Sulphur Bank Mine Superfund Site Update

SEMS-RM DOCID # 100031867

AT A GLANCE - THE RECOMMENDED CLEANUP PLAN

Overview

The 160-acre Sulphur Bank Mercury Mine Superfund site sits on the shore of Clear Lake in Lake County, Calif. (70 miles northwest of Sacramento). Historic mining contaminated the mine property with unhealthy levels of mercury, arsenic and antimony. Contamination from the site also impacts the wetland area north of the mine and Clear Lake itself. This brochure summarizes the U.S. Environmental Protection Agency's proposed plan to address Operable Unit 1 of the site. 'Operable Unit1 (OU-1)' is the part of the site that includes:

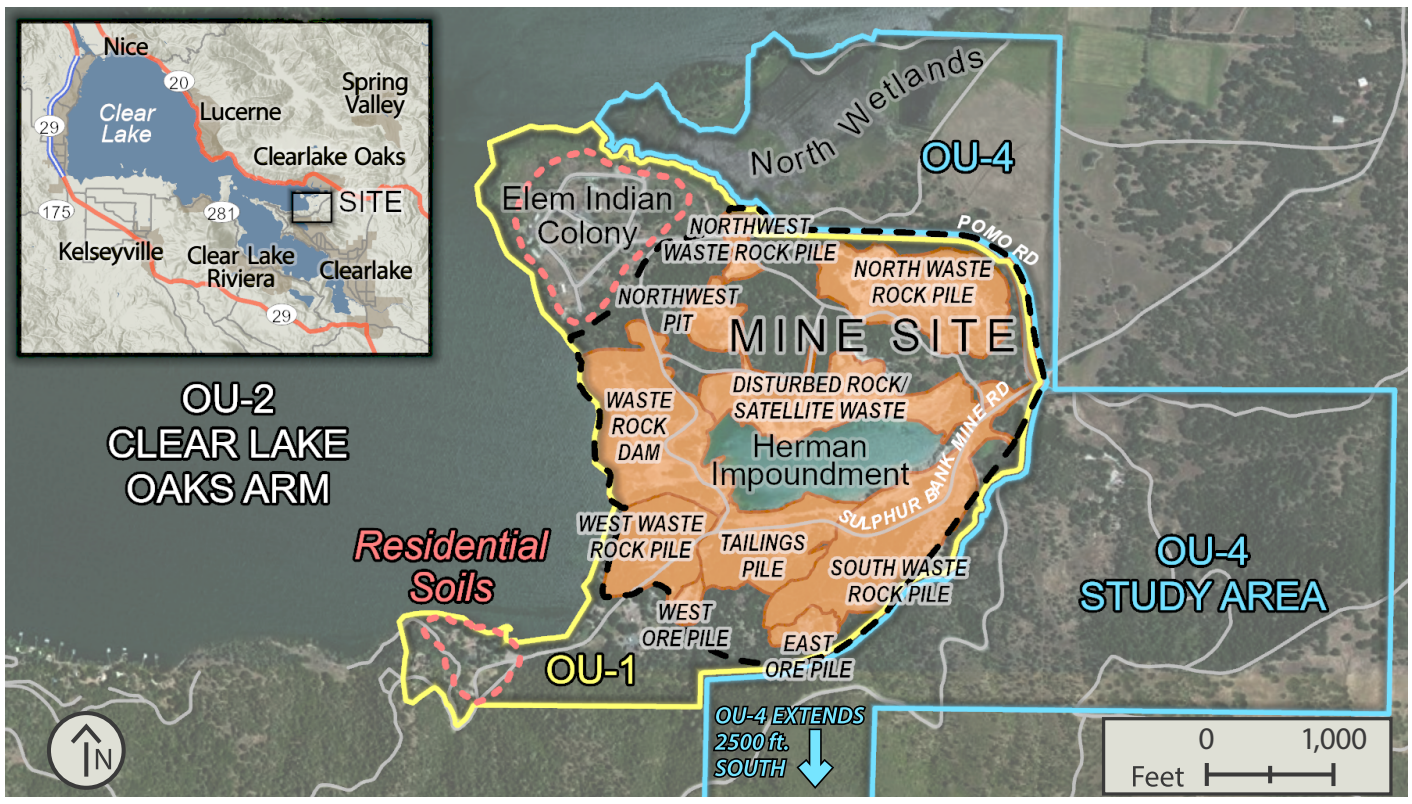
- the mine property, including eight main waste piles and two open pits;
- the sovereign territory of the Elem Indian Colony Tribe; and
- the Residential Soils in the neighborhood southwest of the mine.

We studied different cleanup options for OU-1 (outlined in YELLOW on the site map to the right).

All options:

- protect the community and environment from the 2.5 million tons of mine waste and contaminated soil on-site; and
- limit mercury entering Clear Lake to allow mercury levels in sediments and fish to decrease over time, and help EPA determine the cleanup needed for the lake.

We continue to study options for Operable Unit-2 (Clear Lake and its sediments); and Operable Unit-4 (North Wetlands and Study Area – shown in **BLUE** on the site map to the right).



