

STATE WATER RESOURCES CONTROL BOARD  
WORKSHOP SESSION -- DIVISION OF FINANCIAL ASSISTANCE  
NOVEMBER 2, 2005

**ITEM 6**

**SUBJECT**

THE SAN FRANCISCO BAY REGIONAL WATER QUALITY CONTROL BOARD (SAN FRANCISCO BAY REGIONAL WATER BOARD) REQUESTS ADDITIONAL FUNDING IN THE AMOUNT OF \$400,000, FROM THE STATE WATER POLLUTION CLEANUP AND ABATEMENT ACCOUNT (CAA) FOR THE GAMBONINI MINE (MINE) CLEANUP IN MARIN COUNTY (EXISTING PROJECT CA 137)

**DISCUSSION**

This request is for an augmentation to CA 137. Funding was approved in 1993 for \$569,000 and amended for an additional \$402,300 in 1999 for a total of \$971,300. An additional \$400,000 is needed to clean up and abate pollutant sources remaining at the mine site and downstream, and implement a TMDL to restore beneficial uses.

Tomales Bay provides winter habitat for thousands of migratory waterfowl and is renowned for its fishery and oyster beds. The Mine, located approximately 60 kilometers north of San Francisco in the Tomales Bay watershed, was an open pit mercury mine that generated over 300,000 kilograms of mercury waste. Drainage from the mine goes to Walker Creek, the second largest tributary to Tomales Bay. Water quality studies suggest that hundreds to thousands of kilograms of mercury have been discharged from the mine site to downstream waters since mining ceased in 1972. Discharges from the inoperative Mine have resulted in high mercury concentrations in fish and wildlife. Walker Creek and Tomales Bay are on the 303(d) impaired waterbodies list and the San Francisco Bay Regional Water Board is required to develop a TMDL for attaining water quality mercury standards in these waters.

In an effort to mitigate mercury transport from the Mine, the Environmental Protection Agency (EPA) and the San Francisco Bay Regional Water Board (using CAA funding) initiated an emergency Superfund (CERCLA) cleanup action in August 1999. The EPA was the lead agency and conducted all earth moving and engineering work. The San Francisco Bay Regional Water Board directed the implementation of non-operational cleanup measures such as erosion control, channel restoration, and site revegetation. The overall goal of the project was to eliminate the discharge of mercury-laden sediments from the 12-acre mining waste pile. Using CAA funds and working collaboratively with the EPA under CERCLA, a large portion of the mine site was successfully remediated. Unfortunately the EPA was not able to completely cleanup the site due to CERCLA spending and time restrictions.

The efforts undertaken at this mine site have leveraged CAA funds along with low-cost and low-tech revegetation and erosion control measures to an unprecedented degree and is a unique success story. The Marin Conservation Corps and the California Department of Conservation consider the site to be a showcase for illustrating the use of native vegetation and bioengineering to control erosion. Post-remediation monitoring indicates that mercury discharges from the mine site have been reduced by greater than 50 percent. While these reductions are significant and noteworthy, further reductions are needed to protect downstream beneficial uses.

Post-remediation monitoring suggests that mercury-laden mine sediments deposited downstream in Walker Creek and Tomales Bay prior to the CERCLA action, as well as the continuing erosion from waste piles not addressed under the CERCLA action, continue to pose a significant threat to beneficial uses in the Walker Creek watershed. A preliminary survey of downstream floodplains, banks and instream deposits (conducted with the assistance of EPA) identified mercury-laden sediments in downstream depositional areas with concentrations as high as nine parts per million. These sediments are likely to remobilize during a future large storm event. Current bank instability in downstream reaches is an ongoing source of mercury-laden sediment to Walker Creek. The TMDL target for these sediments will likely be around 0.5 parts per million. The resolution requests the State Water Resources Control Board (State Water Board) allocate an additional \$400,000 from the CAA to investigate and reduce these ongoing mercury sources. Immediate source control can be achieved by implementing a cleanup and abatement plan to address erosion from the mining roads and the waste piles. Abatement of the downstream mercury sources requires a survey to identify mining waste deposits and methyl mercury production areas in lower Walker Creek and Tomales Bay. The remediation work will be modeled on the successful revegetation, erosion control and channel restoration efforts undertaken since the San Francisco Bay Regional Water Board adopted Resolutions 98-078 and 99-079. The monitoring and assessment work will continue to evaluate the net environmental benefit of the project so that findings can be used to guide mine cleanup efforts throughout the state. Downstream beneficial use impairment assessment work will provide the scientific basis for the Walker Creek and Tomales Bay Mercury TMDLs.

**POLICY ISSUE**

Should the State Water Board provide an additional \$400,000 to continue mercury cleanup and abatement efforts at the Mine?

**FISCAL IMPACT**

<b>DATE</b>	<b>PROJECT NAME</b>	<b>AMOUNT</b>
July 1, 2005	Balance Forward	\$2,463,781
September 7, 2005	Sediment Quality Objectives	\$450,000
	Gambonini Mine	\$400,000
	<b>Balance Remaining</b>	<b>\$1,613,781</b>

**REGIONAL WATER BOARD IMPACT**

The San Francisco Bay Regional Water Board has an existing staff commitment to this project and recently received approval from their Board members to request the additional funding.

**STAFF RECOMMENDATION**

The Division of Financial Assistance recommends adding \$400,000 to the Mine project for onsite source control work, identifying significant downstream mercury sources, and implementing pilot source control projects in two small areas on the mine property that were not addressed under the previous effort.

STATE WATER RESOURCES CONTROL BOARD  
RESOLUTION NO. 2005 -

APPROVAL OF ADDITIONAL FUNDING FROM THE STATE WATER POLLUTION  
CLEANUP AND ABATEMENT ACCOUNT (CAA)  
FOR THE GAMBONINI MINE (MINE) CLEANUP IN MARIN COUNTY

WHEREAS:

1. The Environmental Protection Agency (EPA) agreed to remediate the Mine as a CERCLA removal action;
2. The San Francisco Bay Regional Water Quality Control Board (San Francisco Bay Regional Water Board) has continuously supported cleanup and abatement activities at the Mine since 1993;
3. The State Water Resources Control Board approved San Francisco Bay Regional Water Board's request for funding on two previous occasions;
4. Cleanup and abatement at Gambonini has resulted in mercury discharge reduction by greater than 50 percent;
5. While a 50 percent mercury discharge reduction is significant, there is continuing erosion from mining roads and two small waste piles that pose a significant threat to Beneficial Uses in the Walker Creek watershed;
6. Current bank instability in downstream reaches is an ongoing source of mercury-laden sediment to Walker Creek; and
7. Downstream beneficial use impairment assessment work will provide the scientific basis for the Walker Creek and Tomales Bay Mercury TMDLs.

THEREFORE BE IT RESOLVED THAT:

The State Water Board approves funding of an additional \$400,000 from the CAA to continue mercury cleanup and abatement efforts at the Mine; specifically to finish the on-site source control work, identify significant downstream mercury sources, and implement pilot source control projects.

CERTIFICATION

The undersigned, Clerk to the Board, does hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the State Water Board held on November 16, 2005.

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Debbie Irvin  
Clerk to the Board