Coast Range Legacy Mines
Corona & Twin Peaks Mine Drainage Treatment
A Case Study

Remediating mine waste and ongoing discharges from three mercury mines on private property

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- CA Department of Fish and Game
- National Marine Fisheries Service
- US Fish and Wildlife Service
Outline

- Coast Range Mining
- CTP Mine Background
- Challenges that Arose
- Working Through
- Lessons Learned
Portions of Upper Putah Creek Watershed Showing Some Abandoned Mercury Mines

Source: Slotton et al. (1999)
PHOTO BY: KEMAL BATU
Here’s an example of a similar mine site cleanup project. The Abbott – Turkey Run Mercury Mine in the Cache Creek watershed had not been touched since mining ceased in the mid-1900’s.
These photos show the Abbott-Turkey Run Mine cleanup project conducted in 2006-2007 under EPA’s leadership. One component of our project will do similar work.
Mineral Springs like this in Sulphur Creek are ongoing, natural sources of mercury. No springs are on our project site, but there are others in the area.
Conditions in this 1950’s photo of our project site exemplify the development of mercury mining in CA.

- Adit
- Ore Bins
- Waste Rock
- Rotary Furnaces
- 1940’s-1950’s Retort (condenser) tubes
- Soot Recovery
- 1890’s Scott Furnace
- ‘Calcine’ Tailings with Waste Rock
Project Objectives

- Characterize pre- & post- conditions
- Comply with applicable laws
- Abate drain tunnel discharges
- Clean up site
- Set up for long-term O&M
- Identify & resolve liability issues
- Facilitate property transfer / easement
- Outreach & demonstrate
Challenges that Arose

- Property Owner Died
- Science showed needed alternative treatment
- 60 Day Notice to Sue
- Public component for public funding on private land not finalized
Working Through

- Hired Dr. Gusek for independent review of *in situ* treatment plan
- Worked through estate management and liability issues
- Completed environmental compliance with Central Valley Water Board
- Finalized owner and NCRPOSD agreement
Lessons Learned

- Long-term projects that necessitate commitment and long-term funding
- Role of non-profits
- Vision and commitment
- Funding flexibility in time and method
- Endowment funds
Key Regulatory Issue

The current land owner has *voluntarily* controlled erosion and abated discharges. This project will improve upon those efforts. But given current regulations:

Is it possible to effectively address risks and water quality issues at abandoned mine sites without incurring perpetual liability as an owner/operator?