

# Gold Rush toxics in our water: What can be done?

## *NID seeks \$\$ for unique mercury disposal project*

**Dave Moller, Grass Valley Union, 2-27-10**

If it works, the Nevada Irrigation District's novel plan to clear toxic Gold Rush mercury from Combie Reservoir could be an answer to an age-old problem in the Sierra Nevada range.

But it won't be cheap.

District officials are asking Sen. Dianne Feinstein to support an appropriation of \$7.8 million over three years to fund the bulk of the \$9 million project. The request was under review Friday, according to Gil Duran of Feinstein's Washington, D.C., office.

“The project costs far exceed the financial capability of the district,” General Manager Ron Nelson said in a letter he recently sent to Feinstein. “Federal funding is appropriate, as widespread mercury contamination was the result of uncontrolled hydraulic mining in the late 1800s.”

NID Director John Drew lauded the idea, noting that it had grown “from a whim to NID being a leader in the state, if not the nation,” in mercury removal.

No one else is using NID's process, according to project consulting scientist Dr. Carrie Monohan.

The project “is a unique application of cutting-edge science and engineering to address a century-old problem,” Monohan said.

The mercury was used to bind gold, making the ore easier to find in hydraulic mine slurry, according to NID documents. When it moves in a stream or reservoir, it can form toxic methylmercury in the food chain, which can move up from plankton to fish.

Pregnant women who eat tainted fish can pass it to their unborn children, and it can attack a baby's central nervous system, according to the California Office of Environmental Health Hazard Assessment.

There have been no instances of mercury poisoning in California caused by eating fish exposed to mercury in sediment, according to the state office. However, officials fear what large consumption of fish ladled with methylmercury could do, based on deaths in Japan in the 1950 and 1960s, where fish is a diet staple.

NID had Canadian firm Pegasus Earth Sensing Corp. demonstrate the system last fall and managed to extract six grams of mercury per ton of sediment dredged from the bottom of the reservoir. NID routinely dredges the reservoir to extract silt and keep water capacity as high as possible for customers.

Pegasus designed their centrifuge to extract gold from ancient river rock, but company officials found it did a better job of trapping mercury, according to Monohan.

The consultant is also on the staff of the Sierra Fund in Nevada City, which has been educating Californians about the mountain range's toxic mining past in recent years.

Gold Rush miners used an estimated 26 million pounds of mercury during hard rock and hydraulic mining, Monohan added. About 20 to 30 percent of that is believed to have been left behind in the environment.

“If this project is successful, it could be used in a number of reservoirs in the Sierra Nevada as a best-management practice to clean mercury out of watersheds,” Monohan said.

Mike Thornton helped develop the Sierra Fund's educative Mining Toxic Legacy Initiative; his organization strongly supports NID's Combie plan, he said.

“It really is cutting edge and certainly could act as a role model for other water systems,” Thornton said. “We know the mercury's there, and it needs to be cleaned up if for no other reason for NID's capacity” at the reservoir.

The State of California issues fish consumption warnings and recommends that children and women from 18 to 45 not eat bass or sucker fish caught from Combie Reservoir. All others are urged to have only one serving of either fish per week from the lake, which splits the Nevada and Placer county lines along the Bear River.

Similar safe eating guidelines exist for Rollins Reservoir upstream on the Bear River, and Lake Englebright on the Nevada and Yuba county lines.