

**Mercury Offset Program For The Sacramento River Watershed
Work Group Meeting Summary - Draft
August 19, 2003
9 AM to Noon
Tsakopoulos Library Galleria East Meeting Room**

Major Outcomes

The Work Group generally agreed on the following regarding the offset package:

- Project selection criteria for mine remediation sites should allow for consideration of projects both above and below dams and the relative merit of the projects should be compared;
- Mercury-impaired water bodies in northern California including the Cache Creek and Cosumnes River watersheds should be considered for potential mass load reduction (MLR) project locations;
- The offset package should be evaluated using a number of appropriate “yardsticks”, including metrics that are not based solely on the cost of the projects; and
- In response to the District’s question as to whether certain types of activities, such as risk reduction, could be initiated and credited early, the Board staff prefer to review and approve the entire package prior to allowing crediting.

On other items, the Work Group generally agreed that:

- Related activities such as TMDLs, NPDES permit renewals, scientific discovery, guidance (e.g., on liability issues), and remediation actions are constantly changing and need to be evaluated on an ongoing basis relative to this program;
- In response to the question of whether the Work Group should respond collectively to the environmentalists’ letter on EPA’s Trading Policy, the answer was no – the District or a coalition of permittees may elect to send clarifying information about this program to the authors of the letter; and
- A series of working meetings will be held over the next months to develop the details of the offset package – Meetings are planned to cover liability issues, development of objectives for a bioavailability study, projects and their selection criteria, and credit mechanisms and factors. Work Group members identified those meetings in which they would like to participate.

Welcome / Introductions

Eugenia Laychak, Center for Collaborative Policy (CCP), convened the meeting at 9:10 a.m. Participants introduced themselves (see attached attendance list). Ms. Laychak recapped the last meeting held on February 28, 2003. At that meeting the group agreed that: (1) An offset program would include a suite of projects with load reductions, research (in part to address scientific uncertainty), and public outreach/education for risk reduction; (2) group member

agencies will partner on projects and collaborate on solutions; (3) the work group would meet again after SRCSD meets with Regional Board regarding their input.

Expected outcomes for this August meeting were to:

- Bring the Work Group up-to-date on activities and progress;
- Identify remaining issues and how to address them;
- Consider environmental group concerns; and
- Clarify/Identify future role(s) of the work group.

The participants offered no comments or additions to the meeting agenda.

Activity Recap

Vicki Fry, Sacramento Regional County Sanitation District's (SRCSD) Mercury Offset Program Manager, reviewed the purpose of the Program: to address a possible future exceedance of the total mercury mass load cap in the SRCSD's current NPDES permit; SRCSD's mercury loads are not above its loading cap at the present time. Although SRCSD's effluent represents a small contribution (<1%) of the total mercury mass load to the Delta, SRCSD wants to participate in efforts to address the mercury impairment at a watershed scale.

Ms. Fry reviewed activities that have occurred since the last workshop in February.

- Brainstorming Session (hosted by District) – several scientists from USGS, SWRCB, DOC, and land management agencies convened in the Spring to discuss real mass load reduction project ideas.
- Response to Environmental Group Comments on EPA Trading Policy – The District's consultant drafted a response to the March letter to EPA from several national environmental organizations for consideration (the response was not sent).
- The Regional Board sent SRCSD a letter on July 1, 2003 providing guidance on acceptable offset projects, and the Board and SRCSD staff met on July 15, 2003 to discuss the letter (see discussion highlights later in this summary).
- EPA Trading Forum, Chicago – several work group members participated.
- USGS Decision Support Tool – Met on two occasions to discuss development of tool for application in Cache Creek watershed; reviewed summary of mine remediation cost data prepared by USGS.
- Relative Total and Methyl Mercury Concentrations in District effluent and Sacramento River – distributed handout (discussed later).

Elements of Regional Board Letter Regarding the Offset Package

Patricia Leary, Senior Engineer, NPDES section Central Valley Regional Water Quality Control Board (Regional Board) described the content of the Regional Board's July 1 letter (letter was e-mailed in advance to the Work Group and available at meeting), focusing on the components of potentially acceptable offset project elements. The letter represents only a first start of suggesting project ideas and staff is fairly neutral on the list. She noted that an offset program could allow expansion of the District's treatment capacity while waiting for the TMDL. The Regional Board offered the concept of "substantiality" as one basis for evaluating the offset project package, under which the financial value of the package would be compared to SRWTP upgrade alternatives.

Ms. Leary highlighted the following concepts detailed in the letter.

