Gov't stands by as mercury taints water

Jason Dearen, Associated Press, 9-19-09

NEW IDRIA, Calif. — Abandoned mercury mines throughout central California's rugged coastal mountains are polluting the state's major waterways, rendering fish unsafe to eat and risking the health of at least 100,000 impoverished people.

But an Associated Press investigation found that the federal government has tried to clean up fewer than a dozen of the hundreds of mines — and most cleanups have failed to stem the contamination.

Although the mining ceased decades ago, records and interviews show the vast majority of sites have not even been studied to assess the pollution, let alone been touched.

While millions live in the affected Delta region, the pollution disproportionately hurts the poor and immigrants who rely on local fish as part of their diet, according to a study conducted by University of California, Davis ecologist Fraser Shilling. His research found that 100,000 people, which he calls a conservative estimate, regularly eat tainted fish at levels deemed unsafe by the U.S. Environmental Protection Agency.

"Tens of thousands of subsistence anglers and their (families) are consuming greater than 10 times the U.S. EPA recommended dose of mercury, which puts them at immediate risk of neurological and other harm," Shilling said.

But neither the state nor federal government has studied long-term health effects of mercury on the people who regularly eat fish from these waters.

The legacy of more than a century of mercury mining in California — which produced more of the silvery metal than anywhere else in the nation — harms people and the environment in myriad ways.

Near a derelict mine in this California ghost town, the water bubbling in a stream runs Day-Glo Orange and is devoid of life, carrying mercury toward a wildlife refuge and a popular fishing spot.

Far to the north, American Indians who live atop mine waste on the shores of one of the world's most mercury-polluted lakes have elevated levels of the heavy metal in their bodies and fears about their health.

And other mercury mines are the biggest sources of the pollution in San Francisco Bay and the Sacramento-San Joaquin River Delta, the largest estuary on the Pacific Coast.

In all, this metal known as quicksilver has contaminated thousands of square miles of water and land in the northern half of the state.

Records and interviews show that federal regulators have conducted about 10 cleanups at major mercury mines with mixed results, while dozens of sites still foul the air, soil and water. The AP's review also found that the government is often loathe to assume cleanup costs and risk litigation from a failed project.

Mercury from mine waste travels up the food chain through bacteria, which converts it to methylmercury — a potent toxin that can permanently damage the brain and nervous system, especially in fetuses and children.

The federal government calls methylmercury one of the nation's most serious hazardous waste problems, and the Centers for Disease Control and Prevention says it is a possible carcinogen.

Mercury is considered most harmful to people when consumed in fish. People who regularly consume tainted fish are at risk of headaches, tingling, tremors and damage to the brain and nervous system, according to the CDC.

The toxin is less of a threat in drinking water, which is filtered and monitored more closely.

Miningin California ceased decades ago, leaving behind at least 550 mercury mines, though no one knows for sure how many. One U.S. Geological Survey scientist says the total may be as high as 2,000.

"Mercury tops the list as the most harmful invisible pollutant in the (state's) watershed," said Sejal Choksi of San Francisco Baykeeper, an environmental watchdog group for the bay. "It has such widespread impacts, and the regulatory agencies are just throwing up their hands."

In the 19th and 20th centuries, California produced up to 90 percent of the mercury in the U.S. and more than 220 million pounds of quicksilver were shipped around the world for gold mining, military munitions and thermometers. Much of the liquid mercury was sent to Sierra Nevada gold mines, where miners spilled tons of it into streams and soil to extract the precious ore.

"There's probably a water body near everybody in the state that has significant mercury contamination," said Dr. Rick Kreutzer, chief of the state Department of Public Health's Division of Environmental and Occupational Disease Control.

Government officials blame mining companies for shirking their financial responsibilities to clean the sites, either by filing for bankruptcy or changing ownership.

When the government does target a site, success is not guaranteed.

The Sulfur Bank Mine has made the nearby Clear Lake the most mercury-polluted lake in the world, despite the EPA spending about $40 million and two decades trying to keep mercury contamination from the water. Pollution still seeps beneath the earthen dam built by the former mine operator, Bradley Mining Co.

