

Delta Tributaries Mercury Council

October 11, 2005

Woodland Public Library

Woodland, CA

Facilitator: Carol Atkins, Harris & Company

Meeting Summary: Carol Atkins, Harris & Company

Attendees:

Charlie Alpers, USGS

Marisha Banister, Friends of Deer Creek

Paul Buttner, California Rice Commission

Debra Curry, USGS

Chris Foe, CVRWQCB

Vicki Fry, SRCSD

Rosemary Gregor, Friends of Deer Creek

Roger Hothem, USGS

Rich Gresham, Placer County RCD

John Key, BLM

Mary Lee Knecht, SRWP

David Lawler, BLM

G. Fred Lee, G. Fred Lee and Associates

Stephen McCord, LWA

Cy Oggins, Dept. of Conservation

Greg Reller, Tetra Tech

Sarah Reeves, Dept. of Conservation

Jim Sanborn, OEHHA

Dave Tamayo, Sacramento County Stormwater Program

May Lynn Tan, DHS

Lenore Thomas, US BLM

Becky Wood, Teichert

Carol Atkins, Harris & Company

Agenda:

I. Introductions, Agenda Review, Meeting Summary Approval

II. Announcements

III. Presentations

§ Methylmercury loads in the Yolo Bypass, Chris Foe, CVRWQCB

§ Mercury monitoring and recommendations for the Yolo Bypass Water Quality Management Plan, Stephen McCord, LWA

- § Mercury Survey, Friends of Deer Creek, Marisha Banister, FODC Coordinator
- IV. Project Updates: Technical Advisory Group, May Lynn Tan, DHS
- V. USGS Methylation/Demethylation Site Selection, Charlie Alpers, USGS
- VI. DTMC Fact Sheet, Carol Atkins, Harris & Company
- VII. Phase IX Funding Recommendations
- VIII. Other Updates
 - § Sacramento River Watershed Program
- IX. Next Meeting

Meeting

I. Introductions and Agenda Review

Introductions: Meeting participants introduced themselves.

Agenda Review: The group reviewed the agenda. There were no changes.

Meeting Summary Approval: The group had no changes to the summary of the August 9, 2005 meeting.

II. Announcements

§ Sarah Reeves announced that the next California Abandoned Mine Lands Forum Meeting would be held on November 16th from 9 to noon. The meeting will be held at the Central Valley Regional Board offices located at 11020 Sun Center Drive, Suite 200, in Rancho Cordova. An agenda will be available shortly.

§ Carol Atkins announced that a call for abstracts has been made for the Mercury 2006 Conference. For more information, go to www.mercury2006.org

§ John Key announced that the BLM will be sponsoring a TMDL workshop on December 6th and 7th. The agenda is still under development. The target audience is field office staff (i.e., Watershed, AML, and Hazmat units).

§ Vicki Fry shared feedback from a classroom visit she had made to discuss mercury in the environment. She reported that $\frac{3}{4}$ of the students indicated that they eat fish three times or more a week. The students had made a book of colorful pictures on mercury in the environment as a thank you to Vicki.

§ May Lynn Tan reminded participants that the Delta Fish Project Technical Advisory Group is planning a public forum on fish contamination issues. The forum will be held at the Sierra Health Foundation on December 7th.

III. Presentations

Methylmercury Loads in the Yolo Bypass, Chris Foe, CVRWQCB.

Chris Foe began by recognizing that the project has been funded by CALFED and State of CA TMDL funds. Chris reviewed that mercury is a neurotoxin and chemical of concern that bioaccumulates in biota. Chris also presented data that showed:

- A positive correlation exists between methylmercury concentrations in water

and biota

- Yolo Bypass has highest methylmercury concentrations in Delta

Chris then showed data results in an effort to address the following questions:

- Where does the aqueous methylmercury originate in the Yolo Bypass?
- Why do methylmercury concentrations increase between Lisbon and 1/2 Lisbon?
- Are there methylmercury patterns in the Cache Creek Settling Basin?
- What happens to the methylmercury transported through the flooded Little Holland Tract and Liberty Island?

