A MERCURY OFFSET PROGRAM FOR THE SACRAMENTO RIVER WATERSHED
MEETING SUMMARY
October 15, 2002
Tsakopoulos Library Galleria East Meeting Room
Sacramento, California

Major Outcomes

Prepare for future discussions and decision-making by:

- Developing a common level of understanding of the Mercury Offset Program
- Initiating a dialog to assist the Sacramento Regional County Sanitation District (SRCSD) in determining the feasibility of a Mercury Offset Program
- Surfacing issues and concerns regarding the Offset Program to a diverse group of interested parties

Welcome and Introductions

Bob Shanks (District Engineer, Sacramento Regional County Sanitation District (SRCSD)) convened the meeting at 9:18 a.m. and thanked everyone for attending. He stressed that the Mercury Offset Program was an important project for SRCSD and other NPDES permittees. Mr. Shanks highlighted the importance of the project:

- The SRCSD has a long-term interest in dealing with pollutants of concern in the watershed
- The SRCSD has been involved in addressing pollutants of concern on a watershed basis since the early 1990's.
- Mercury has been identified as a pollutant of significant concern in the Sacramento River watershed.
- To address mercury, we need to look at non-traditional methods – particularly since control of point sources will not significantly reduce mercury loads
- The real goal is to figure out what to do that makes sense to the larger community and is cost-effective for rate payers

Mr. Shanks challenged the attendees to come up with a method of reducing the mercury load that is acceptable to regulatory agencies, environmental advocates and everyone else. He pointed out that the concept of a mercury offset program has never been done in California. The SRCSD believes that the process will take time, but is committed to using the time and resources necessary to jointly accomplish the goal.

Mr. Shanks then introduced the key program participants including:

Vicki Fry, Program Manager for the Mercury Offset Program, SRCSD
Tom Grovhoug, Consultant, Larry Walker Associates
Stephen McCord, Consultant, Larry Walker Associates
Eugenia Laychak, Meeting Facilitator, California Center for Public Dispute Resolution
Jodie Monaghan, Note taker, California Center for Public Dispute Resolution

Role of the Work Group (Eugenia Laychak)
Eugenia Laychak introduced herself as the meeting facilitator and shared some of her background including her involvement with CALFED. She discussed the role of the workgroup and went over the ground rules for the meeting including:

- All ideas/views are valid
- Everyone participates/no person or interest group dominates
- Seek common ground
- Honor time constraints
- Please silence cell phones

She asked for comments and/or additions to the ground rules. None were offered by the participants. She then invited the group to go around the room and introduce themselves.

Overview of Offset Program (Vicki Fry)
Vicki Fry presented a PowerPoint presentation on the Offsets Program. The role of the Work Group is to begin discussion on the feasibility of the offset program. She reviewed the schedule starting with

- The existing NPDES permit, adopted August, 2000,
- The Mercury Offset Program Feasibility Study, initiated in October, 2002,
- Expect to submit the Feasibility Study to Regional Water Quality Control Board in July, 2004.
- RWQCB staff review of the Feasibility Study;
- RWQCB staff reopening the permit, public review and comment period, and;
- The RWQCB may adopt a new permit that incorporates the concepts of the offset feasibility study.

Ms. Fry stated that the challenge is to define a workable offset program and determine if there is enough interest and commitment to make the program work. She asked that each organization designate one (1) person as a point of contact. Ultimately, the process needs a single voice from each organization.

Offset Concepts (Tom Grovhoug)
Tom Grovhoug presented an overview of the Offsets Program and policy issues. The SRCSD is interested in the concept of offsets for the long term. Mr. Grovhoug reviewed the elements, benefits and concerns related to offsets. Mr. Grovhoug defined "trading" as "an agreement between parties contributing to water quality conditions that alters the allocation of pollutants reduction responsibilities among the parties" and defined "Offsets" as "an optional trade for a new or expanded source of a pollutant to a water body, to offset the new loading by arranging for pollution reductions from an existing source". At the national level, the EPA's new draft trading policy (May 2002) outlines essential concepts intended to clarify key legal and regulatory interpretations and facilitate exploration of trading opportunities. The Policy emphasizes establishing clear legal authority, fungible trading units, and clear success criteria.

