Mercury Recycling Pilot Project

- Conceived in 1994.
- Goal: To remove mercury from California’s rivers and streams.
- Targeted Recreational Gold Miners (Suction Dredgers)
Recreational Gold Mining (Suction Dredging)
Mercury in California’s History

- Mercury used during the gold rush.
- Mined in the Coast Range, used in the Sierra Nevada.
- An estimated 20 million pounds used.
- Used at “Hardrock” mines
Mercury in California’s History

- Used at “hydraulic gold mines”.
- Much of the 20 million pounds used was lost.
- Now mercury bioaccumulates in the foodchain.
Recreational gold miners (suction dredgers) find mercury with gold in Sierra Watersheds.

An urban legend is born in 1994: a suction dredger was fined for turning in more mercury than regulations allowed.

State agency staff and suction dredgers hit on an idea for a mercury recycling program.
It’s a great “win, win” idea, but...

- A multi-thousand man, volunteer workforce removing mercury from watersheds year in and year out.
- Suction dredgers would improve their poor environmental image.
- But regulations need changing.
- Conservative political climate makes state agencies reluctant to take chances.
New Administration in 1998

- Views proactive projects favorably.
- Views state, federal, and local projects favorably.
- Makes regulatory barriers fall.
Mercury Recycling 2000

- State (SWRCB, DOC, and DTSC) and federal (U.S. EPA, USF and BLM) agencies develop the “House Call” plan.
- Nevada County agrees to take bulk mercury at their Household Hazardous Waste Event if agencies assist with extra cost.
- Variance for handling issued by DTSC to the State Water Resources Control Board August 7, 2000.
House Calls

- Teams collected 140 pounds of mercury the first day.
House Calls - transfers
House Calls - deliveries

- Teams delivered mercury to the Polar Star Mine CERCLA site for shipment.
- 200 pounds of mercury were shipped in September.
House Call Donors

- Most mercury came from mining.
- Most mercury had been stored for a long time.
- Most “Donors” were older people (65 +) or their heirs.
- Suction Dredgers didn’t donate much.
Nevada County’s Household Hazardous Waste Day

- Dovetailed with “House Call” effort.
- USF and BLM agreed to assist with costs.
- Publicized well by Nevada County.
- County is a hotbed of recreational gold mining.
Household Mercury

- Some mining mercury was collected but most was industrial or dental mercury.
- The County collected about 30 pounds.
- Additional cost - $1,300
Most donors were older people (65 and over) or their heirs.

Donors had tried to discard but “had been made to feel like criminals” by officials.

No mercury from suction dredgers.
Summary - the good

- Collected a lot of mercury for little money (270 pounds to date).
- Identified a previously unrecognized donor group (older people).
- The new group likely has a finite amount of stored mercury.
- The new group is not limited regionally.
Summary - the bad

- Missed our targeted donor group - suction dredgers.

- Not sure why because they had been really interested in 1994.
Follow up efforts

- Larger-scale, rural and urban county HHW bulk mercury collection pilot project.
- Would target older people and suction dredgers.
- Would run for 3 years (gives dredgers more time to participate).
- Results might justify a statewide collection program.
Conclusions

- In terms of collecting mercury, the project was a success.
- Traditional mercury collection effort have focussed on small items, e.g., mercury-filled thermometers.
- 270 pounds of mercury collected by this project would fill more than 1.2 million thermometers.