AGENDA

INTRODUCTIONS AND AGENDA REVIEW           11:30
DTMC STRATEGIC PLANNING                     11:40
DTMC UPDATES                               12:40
CALFED MERCURY STUDY                       1:30
BREAK                                      2:30
BEAR/YUBA WATERSHED                        2:45
TRINITY WATERSHED                          3:00
INGLEBRIGHT PROJECT                        3:15
AML-RELATED UPDATES                        3:30
PLANNING THE NEXT MEETING                  4:15
ADJOURN                                    4:30

This meeting was the first-ever, joint Delta Tributaries Mercury Council and Bear/Yuba/Trinity Mercury Technical Workgroup meeting. Forty-four people attended and are listed at the end of the meeting summary. Molly reviewed the agenda with the group. She emphasized the fact that this was an experiment and the agenda was designed to address both groups’ topics in a condensed period of time. The beginning of the meeting covered predominately DTMC-focused information the end focused on predominately Sierra-related topics. Everyone present introduced himself or herself at the break.

DTMC STRATEGIC PLANNING

At its previous meeting, the DTMC conducted a strategic planning exercise. The primary goal of the exercise was to establish a plan for mercury management that would guide the group and help to establish priorities for reducing mercury in the Sacramento River and San Francisco Bay Delta Watershed. The plan and resulting priorities would not be tied directly to any one project or budget, but would be integrated with all relevant activities. For example, the results of the planning would help to shape feedback to the SRWP on their next phase of planning and budgeting. The group used its existing objectives as the framework for its planning. They broke into two subgroups to flush out the details of four of the objectives: Members of the DTMC who participated in these breakout sessions at their previous meeting explained their results and the group discussed them.

Goals and Targets
Tom Grovhoug provided the initial summary of the results from the Group 1 breakout session. The group felt there was a need for historical knowledge of the work to-date
with goals and targets. The problem needs to be better defined with in the group and then we need to move out to educate other parties. The group discussed the nature of the target and what was most appropriate to use as a target. (See 11/21/00 meeting summary for breakout session notes)

**Discussion**

- Would the goal be to have different numbers depending on use and nature of water body versus a generic template for humans (based on weight, age, etc.)? The former takes a lot more data and would be much harder for the public to understand.
- Data is very species specific and advisories from OEHHA focuses on fish species (vs. reservoir specific).
- We don’t know enough yet about the Hg levels in each species in each reservoir and we don’t know enough about who consumes what. Until then, it is hard to determine the nature of the target that will be used.
- It is important to take into consideration the education of the public in determining targets.
- We need to look at what we want to accomplish and what we have accomplished.
- Do we want to reach a goal in 10 years or 100 years?
- Can we divide up the watershed money on a practical level and integrated level to address problems?
- We have accomplished a lot to understand some parts of the problem but other parts remain largely unknown.

**Modeling**

Modeling was also covered by Group 1. They agreed that there was a need for a good conceptual model to help make a case for linking the various elements of the mercury problem. (See 11/21/00 meeting summary for breakout session notes).

The group discussed the model development and several people suggested that the geographic area be defined within the watershed. The smaller the area, the easier it will be to model. Perhaps it would be possible to make preliminary conclusions based on a narrow focus on the most important area(s). That would save money, make the modeling easier and make it possible to answer some questions faster.

**Identify Sources Fate and Transport**

The sources fate and transport breakout session described their effort. They broke their topic into the following three categories: 1) impact issues (human health and wildlife); 2) Pathways and Transformations; and 3) Distribution and Sources. The session identified a series of questions to guide the approach to each of the categories, the goal being, to answer the questions in order to meet the overall objective.

**Steps**

Also at the previous meeting, the group identified the steps that they wanted to use to guide the implementation of the strategy:
• Identify relevant and necessary pieces.
• Categorize.
• Identify what is already going on.
• Timing, Sequencing, Scheduling.
• Identify gaps.
• Identify budget needs.
• Evaluating/reviewing effectiveness.
• Use logic and strategy to integrate.
• Develop Framework.

Next Steps for Strategy Development
The group agreed that further steps needed to be taken by the DTMC to complete the work of the breakout sessions. For all of the tasks, specific individuals and organizations needed to be identified to take the lead responsibility. Additionally, the group needed to identify what has and has not been completed to date on each task. Participants pointed out that there are still perspectives missing in the group. For example, Human Health expertise is missing.