Chris concluded the presentation with the following observations:

- A positive correlation exists between aqueous and biotic methyl mercury concentrations.
- Yolo Bypass has the highest methyl mercury concentrations in Delta.
- 27-66% of methyl mercury in Bypass during the winter, non irrigation season is locally produced.
- When not flooded the Cache Creek Settling Basin is a source of methyl mercury. In contrast, a negative relationship between flow and production may exist when full and discharging over weir.
- Liberty and Little Holland Tracts are sinks for methyl mercury in winter and in spring. In the summer, methyl mercury may be transported in a conservative fashion across both flooded tracts.

Mercury Monitoring and Recommendations for the Yolo Bypass Water Quality Management Plan, Stephen McCord, Larry Walker Associates. Stephen reported on data that have been collected for a project within the Yolo Bypass. Stephen began by reviewing the hydrology of the Yolo Bypass, and then reviewed the monitoring sites for the project, which included:

- 2 sites where flood flows occur
- 3 sites in main tributaries
- 2 sites in ag drains
- 5 sites in the Yolo Bypass

Sediment and water sampling occurred between November 2003 to October 2004 (a year before Chris Foe's sampling). Stephen noted that when flooded the water from one side of the Bypass canal could be very different from that water on the other side of the canal, so it is important to collect flow-weighted composite samples or at least recognize this sampling bias.

Stephen reviewed the data results. He also presented slides evaluating correlations between mercury concentrations (both methyl and total) and other factors such as total organic carbon and total suspended sediment on both a watershed wide and bypass-wide basis. No obvious correlations were observed. Data results included:

- No apparent increase of methylmercury within the Bypass.
- Ridge Cut samples were relatively low in both total and methylmercury.
- All methylmercury values were above potential criterion.
- All total mercury values were below criterion.
- Methylmercury values were approximately 3% of total mercury values.

Stephen indicated that these data will be used in an effort to address mercury issues within the Yolo Basin. Projects are being considered to redirect the Colusa Basin Drain and to improve the Cache Creek Settling Basin.

Questions regarding this presentation included:

Q: Why are your data different from Chris Foe's data?

A: Not sure, expect that it is largely due to different water years.

Friends of Deer Creek Mercury Survey, Marisha Banister, Watershed Coordinator.

Marish began by explaining that the Friends of Deer Creek is a science-based community watershed group that has been conducting citizen monitoring since 2000. This monitoring has included collecting and identifying macroinvertebrates. The group is beginning to get involved in mercury monitoring. Marisha reviewed the location of the watershed and some USGS data that have lead to 303(d) listing of the waterbody. She noted the large number of placer and hardrock mines within the watershed, including 16 majors.

Marisha reported that the Regional Board has provided funding for 100 water and sediment samples for a pilot mercury assessment within the watershed. The funds will be used for materials and sample analyses. Unfiltered total mercury and total suspended sediment will be measured in the water and sediment.

The objectives of the mercury survey include:

- Determine the extent and magnitude of mercury contamination in Deer Creek watershed
- Identify major mercury source locations in Deer Creek watershed for the purposes of remediation and informing the required TMDL process
- Characterize mercury transport/streamflow relationships in order to estimate mercury loads

Marisha reviewed the proposed sampling allocation and schedule. She also discussed sites that are being considered. She invited people to provide her with feedback on the sampling sites (marisha@friendsofdeercreek.org). Marisha noted that they were collaborating with the BLM on macroinvertebrate collection and analyses.