Mr. Grovhoug stated offsets give the opportunity to achieve point source reduction credits over some timeframe. Funding for offsets may fuel projects in remediation efforts, control of mercury to reduce levels in fish and pilot projects yet to be named.

Mercury Behavior in the Environment (Stephen McCord)
Stephen McCord addressed the technical issues involved with mercury in the Sacramento River watershed. The challenge is to understand the linkages between mercury sources and concentrations within the watershed, including water and sediments, fish tissue, the food web, and consumers, both human and wildlife. The Offset program would provide an opportunity to study the impact of the linkages and ways to break the links. Some links are understood; other are not well understood. Known sources of mercury account for 61% of the total in the Sacramento River below Freeport – leaving 39% coming from unknown sources. There are over 3,000 working and abandoned mines in the watershed – the location of some of the abandoned mines is not known. Additionally, high mercury concentrations appear in some unexpected sites and, conversely, are minimally present in some places where high concentrations would be expected (eg. just downstream of Clear Lake). Also, the data is fragmented, making trends difficult to determine.

Work Group Comments, Questions and Answers
Note: statements made by presenters or commenters should not be deemed to imply agreement by other attendees or the organizations they represent.

Ms. Laychak invited the group to speak to the opportunities and concerns regarding the Offsets Program. The comments will help frame discussions for the next two meetings. While this will not be the last chance for participants to speak, it will help set the stage for the next meeting.

- Rick Humphries (SWRCB) suggested that questions regarding the mercury problem be addressed. Ex: Where would point of compliance be for fish tissue to determine if offsets work? Where would the fish be selected from – the Delta? The rivers? If so, which rivers?

- David Lawler (BLM) asked about aggregate mining and mercury recovery. He said he was glad that a representative from the mining association was present and willing to participate. Mr. Lawler thought that effectively recovering hundreds of pounds of mercury a year represented a key opportunity. He thought that there was a need for additional mining equipment to recover even more mercury – but that financial incentives would be needed to facilitate the effort – particularly mercury from historic hydraulic mining sites like Greenhorn Creek and Dry Creek (north of Oroville) which drains the Cherokee Hydraulic Mine.

- Bob Shanks re-stated the issue: Is there an opportunity to recover more mercury?

- Khalil Abu-Saba (Applied Sciences) asked if there was a need to manage by-products from mining.

- Adam Harper (CMA) answered that he was not aware of aggregate mines on-stream in this watershed. Most were off-stream. Also, he was not aware of mercury collection issues. He stated that there was a need for data on aggregate production. Major mines or known mining pollutant sources are permitted anyway (e.g., Yuba Gold Fields).

- Dave Lawler named several on-stream mining sites in the watershed producing mercury.

- Alex Wood (USGS) expressed concern with contingent liabilities associated with offset projects. He gave the example of Colorado where the program was covered by the Good Samaritan Law. Colorado was not held liable for any further contamination. The law was a shield for federal suits but not citizen suits. In California, we have seen liability associated with a mine cleanup at Penn Mine (EBMUD and State of CA were found liable).

- Rick Humphries stated that Penn Mine is private land. Suits are prevalent on private land – less so on State and Federal land.

- Mike Levy (attorney for SWRCB) stated there was no distinction in liability between public and private lands. He also noted that there were no environmental interests at the meeting and thought there was a need to get environmentalists to the table.

- Adam Harper said that California law protects Good Samaritans, but this protection does not affect federal liability.

- Lisa Bacon (CH2M Hill) thought that the issue was not just public vs. private land. POTW's NPDES permits, which will ultimately allow and reflect trades or offsets, may give citizens a pathway to liability lawsuits.

- Bob Shanks stated that ratepayers are paying to reduce pollution. What is important is to effectively spend the public money to achieve the goal and address the problem.

- Bill Labiosa (USGS) asked how the mercury offset program fits into the TMDL process in the Central Valley. Also, he asked for the mercury TMDL schedule. Is there an institutional summary?