The group discussed the potential for a strategic plan to lend credibility to the requests for future funding. The DTMC needs to continue with the strategic planning effort, not just the big picture, but also prioritization, itemization of specific tasks such as monitoring needs, etc. It would be helpful to generate the list of needs upfront, prior to funding opportunities that arise. Molly offered to help organize the work from the breakout sessions.

DTMC UPDATES

Mercury Monitoring Workgroup: The Mercury Monitoring Workgroup met on January 5, 2001. Participants included Joe Domagalski, Chris Foe, Charlie Alpers, Tom Grovhoug, and Mitch Maidrand. Additional funding may be available through the SRWP monitoring Subcommittee and the group was tasked with making a recommendation about priorities. They developed a list of activities and discussed critical areas in the watershed that needed monitoring and were time sensitive. The highest priorities for funding identified by the workgroup were the following:

• Aquatic Sampling at Green’s Landing, south of Sacramento – Work will include weekly monitoring and high levels will trigger additional sampling. ($15,000).

• Monitoring to identify an unknown source (focused on as a priority in the near term) on the Sacramento River by Colusa and Hamilton City. This is a potential source of methyl Hg on the bank of the mainstem, not coming from a tributary. ($15,000).

• Additional Sampling Priorities were also identified. Only $15,000 is available so the group understood that the existing funds may only cover Mill Creek.
1. Mill Creek
2. Arcade Creek (urban) – use as a test for urban water bodies
3. Colusa Basin Drain/Sacramento Slough

Data already exists at mouths of these tributaries, but they felt that it would be beneficial to do more episodic monitoring upstream. This work compliments ongoing work being done to develop a comprehensive mass balance.

**DTMC Website** The DTMC website is available to the public. The address is: [http://www.ice.ucdavis.edu/hg/default.htm](http://www.ice.ucdavis.edu/hg/default.htm) New information is being added regarding disposal and containment of mercury. Bob Speirs asked that all members think about relevant information that should be added to the site and contact him with suggestions. Molly said that she will try to start using the website as a tool for communicating with the group.

**CALFED/Prop 13 funding:** The state funding for CALFED is increasing. However, the Federal contribution is lacking significantly at this time. Mercury continues to be a high priority. The Proposition 13 legislation made funds available to "construct facilities to control drainage from abandoned mines that adversely affect water quality in the Bay-Delta." About $17 million dollars will be available from a California Water Bond measure. CALFED will be responsible for overseeing the planning phase for the funds. CALFED will be contracting with the Department of Conservation for 1 year to provide technical expertise. They will be developing an agency MOU. An advisory committee may be established to help identify priorities for use of that funding. Candidates for that advisory group will likely be members of these two groups (DTMC and Bear/Yuba Workgroup). Some challenges are being identified, for example, legal issues. Overall the use of funds seems pretty flexible. Five million dollars has been requested already for the first phase of the total seventeen million dollar project. It will be available on July 1st. The next step for the Proposition 13 funding is to convene an advisory group. Barbara Marcotte and the team will notify members of DTMC and the Bear/Yuba AML task force of key developments. They may hold the meeting in conjunction with next DTMC meeting (that may be too soon). On July 1st the funds will become available. CALFED has not decided yet how the funds will be distributed.

**SRWP News:** Lynn Barris reported that the location of the SRWP Resource Center was moving to Butte College. The SRWP Monitoring Subcommittee is trying to finalize plans for next year, most of DTMC recommendations have been accepted. The Public Outreach and Education Subcommittee (POES) publishes a newsletter and the February edition will include an article on mercury and DTMC. The SRWP Institutional Framework Committee is forming a non-profit organization for the SRWP. Trustees will be appointed to the Board. It is an ongoing process. Their goal is to have the paperwork filed by spring.

**EPA Fish Tissue levels:** The USEPA issued a Fish Tissue Criterion of 0.3 ppm. This number coincides with screening number that OEHHA has been using for fish advisories. A fact sheet is available through EPA. This new criterion will be incorporated into the
Numeric Target Report for Clear Lake. The regional Board has not decided whether it will stick with lower number it originally used for Clear Lake or change it to the new criterion. They feel that there may be an argument for using the lower number for Clear Lake since they have data to support a higher consumption rate. The new EPA number may be used for the general population since less data is available.

CALFED MERCURY STUDY

Chris Foe and Mark Stephenson provided a summary of the results of the first year of study under the CALFED Mercury Project. Chris began by presenting a brief summary of the Science Review Conference that took place December 4th and 5th in Monterey CA. Three advisory team members participated. It was not open to the public. This was the second of three meetings that were planned for the project.

