				

2015	2016	2017	2018	2019	2020	2021
Complete RI Sampling	Complete RI Sampling	Complete RI Sampling**	Final RI/FS Report	Proposed Plan** Public Hearing**	Record of Decision**	Remedial Design**

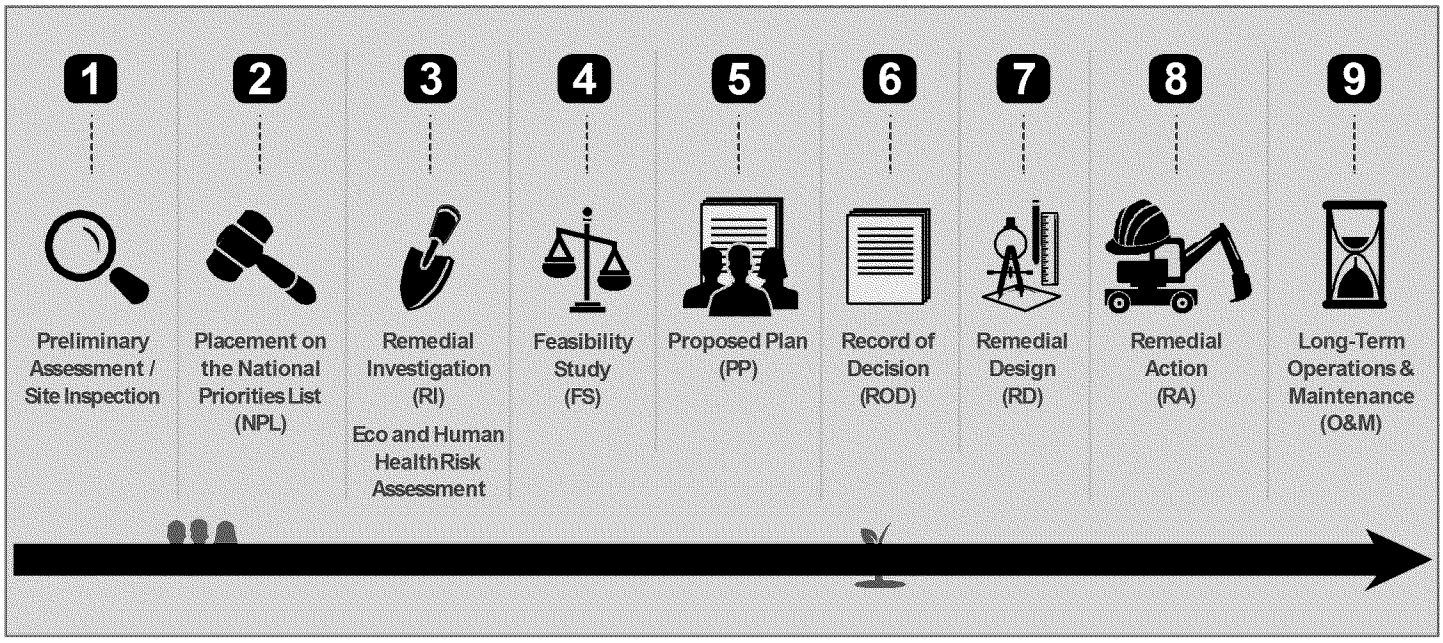
Overall Schedule

CA RWQCB Pond Water Treatment System Achievements 1999-2016

Water Treated	107,000,000	Gallons
Aluminum Removed	405,337	Pounds
Arsenic Removed	5,500	Pounds
Iron Removed	592,284	Pounds
Nickel Removed	5,740	Pounds

**RI/FS – Remedial Investigation/Feasibility Study*
***Proposed Schedule*

The Superfund Process



For More Information

Visit one of the Information Repositories located at:

Douglas County Library
1625 Library Lane
Minden, NV 89423
(775) 782-9841

EPA Superfund Records Center
95 Hawthorne St., 4th Floor
San Francisco, CA 94105
(415) 536-2000

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Websites:
Leviathan Mine Superfund Site – **http://go.usa.gov/x9mf4**
April 2015 Site Updates Fact Sheet – **http://go.usa.gov/x9mfZ**

Be included on the Leviathan Mine Superfund site mailing list by contacting Yolanda Sanchez.

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