For years, Bradley Mining has fought the government's efforts to recoup cleanup costs. An attorney for the company didn't return calls seeking comment.

For the Elem Band of Pomo Indians, whose colony is next to the lake and shuttered mine, the mercury has made it unsafe to eat local fish.

Their colony was built in 1970 by the federal government over waste from the mine. Officials knew it was contaminated, but were not aware at the time how dangerous mercury was to people. The mine is now a Superfund site.

State blood tests on 44 volunteer adult tribe members in the 1990s found elevated levels of mercury. The average level was three times higher than found in people who do not eat tainted fish, but regulators said only one man was at immediate risk of brain damage or other harm.

Yet the EPA determined that the tribe's mercury levels were a serious enough threat for the agency to spend millions of dollars removing contaminated dirt from the colony's homes and roads.

Many have moved from the colony, leaving about 60 of what was once a community of more than 200 people.

As a child, Rozan Brown, 31, said she ate lake fish, swam in the turquoise waters of the mine waste pit and played on mercury-tainted mine waste piles.

"When I was pregnant, I drank the water," Brown said. "When I was breast-feeding, I worked as a laborer during some of the (mercury) cleanups."

The CDC says high levels of mercury can cause brain damage and mental retardation in children when passed from mother to fetus. Brown's son, Tiyal, has been diagnosed with autism. The CDC has found no link between mercury and autism, but agency spokesperson Dagny Olivares said in an e-mail, "Additional information is needed to fully evaluate the potential health threats."

At most abandoned mercury mines, especially ones in remote places, nothing gets done at all.

Twenty-seven years ago the EPA shut down New Idria Mine, once the second-largest mercury producer in North America. The mine and its towering blast furnace still sit untouched. Acidic runoff flows from hills of waste and miles of tunnels into a pool that smells like rotten eggs. The toxic brew turns nearby San Carlos Creek orange and kills aquatic life before flowing into the San Joaquin River.

"It's really hard living up here," said Kate Woods, 51, standing on a wooden bridge in front of her rural home, tucked amid the hills and cattle ranches just downstream of the mine. "It would be paradise here but for this damned orange creek."

Woods and her brother, Kemp, experience tremors in their hands and headaches, she said, blaming prolonged mercury exposure through water and dust. The EPA found mercury in the creek exceeding federal standards in 1997, records show. Field researchers sent a "high priority" referral to state water quality regulators, warning the mercury could be migrating into a popular fishing area and eventually to the Delta-Mendota Canal, "a drinking water conveyance to other parts of California."

Neither agency undertook the expensive cleanup, nor did they conduct the follow-up studies to find out if New Idria's mercury was the source of the contamination found downstream.

EPA officials said mines such as New Idria are a concern but are not always the agency's highest priority.

"We are here to protect the environment, and sometimes we do it better than other times," said Daniel Meer, EPA's assistant Superfund director for the region. "We can't start cleaning up everything all at once."

The EPA, with financial help from the mine owners, has covered up waste piles at two mines feeding pollution into Cache Creek to try to reduce the mercury flowing into the Delta, but no one has touched the other problem sites.

At least 13 other mine sites also pollute Cache Creek, and are responsible for 60 percent of the mercury in the Sacramento-San Joaquin Delta, where thousands regularly catch and eat local fish, state water quality officials said.

"What can we do? We're evaluatingthat now," said Jerry Bruns, a mercury control official with the Central Valley Water Quality Control Board. "It's complicated, we can't just go in there and do whatever we want. There are Native American archaeological sites and different landowners."

A separate cluster of derelict mercury mines near San Jose has been called the largest source of the toxin in the San Francisco Bay's south end, where warning signs warn fishermen of the "poisonous mercury" polluting the water.

A solution to California's mercury pollution is nowhere near at hand, state and federal regulators say.

"It took a hundred years to occur," said the EPA's Meer. "And it may take a hundred years or more to solve."