Chris focused on the preliminary data being gathered in the Bay-Delta, the goal of which is to construct a mercury mass balance for the freshwater portion of the estuary. Several key assumptions have been made:

- There is a positive relationship between mercury in water and mercury in biota.
- Methyl mercury is being produced both in the estuary and being produced outside the estuary and being imported.
- They estimate that it is taking 30 to 45 days to transport water across the system.

General conclusions from the first year of sampling in this area are as follows:

- There is a net loss of raw and filtered methyl mercury in the delta each month – on the order of 30% to 50% of the mercury moving into the estuary.
- Prospect Slew was the primary source of mercury in March.
- They are having problems getting good Flux data in the estuary.
- The rivers seem to contribute more methyl mercury than the estuary.

Data supports the idea of a methyl mercury sink in the estuary. High concentrations of methyl mercury are being found in the rivers and towards the edges of the estuary, but the middle of the estuary is relatively low.

The most important points:

- The Sacramento River is the single greatest source of mercury to the estuary.
- Total methyl mercury seems to be independent of flow rates.
- High concentrations of mercury are occurring in the winter and in May, but not the rest of the year.

Chris explained that the study team has begun identifying future work needs. They want to continue sampling monthly total and methyl mercury for another year (until March of 2002) and they want to determine where and why methyl mercury is disappearing from the system.

Mark Stephenson presented data on the results of sediment studies that are being conducted by the team. He explained that the Delta sediments in place are important to
assess because they are potential sources and they tell us how mercury is being cycled through the system. They have found that salinity level is a significant factor. 0 – 5 parts per thousand salinity shows a dramatic loss in Mercury. The team does not yet understand where it is going. The data indicates that some biological component is removing mercury (such as clams)

The results are also showing that, in comparison to other parts of the country (especially the east coast), the mercury in our system is not methylating at the same rates. Mercury levels in the sediment are found to be inverse of the levels in the water column. Mercury levels in clams correlate better with the water column data than with the sediments. The same is being found with some fish species. There is also a strong correlation between fish species, clams, and other biota. All this means that the water coming in from the tributaries is very important to the biota, whereas the sediments in the Delta may not be as important. As far as the loadings go, the main stem of the Sacramento River has the most important impact on the biota. Again, the sediments are being found to be less important.

A summary of the first year findings will be written for public education and outreach to be published in the spring issue of the SWRP newsletter.

BEAR/YUBA WATERSHED

Charlie Alpers provided an update on the Bear Yuba watershed activities by summarizing the project underway. The significant finding included; elevated levels of Methyl Mercury in the Bear River and elevated mercury levels in fish tissue, especially bass, catfish and brown trout. The elevated levels being found are similar to other areas (reservoirs, etc.) that have fish advisories. Concentrations in bass were found up to 1.5 parts per million, 0.75 ppm in channel catfish, 0.41 in sunfish, 0.43 in brown trout and 0.38 in rainbow trout. Fish were tested in five lakes: Camp Far West Reservoir, Lake Combie, Rollins Lake, Scotts Flat Reservoir and Englebright Lake. In addition to fish tissue, water quality, sediments and aquatic life were tested in 14 streams, including Deer Creek. Several hot spots have been identified in the region.

David Weaver explained that the Forest Service is going to do some safety work on some of the tunnels in the area. This work will most likely will focus on gating and other closures for safety purposes. BLM may be able to do some remediation. The Forest Service is looking at several sites using CERCLA authority to do emergency response actions on hydraulic pits. The goal is to try to change the hydrology. They are in the preliminary stages of a PRP search and will be following traditional superfund steps, including developing a public relations plan.

TRINITY WATERSHED

The Trinity Watershed is following a similar process as that being developed in the Bear/Yuba. They have talked to the Nevada County Supervisors. According to Jim Rytuba, the dredge ponds and hydraulic tunnels are a significant concern in the Trinity,
but there are also mercury mines which present an additional source of mercury. They are finding remarkably low numbers for the mercury in these waters considering the similar nature of the problem. The drainage coming from the Altuna mine, however, is exceptionally high. It has high levels of methyl mercury in addition to total mercury and the methylation rates are very high. Although the tunnels in the area have very high mercury concentrations, they don’t seem to be contributing much to the system. The Trinity Resource Action Committee is meeting later in January (they have been meeting for several years) Biota has been sampled in the area and hot spots have been identified at Altuna. Not all of the data is back yet. Follow-up sampling will be conducted next summer. There is an indication that mercury is being sequestered in the biota.