- Load reduction projects should consider removal of total and methylmercury, recognizing that methylmercury is the more important (toxic, bioaccumulative) form. Direct reduction from mine sites in Cache Creek are one option; Sierra Gold mines are another. Fairly good information exists for Cache Creek mines on private lands, some of which may be appropriate for an offset.
- Settling basins trap a significant source of Hg. Studies are underway regarding improving the settling characteristics of the Cache Creek Settling Basin, but there are no funds for O&M so there may be a mass load reduction project opportunity there. SRCSD could consider other areas that might benefit from constructing new settling basins.
- There are many Hg science investigations that would benefit the offset program and TMDL development. Developing a standard bioavailability test would be a great benefit. Bank stabilization studies would be useful to identify sources of mercury in streambanks.
- Public outreach and education to reduce Hg exposure would be useful and should focus on subsistence fishers.
- The Board views several types of projects as unsuitable for inclusion in the offset package, including: ongoing Hg collection efforts, programs already underway, projects subject to regulation by other programs, compiled studies, in-house studies without peer or 3rd party review.

Summary of Common Ground, Points of Clarification, & Action Items Related to the Board's Letter

Vicki Fry presented issues related to the Regional Board's letter discussed at the July 15 meeting. The District and Regional Board agree that the offset package should consist of three components: load reduction, research, and outreach. SRCSD asked for clarification on a number of points, including:

- Offset credit counting;
- Private v. public lands and partnering;
- Project area and point of compliance; and
- Cost information, conceptual costs for alternatives, including treatment at SRCSD plant.

Items from the July 15th needing further discussion or response include:

- Credit and banking mechanisms (Regional Board to look at how to credit research and outreach before load reduction project could begin);
- Legal liability issues related to working on private land; and
- The purpose of developing cost information.

Group Discussion

Vicki Fry introduced discussion points (below in bold italics) with reference to the Regional Board's letter, and Eugenia Laychak facilitated discussion on the items.

Appropriate Project Area: The area identified in the letter is different than some had anticipated, including Cache Creek (which doesn't drain past the SRCSD's outfall) and excluding sites above major dams (which do drain past the SRCSD's outfall).

Board staff noted that:

- A project below any dams would be easier to justify in the permit because people think of dams as settling basins, removing Hg from the water. If we are focusing on reducing loads to the Delta, removing a load from above a dam has less of an impact in reducing Hg to the Delta.
- SRCSD's offset projects may need to be close enough (based on technical conclusions) to the outfall to satisfy anti-degradation policies, but further evaluation is needed in the near term to clarify whether this issue will influence the load reduction project selection criteria.

Others noted:

- Dam-related fate and transport processes are being investigated but are not well understood.
- The "dam" criterion eliminates almost all Sierra Nevada gold mines, which tend to be above dams.
- The California Bay-Delta Program, through its proposal solicitation process for Abandon Mine Remediation, is going to leave it to the organization proposing a project above a major dam to demonstrate that there is a water quality impact in the Delta.
- Project selection criteria for mine remediation sites should allow for consideration of projects above/below dams and the relative merit of the projects on the Delta should be compared – the Regional and SRCSD Boards will respond to that information.
- One complication arising from a criterion that requires the offset project to reduce loads passing directly past the outfall is that some other dischargers have no sources above their outfalls (Vacaville and Iron House were noted).

- The Regional Board, SRCSD, and others noted that Cache Creek is an appropriate and attractive area to do a mercury load reduction project because it:
 - has the highest mercury mass loading per area in the Sacramento River watershed,
 - has a high proportion (approximately 50 percent) of the total load to the Delta,
 - is close to the Delta and to SRCSD, and
 - has been monitored extensively.
- Disadvantages of Cache Creek sites are that:
 - it drains into the Yolo Bypass and enters the Delta downstream of the SRCSD outfall; and
 - most people are fishing right around Sacramento where fish tissue concentrations are higher than in the Delta. By focusing on the Delta these people are still at risk..

General agreement was reached that mercury-impaired water bodies in northern California including the Cache Creek watershed should be considered. Furthermore, consider the Cosumnes River watershed (highly contaminated with mercury, no major dams, close to SRCSD, and flows directly into the Delta). Members noted it should be acknowledged that NPDES dischargers are a minor source and that impairment of the Delta needs to be addressed.

Crediting early risk reduction: a load reduction project will take a number of years to implement; outreach is the only thing SRCSD can do now with immediate results for managing risk. The District would like to embark on these activities early, but a crediting mechanism needs to be worked out.

Vicki Fry explained that SRCSD has a cap of 5.1 lbs total Hg/yr in its current permit. SRCSD is currently discharging less than that, banking the difference as credits. Under this system, an offset mass load reduction project would be needed when they exceed the annual cap and use up any banked credits. But SRCSD is willing to move faster. One activity that SRCSD could initiate right away is education targeting high risk consumers of fish if a credit system was in place. One option to calculate the number of credits associated with an outreach activity would be to estimate the reduction in Hg consumed as a result of such efforts.

General agreement was reached that it may be problematic to approve an offset program that has only risk reduction or research elements, or to begin crediting outreach without some assurance that SRCSD would implement research and mass load reduction activities, along with risk reduction.

Substantiality Issues: What does the Board mean by “substantiality” and is cost the only appropriate measure?