- Patrick Morris (Central Valley RWQCB) said the Regional Board is working on mercury TMDL's for the Delta; the technical report is due June, 2003. He speculated that it would take an additional year to take it to the RWQCB for adoption. He added that the permit for the SRCSD has existing mercury load restrictions.

- Tom Grovhoug stated that the mercury offsets program and the mercury TMDLs were on parallel tracks. The two are not incompatible.

- Rick Humphries asked that the costs for mercury treatment by SRCSD be explained.

- Vicki Fry offered to share SRCSD treatability studies and costs at the next meeting.

- Bob Shanks stated the Sacramento region is one of the fastest growing regions in California. The SRCSD would like to continue to process wastewater in the existing facilities and do not believe advanced treatment technology is necessary at this time. They are developing an aggressive source control program to reduce mercury and are concerned with increases in mercury discharges as the region grows. However, it may not be cost effective to spend millions of dollars to reduce one pound of mercury when the Offsets Program would provide greater reduction at a more attractive cost. In looking at all the opportunities, participants must work together to overcome objections to the project and outcomes.

- Janna Herren (DFG) asked if there was background on the risk of upstream contaminants.

- Tom Grovhoug noted that this raises an important question about where an offset project would need to reduce risk at the point of discharge downstream of Freeport? In the Delta? At upstream reservoirs? He sees the need to reduce amount of mercury in fish vs. reducing a load. It appears that trading a load for a load is easier than trading a risk for a risk.

- Janna Herren asked how do we know if the discharge will get down the watershed.

- Tom Grovhoug responded that the issue is one of offset credit definition (and by implication, trading ratios). One difficulty is pinpointing the source – particularly the mercury sitting in stream banks. As erosion progresses, the mercury erodes and moves in big spikes. Concentrations of sediment are tied to mercury concentrations.

- Khalil Abu-Saba asked if there are two projects with equal fungible units and equal risk, which is in the greatest public interest? How do we look at Sacramento regionally? He made a tentative proposal: fungible units defined as mercury mass in fish tissue. The outcome must be compatible with the Clean Water Act.

- Dave Tamayo (Sacramento County Department of Water Resources) stated that we need to look at who's eating what fish, and connect an offset project to the best protection of beneficial uses (i.e. risk to consumers).

- Khalil Abu-Saba agreed with Dave Tamayo and reiterated that the program needed to be evaluated based on equivalent projects.

- Janna Herren asked if there are measurement techniques for evaluating the effectiveness of projects.

- Vicki Fry stated that you could have high concentrations of mercury and methyl-mercury in the water without seeing concentrations in fish – and visa-versa.

- Lisa Bacon said that was the trick on the trading program – to connect measurable benefit while realizing factors that can not be controlled.

- Vicki Fry offered that a control site similar to the site where load reduction is implemented can be used to compare the effects of implementation versus the effects of factors that can not be controlled.

- Rick Humphries stated that if trying to find an up-stream project, SWRCB can sell the idea on the benefits to the local population. It is difficult to see benefits in the Delta below the treatment plant. You might see improvement to upstream fish, but we're not there yet to see benefits in the Delta. The issue is how to measure success.

- Khalil Abu-Saba suggested that you might define risk as mercury exposure for people.

- Dave Tamayo said that he did not think we wanted to set a difficult success measure and then find out in 20 years that we were in violation of the permit. He suggested that because there are so many unknowns, we have to get credit for trying.

- Darcy Jones (SWRCB) talked about increasing mercury loads in light of growth. She thought when discussing trades, we need to narrow the focus to something that will work (i.e. load reduction) versus. monitoring fish tissue, a parameter that is more speculative. The load reduction may have to be shown at Freeport (discharge point).

- Khalil Abu-Saba added that loads were important for permitting; monitoring fish tissue measures success.

- Vicki Fry asked about mercury loads vs. methyl-mercury loads.

- Adam Harper asked how to measure success. Proposed solutions need to be assessed for consistency with the Clean Water Act.