Site is divided into parts called 'operable units.' Operable Unit-1 is outlined in YELLOW and include areas of mine waste where the contamination is highest (ORANGE).

The Proposed Cleanup Plan and a video presentation on it are online:

To view the site's webpage and Proposed Plan, and to access a link to a video presentation, please scan the QR code with your phone camera or visit: epa.gov/superfund/sulphurbankmercury

We can also mail you a paper copy of the Proposed Plan and/or you can view a copy in-person at the Clear Lake information repository. *Contact us or see the "Key Announcements" section on the webpage for info.*

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1990 — Added site to EPA Superfund cleanup program

1992, 1997, 2000, 2006, 2008, 2010 — Early cleanup actions to address most urgent threats to public health and the environment

2006 — Remedial Investigation and Feasibility Study completed. This work defines where contamination is on-site and a range of cleanup actions

2014 - 2017 — Developed new cleanup options with the State of California and the Elem Indian Colony

2020/2021 — Focused Feasibility Study, including EPA's preferred cleanup approach (finished)

Site History

The mine operated off-and-on from 1865 to 1957. The site was added to the Superfund cleanup program in August 1990.

Since then, EPA completed eight early cleanup actions to protect human health and the environment and reduce contamination in:

- Soil
- Lake water
- Residential and tribal properties near the mine
- Sediments
- Fish and wildlife

What's next for the cleanup?

- **Winter 2022-Summer 2023**: Receive public comment on the cleanup plan (the "Proposed Plan"), respond to all comments, and document the final plan in an official document called a "Record of Decision."
- **2023-2025**: Gather data and prepare cleanup designs.
- **2025-2026**: Begin cleanup (cleanup estimated to take 3 to 5 years depending on what Phase 1 reveals.)
- **2023-2028**: Continue studying the North Wetlands, Clear Lake and sediment to see how best to control mercury and other contaminants in these areas.

EPA's mission is to protect human health and the environment.

Summary of EPA's Proposed Cleanup Plan

The recommended cleanup is split into two phases. What is learned in the first phase will be used to form the second phase.

Cleanup goals:

- Combine smaller piles of waste with larger piles to reduce the area of contamination
- Put clean earth and soil over the contaminated waste and soil. This will:
  - Make residential areas safe for life-time residential use.
  - Make on-mine areas safe for limited use by Elem Indian Colony residents (hunting, fishing, foraging, transit to nearby lands).
  - Prevent contamination from mixing with stormwater or being blown off site by wind.
- Limit mercury entering Clear Lake to allow mercury levels in sediments and fish to decrease over time, and help EPA determine the cleanup needed for the lake.

What are the health risks for users of Clear Lake?

- Mercury from the site builds up in the fish in Clear Lake, making some fish unsafe to eat in large amounts (especially for young children).

(See the state's fish guidance for eating fish from Clear Lake: oehha.ca.gov/advisories/clear-lake)