Regional Board staff noted that remediation costs are often compared to treatment costs in compliance orders and could be used as a yardstick for determining the substantiality of an offset program. The Board staff wants a consistent standard for gauging acceptable projects for large and medium sized dischargers. Also, presenting cost-savings to the public is helpful in selling the program. Other members raised the following issues:

- costs do not address the effectiveness of risk reduction
- using costs or “ability to pay” as a yardstick removes the economic incentive to select the most cost-effective alternative
- higher costs would work against promoting trading programs elsewhere.
- The costs of increased treatment to remove mercury at the SRWTP make it infeasible, so it is not an appropriate benchmark.

General agreement was reached that metrics or yardsticks for measuring substantiality of the program include criteria other than costs. Regional Board staff are willing to consider alternatives that are not based on cost considerations.

Comments/Discussion of Response to Environmental Advocacy Letter

Stephen McCord, Larry Walker Associates, discussed the content of a letter from four national environmental organizations to the EPA on its January 13, 2003 Trading Policy, and reviewed a draft response to the letter (available at meeting and emailed in advance to the Work Group). The purpose discussing a potential response to the letter was to raise these issues within the Work Group and to create the opportunity for a dialogue with the national and local environmental groups on this specific effort.

Points Raised in Letter to EPA	Points Made in SRCSD’s Draft Response
A program can not violate water quality-based effluent limits (WQBEL)	The District has a performance-based mass limit ,not a WQBEL. Therefore, additional loading by the District would not violate water quality-based limits.
TMDLs are the appropriate framework for trading	Pre-TMDL trading is allowed under EPA policy. State is at the table, and Work Group is using best available information. Regional and State Boards will use the same decision framework as used for a TMDL.
Trading toxics is bad policy because hot spots can be created	SRCSD is not creating a hot spot now, and would not in the future. There is no acute toxicity at these levels, and SRCSD’s load is <1% of the total load to the Delta.

The Work Group has tried on numerous occasions to reach out to and have a dialogue with local environmental groups but representatives have not yet attended Work Group meetings. It was noted at the meeting that local group concerns seem to be similar to the concerns expressed in the letter.

Stephen McCord was able to attend a meeting with the local Sierra Club chapter, in Davis, where he asked for their input on this project. Their main comments were: there is too much Hg in fish; they generally do not trust “rich polluters”; they would be concerned about creating hot spots; they are uneasy commenting contrary to the national comments; and they tend to expect DeltaKeeper to take the lead in addressing water quality issues.

Work Group discussion clarified that DeltaKeeper and Clean Water Action received the Regional Board letter and the draft responses to the March 13 comments. Members advised that

any response to the March 13 letter should not write off the potential for local water quality effects.

Dr. McCord presented a recent analysis of effluent versus receiving water data for mercury to clarify the local impacts issue. There is no visible change between stations upstream and downstream of SRCSD's outfall in terms of concentrations, filtered fraction, or methylmercury fraction. The bioavailability study may also provide insight on this issue of the localized effect of the District's effluent.

The workgroup considered responding to the policy comments. A concern existed that a formal response could precipitate an adversarial cycle and not accomplish much. It was mentioned that a response should separate the local and regional issues. It was suggested that SRCSD may be defining the term "hot spot" too narrowly; the Delta is a designated mercury hot spot.

General Agreement: Agency staff can not take a position on behalf of their agencies, so a response can't come from the Work Group. Any response should come from the District or a coalition of permittees. A response could focus on explaining that the program would not be creating a new hot spot, and transmit information about this project in a non-adversarial manner.

Role of Work Group

A number of specific issues need to be worked through over the next 6 months. SRCSD would then develop a draft offset package and present it at a Work Group meeting. The goal is to have a draft feasibility study report done by July 2004 to allow time for outside peer review. Unless some components of the offset program (e.g. outreach) could proceed under the current banking system, the Offset Program could be initiated and implemented in SRCSD's next permit (August 2005).

The Work Group identified the following topics for sub-group meetings. SRCSD will email announcements of meeting schedules to all Work Group members.

Project Area (include Point of Compliance, anti-degradation implications and local/regional issues): Sandra Lunceford, Matt Mitchell, Jackie McCall, Kim Speer, state and regional boards, SRCSD

Crediting and Substantiality, Cost (what, when and how to credit for all three components of "suite"): Sandra, Matt, State and Regional Boards, Delia Garrison, Kim Speer, Donna Podger CBDA (interested in coordinating with sub-group).

Liability: Donna Podger noted that a CBDA-funded group is developing a guidebook on liability issues related to doing mine remediation projects. The CA Department of Conservation legal counsel is taking the lead, along with Mike Levy (State Board) and EPA.

Projects list: List will be as specific as possible so relative merit of projects can be evaluated. The Tetra Tech study will be available soon.

Objectives of bioavailability study: Consult with USGS and others on appropriate participants and study design