IV. Project Updates: Technical Advisory Group, May Lynn Tan, Dept. of Health Services: May Lynn Tan updated the DTMC participants on activities within the Technical Advisory Group (TAG). She indicated the following:

- DHS staff would be attending DTMC meetings to seek input on the new contact for a fish consumption survey and education project. They are looking for a clinic to work with in either Sacramento or Yolo County. She indicated that staff would have more to report at the December meeting.
- The Delta Watershed Fish Project hosted a “Training for Trainers” workshop in Sacramento on September 14th. The class showed attendees how to use the new fish contamination training curriculum
- The TAG is moving forward with a survey on the San Joaquin River that will occur at four sites. They anticipate that the survey information will help with the upcoming advisories and possibly with public education materials.
- The TAG is working on posting the “East Delta Fish Safely Sign”. Sun asked for additional suggestions. It was asked if there would be surveys prior to and following posting of the signs. Sun indicated that there would be.

V. USGS Methylation/Demethylation Site Selection, Charlie Alpers, USGS

The USGS is under contract with the SRWP to investigate methylation rates and limiting factors in sediments associated with select environments within the watershed. In previous DTMC meetings, the meeting attendees determined that the study should be focused on wetland environments. USGS staff did reconnaissance of potential sites for the study during early October. Charlie Alpers reviewed the proposed sites and sampling times with the meeting participants:

- Yolo Bypass sites (one permanent wetland, one seasonal wetland in Yolo Basin Wildlife Area):
 - Fall 2005 (Early Nov., 3-4 weeks after flooding of seasonal wetland)
 - Spring 2006 (April/May)
- Cache Creek sites (one permanent wetland – CCNP or CCSB, one seasonal wetland – CCSB):
 - Late Fall / Early Winter 2006 (Dec.-Feb., 3-4 weeks after flooding)
 - Spring / Early Summer 2006 (depending on conditions)

Regarding the Cache Creek sites, Charlie asked the group if they would want the permanent wetland site at the Cache Creek Nature Preserve (CCNP) or within the Cache Creek Settling Basin (CCSB). The group discussed the question. A vote on sites revealed that the group was split on the whether the permanent wetland sampling site within Cache Creek should be at the Nature Preserve or within the Settling Basin. The group determined that they would defer to Charlie and Mark on the location of the sampling site for the wetland within Cache Creek.

VI. DTMC Fact Sheet

Carol explained that she had been asked to prepare a fact sheet on the DTMC for distribution at the Sacramento River Watershed Program's annual stakeholder meeting. She prepared a draft for an ad hoc workgroup to review. She made revisions, and distributed a revised draft of the fact sheet to meeting attendees for their review. She asked them to specifically focus on the text in red. She also asked that comments be sent to her by Friday October 14th.

VII. Phase IX Funding Discussion and Recommendations

In the interest of time, Carol summarized the four projects that had been suggested for consideration for the Phase IX funding. The projects were:

- Funding to support an additional DHS mini-grant in the current solicitation
- Funding to augment resources for the Friends of Deer Creek mercury survey
- Funding to support the Dredge Tailings Workgroup meetings and completion of the Issue Paper
- Funding to support work on the DTMC webpages

As there was no budget submitted for the proposal to work on the DTMC webpages, the project was removed from consideration. The group discussed the three remaining projects. It was suggested that the group consider partially funding all three projects, as they all were good proposals. It was noted that this proposal would require scaling back of the work under the proposals. The group voted; the vote supported splitting the funds among the three proposals. The proposal proponents were directed to work among themselves to determine an appropriate funding split. Carol will then write a memo to the Grants Subcommittee transmitting the DTMC recommendation.

VIII. Updates

- **Sacramento River Watershed Program:** Mary Lee Knecht, SRWP Education Coordinator, announced that:

§ The SRWP Annual Stakeholder meeting would be held on October 27th in conjunction with the Sacramento River Preservation Trusts, State of the River Watershed Conference.

IX. Next Meeting

The next DTMC meeting is scheduled for December 13th from 12:30 to 4:30 p.m. and will be held at Sacramento Regional County Sanitation District offices.