- Mike Levy stated that the Clean Water Act did not define "load" very well. Credit can be granted if a proposed solution is based on legitimate scientific research – and permit conditions can be adjusted, if needed. If the proposal is speculative, it will not fly. The SRCSD may be able to agree to an offset "package" that includes research, if it is scientifically supportable.

- Dave Tamayo thought we needed to protect the most important beneficial use – human health. If load is used, and there is no benefit to human health, the solution is pointless.

- Bob Shanks compared the offsets project to current discharge. The current NPDES effluent limit for the Sacramento Regional Wastewater Treatment Plant discharge is 5.1 lbs/year. It is easy to offset the load. The question is: what is the benefit? What's the scorecard? Is it load from the plant? Is the load reduction total mercury or methyl-mercury? He stated that the group had to agree that the best project to spend money on was based on good science.

- Darcy Jones stated that the landscape was changing. The EPA is promulgating fish tissue criteria; the new rules are scheduled to be promulgated in 2004.

- Khalil Abu-Saba asked whether the SRCSD should only do sure things and let CALFED do the experimental pilot programs and take all the risks. He suggested when scoping the project, the SRCSD use existing projects (i.e. CALFED) as a model.

- Eugenia Laychak asked if the attendees were aware of other projects.

- Vicki Fry mentioned that mercury research is and has been done on the East Coast, Florida, Canada and in Wisconsin.

- Rick Humphries stated that success of demonstration projects is based on specific conditions and criteria, making it difficult to predict if similar projects will work elsewhere. Process evaluation and the need for more information should be considered.

- Bob Shanks said that anything was on the table at this point. The SRCSD is looking for permitting relief on mercury and load reduction.

- Rick Humphries saw a possible correlation between nutrient loading and methyl-mercury.

- Bob Shanks said the purpose, conceptually, was to figure out what makes sense to reduce the load AND will work legally.

- Barbara Marcotte (CALFED) said that she finds credit for funding additional research attractive. CALFED may or may not be able to fund all research and monitoring needs – no one entity can shoulder all the research costs, so why not give offsets for financial support for research.

- Patrick Morris thought that there was a possibility that CALFED do the research and the SRCSD do the O&M of the CALFED project.

- Matt Mitchell (EPA) weighed in on attractive opportunities. He thought they included the achievement of source reduction not normally achievable and achievement above that required by a TMDL. The EPA trading policy is not final, but yet the SRCSD is moving forward. He stated that to generate credit, the SRCSD must meet base water quality

requirements. The SRCSD will only get credit if the offsets program is over and above base requirements.

- Alex Wood asked why EPA withdrew offsets in the 2000 rule.

- Mike Levy suggested that current regulations are adequate for TMDLs. Offsets were dropped because of resistance to mandatory requirements.

- Dave Tamayo said that there was a need to establish an agreed on process for scientific review. People need to buy into the process – including those who write the permits. The goal has to be known.

- Dan Russell (U.S. Fish & Wildlife) had compliance enforcement questions. He asked if there was a mercury risk factor measurement. Methyl-mercury risk factor measurement? He also asked if there was a measurable offset benefit.

- Dave Tamayo asked about restoration efforts in the Delta and the responsibility of those who restore wetlands. Such projects may increase the accumulation of mercury.

Next Steps
Eugenia Laychak hoped that the group met the objectives of the day. The meeting summary will be available in 1 month. Meeting notes will be sent via email. Additionally, Vicki Fry will email a list of meeting participants to each organization's contact person.

Bob Shanks thanked everyone for their attendance and time. He hoped that everyone will want to continue to work on the project to benefit the people of California. He asked the participants to identify any additional stakeholders who should be in the room. They will be contacted for input and invited to future meetings. Also, if the participants feel there are more issues to be discussed, contact Vicki Fry.

Mark Elliott (City of Sacramento) suggested that the SRCSD create a web page for the project. Bob Shanks said the SRCSD will try to incorporate the idea.

Eugenia Laychak thanked everyone for their hard work and adjourned the meeting at 11:59 p.m.