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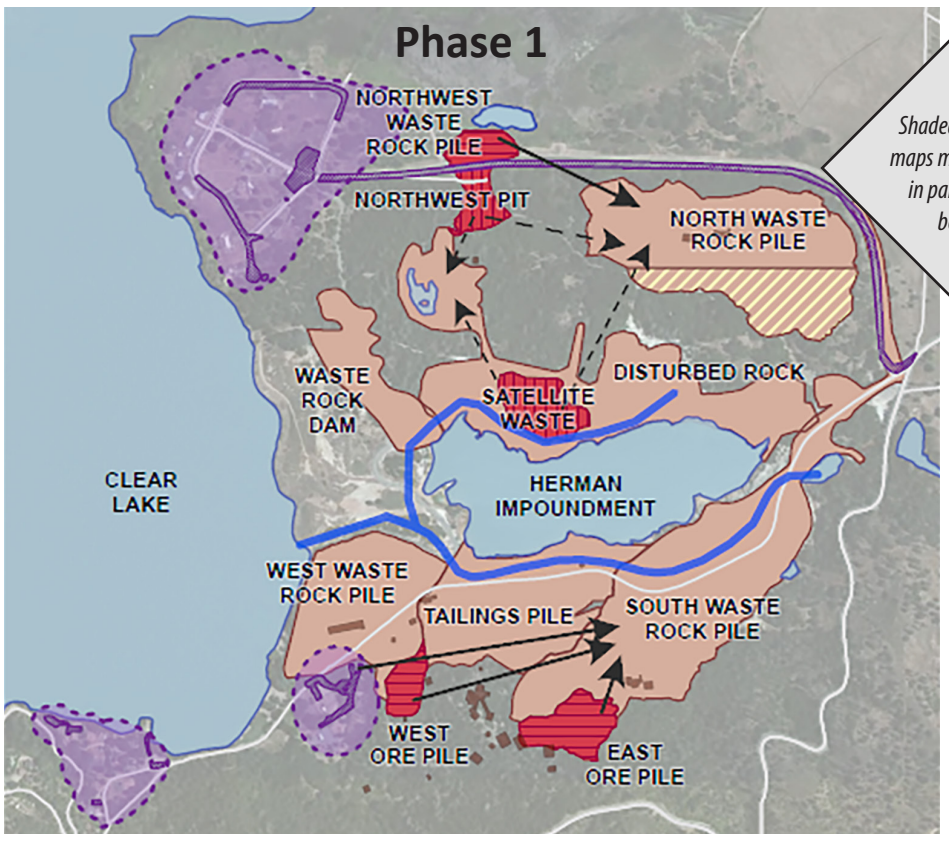
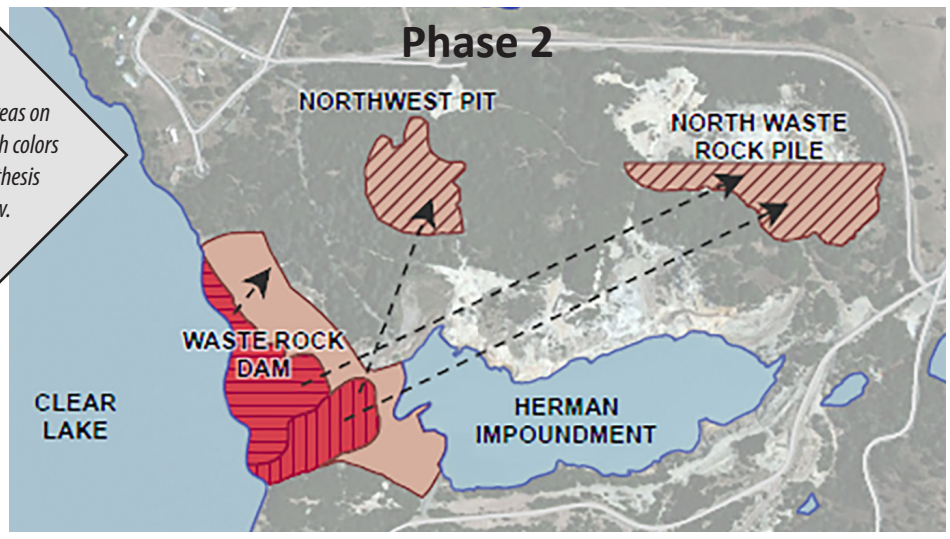
- Swimming, catch-and-release fishing and other typical forms of recreation on Clear Lake will not expose you to unsafe levels of contamination from the site.

(While unrelated to the site, there are occasional blooms of harmful algae that can make it unsafe to swim. These usually happen in mid-to-late-summer. EPA advises the community to follow state and county guidance: lakecountyca.gov/cyanobacteria)



Shaded areas on maps match colors in parenthesis below.



Phase 1 Cleanup

Phase 1 cleanup includes:

- Confirm areas of contamination in residential areas (**LIGHT PURPLE**)
- Set restrictions for how areas with contamination can be used (**DARK PURPLE**)
- Dig up and move mine waste (**RED**)
  - Solid lines show where mine waste will be moved
  - Dashed lines show where mine waste might be moved (depending on type and level of contamination)
- Replace removed soil with a clean soil cover (**PINK**)
- Future Phase 2 storage area for mine waste (**HASHED PINK**)
- Redirect clean stormwater (**BLUE**)
- Monitor site water quality and the amount of groundwater flowing into Clear Lake

Phase 2 Cleanup

The change in Herman Impoundment's water quality and water level will help tell EPA how much of the Waste Rock Dam needs to be dug up. Phase 2 cleanup includes:

- Determine amount of Waste Rock Dam to be dug up (**RED**)
- Move that material to safe storage on site (**HASHED TAN**)
- Place clean engineered/soil cover (**PINK** & **HASHED TAN**)

After the Cleanup

Once Phase 2 is complete, EPA will ensure cleanup goals have been met by monitoring soil, surface water and groundwater. Following this, the Operations and Maintenance (O&M) phase will begin, which includes:

- Ensuring vegetation growth on soil capped/ covered areas
- Sampling groundwater, surface water and lake water
- Maintaining fences, "no dig" restrictions and tribal access points, as needed
- Following-up with stakeholders according to the 2023 Community Involvement Plan update

After this, long term O&M responsibilities will be passed to the State of California. Every five years thereafter, EPA will review the cleanup to ensure it remains protective of human health and the environment.

EPA Contacts

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Para ver la presentación resumida del Plan propuesto con subtítulos en español, visite nuestra página web: epa.gov/superfund/sulphurbankmercury

We Want to Hear From You!

Learn more about the cleanup plan by:

- **watching our recorded presentation** on the Proposed Plan
- **reading the plan and the Administrative Record**—a collection of key documents used to create the plan—by going to:
  - epa.gov/superfund/sulphurbankmercury
  - the libraries listed on the site's webpage
- **contacting EPA staff below**
- **attending an in-person meeting** – (Learn more by scanning the QR code with your phone's camera or favorite app)

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Comment on Our Proposed Plan

- Email comments to the EPA addresses below.
- Printed comments can be mailed to Gavin Pauley (see address below) postmarked no later than **April 10th, 2023**.
- Oral comments can be left on EPA's voicemail box at: (800) 231 – 3075.