

Mining's Toxic Legacy Report from the Sierra Fund

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The Sierra Fund released Mining's Toxic Legacy: An Initiative to Address Mining Toxins in the Sierra Nevada yesterday, a report nearly two years in development. This is the first comprehensive look at the long-term impacts of the Gold Rush on the culture, environment and health of Californians.

The Sierra Fund worked with researchers at California State University Chico, tribal representatives, government scientists, conservation leaders and medical professionals to develop the report.

"All Californians should take note of The Sierra Fund's findings. This issue affects the fish we eat, the water we drink, and the air we breathe. And we are only just beginning to appreciate the magnitude of the problem," said Assemblywoman Lois Wolk, who chairs the Assembly Water, Parks, and Wildlife Committee. "While over a dozen state and federal agencies are working to resolve the existing risks to public safety and the environment we inherited from the gold rush era, just over 5 percent of the state's abandoned mine sites have been inventoried at this point. Assessing the remaining mine sites and addressing existing risks swiftly and effectively will require close collaboration between stakeholders and state, federal and local government. This hearing lays the groundwork for that effort."

"We learned that, though well-known toxins are present throughout the land and water of the Sierra Nevada, there has never been any research into the health impacts of this ongoing exposure on Sierra residents," notes Elizabeth "Izzy" Martin, CEO of The Sierra Fund. "In fact, we learned that many local health clinics don't routinely advise their pregnant clients, or those with young children, about the recommended limits on consumption of area fish due to high levels of mercury in that fish. We are calling for immediate research to understand the potential health impacts of these exposures."

The Hearing

At the hearing, Martin presented a summary of the report to members of the three Assembly Committees, highlighting top priorities for the state

legislature to address this year, calling for the state to do a thorough assessment of state owned lands for mining toxins, and to prepare and fund a plan for remediation in collaboration with area residents and tribes. She also called for development of a new Mining Toxin Working Group with university and agency scientists, tribes and other community leaders to learn more about human health impacts, distribution and behavior of toxins, and how to remediate mining toxins. Other top recommendations for action this year include directing the Sierra Nevada Conservancy to coordinate these efforts among local, state and federal agencies, and calling for reform of suction dredging for gold mining regulations.

Speakers at the hearing included Don Ryberg of the Tsi-Akim Maidu Tribe, Dr. Charles Alpers of USGS, Rick Humphreys from the State Water Resources Control Board, Cy Oggins from California Department of Conservation Abandoned Mine Lands Unit, scientists from CALFED, Kathryn Tobias from California State Parks, and Dr. Carrie Monohan from the Sierra Nevada Science Institute. All speakers presented information about the health, environmental or cultural impacts of the Gold Rush. In addition, more than a dozen members of the public spoke at the conclusion of the hearing, urging the Assembly to take action to address mining's toxic legacy.

At the conclusion of the hearing, Assemblywoman Wolk indicated that The Sierra Fund's report would help to advise future legislative efforts on this topic.

The Report

Mining's Toxic Legacy discusses the environmental impacts of historic mining techniques, such as using hydraulic canons to blow down the sides of mountains, or hard rock mines that dug hundreds of miles of tunnel through rock. It documents the widespread distribution of toxins associated with mining, such as mercury used for gold mining, or naturally occurring toxic minerals such as arsenic and asbestos in mine tailings that were crushed and redistributed throughout the region. Other important findings:

* Reservoirs in the foothills of the Sierra Nevada that form the headwaters of California's water projects are contaminated with mercury left over from gold mining, and reservoir management practices such as dredging must be monitored and modified for their impact on mercury, particularly its highly toxic form, methylmercury. Scientists estimate that 13 million pounds of mercury were left in the land and water from historic gold mining in California.

* High levels of arsenic or asbestos fibers in mine tailings may constitute a

health hazard to children riding dirt bikes or people working on or with these materials as part of construction, forestry or other activities that disturb soil. Research is needed to document the distribution of and potential exposures to these naturally occurring toxic materials.

* New studies indicate that suction dredging for gold mining spreads mercury in the environment. Regulations governing suction dredging are outdated.

The Sierra Fund report calls for the new Sierra Nevada Conservancy to be funded to serve as a coordinator for many of the actions recommended in the report. Another top priority is the need for new, strategic investments by government and private philanthropic sources in research, education and cleanup.

The Initiative lays out four strategic recommendations, including:

1. Increase collaboration and research, including the formation of a Mining Toxins Working Group made up of researchers at the University of California and California State University, and other research institutions, to learn more about human health impacts, distribution and behavior of toxins, and how to remediate mining toxins.
2. Improve outreach and education about the long-term impacts of the Gold Rush to improve community awareness of potential problems with exposure to mining toxins and encourage participation by residents of the region.
3. Improve education in the medical community, including increased training and information to ensure that symptoms of mining toxin exposure are well understood and that monitoring the human population for exposure mining toxins is improved.
4. Reform and fund government programs at the local, state and federal level. Among the fourteen recommendations for action, the report calls for a thorough assessment of state and federal lands to be immediately undertaken, and remediation plans developed and funded.

A Gold Ribbon Panel of experts advised the process including development of the policy recommendations. Agency Science and Policy Advisors provided the authors with an understanding of the issues and policies associated with historic mining.

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Find a pdf of the report and executive summary on the mining project page of the Sierra Fund website.