**ENGLEBRIGHT PROJECT**

Charlie provided a summary of the Englebright project or the “Upper Yuba River Studies Program. He explained that six scopes of work have been approved for the following elements:

- Habitat
- Sediment
- Water Quality
- Flood Control “Public Safety”
- Water Supply Hydro Power
- Socio-Economics

The final stages of funding approval are going on right now. The overall budget is 6.5 million dollars. The studies are to be completed within 18 months. CALFED then has 6 months for an EIR/EIS process to make its decisions. One member of the group asked how they can consider releasing mercury contaminated material (from the Englebright Reservoir) into a 303d listed waterbody?

**AML-RELATED UPDATES**

**Mercury Recycling:** Rick Humphreys told the group that a power point presentation has been posted on the website. 280 lbs. of mercury was collected at a cost of $2000 using house calls. The County’s household hazardous waste program received about 22lbs.

**PLANNING FOR NEXT MEETING**

The group discussed the joint meeting and felt that it was positive. There may be reasons to continue to meet separately however – for example the Bear/Yuba group needs to get into more detail on some of the projects they are coordinating in the Sierra watersheds. Despite the fact that the agenda was tight, the group did not agreed to a longer meeting. The next meeting of the DTMC will be on February 13th, the second Tuesday of the month. The Bear/Yuba group will meet next on February 23rd. The groups agreed to meet jointly on March 13th at the CVRWQCB (subsequently changed to TBD)
Next Meetings
February 13, 2001, DTMC, Woodland Library, 12:30 – 4:30
February 23, 2001 – Bear/Yuba, BLM Offices Sacramento, 9:00 am – 12:00 pm
March 13, 2001 – Joint DTMC and Bear/Yuba, Location TBD (topic: CALFED Cache Creek results)

Topics for the next DTMC meeting: Ellen Manges presentation of the Sulfur Bank Mine update and Strategic Planning.

A future meeting will compare the major sources of mercury in the Bear and Yuba watersheds to Cache Creek (for example).

REMEMBER: At their November 2000 meeting, the DTMC agreed to start meeting on the second Tuesday of each month. They agreed to a six month trial period. At the June 12th meeting the group will re-visit its schedule and decide if it would like to continue monthly meetings.

Monthly DTMC Meetings
February 13
March 13
April 10
May 8
June 12 – check-in at 6 months

The meeting adjourned at 4:35 PM.
MEETING ATTENDEES:
Terry Adelsbach – USFWS
Charlie Alpers – USGS
Shaun Ayers – UC Davis
Lynn Barris – SRWP Resource Center
Denali Beard – CA State Parks
Janis Cooke – CVRWQCB
Joe Domagalski – USGS
Ron Churchill – DOC/DMG
Janine Clayton – USDA/Forest Service
John Clinkenbeurs – DOC/DMG
Linda Fiack – Yolo County Planning
Chris Foe – CVRWQCB
Tracy Gidel – Nevada County Environmental Health
Tom Grovhoug - Larry Walker & Associates
Ross Grunwald – Resource Design Technology
Allen Harthorn – SRWP
Roger Hothem – USGS – BRD
Rick Humphreys – SWQCB
Mike Hunerlach – USGS
David Jones - EPA
Joe Karkoski – CVRWQCB
Ray Kraus – Homestake
Mark Kravetz – Cherokee Chemical Co.
David Lawler – BLM – CASO
G.Fred Lee – G Fred Lee & Associates
Jan Lowrey – Cache Creek Conservancy
Mitch Maidrand - SRCSD
Barbara Marcotte – CALFED Bay Delta Program
Stephen McCord – Larry Walker & Associates
Patrick Morris – CVRWQCB
Gail Newton – DOC/OMR
Jim Rytuba – USGS
Fraser Shilling – UC Davis
Darell Slotton – UC Davis
Bob Speirs – Local Resident
Mitzi Speirs – Local Resident
Mark Stephenson – DFG
Tom Suchanek – UC Davis
Avery Tindell – Local Resident
Mike Tuffly – DOC/OMR
Rick Weaver – USFS/Tahoe National Forest
Janet Witlock - USEPA
Becky Wood – Teichert

Molly Mayo facilitated the meeting