

MEMO

To: NPS Workgroup

Date: 6 March 2012

Subject: TAC meeting summary; 9:00 a.m. – 4:00 p.m., Board Meeting Room; Central Valley Regional Water Quality Control Board



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Overview

The Technical Advisory Committee (TAC) met for the first time on 6 March 2012 at the Central Valley Regional Board's offices. This memorandum summarizes the discussion by agenda item.

A. Welcome and Introductions

See TAC members' bios at http://www.waterboards.ca.gov/centralvalley/water_issues/tmdl/central_valley_projects/delta_hg/stakeholder_workgroup_mtgs/delta_hg_tac_pubinfo.pdf. All members were present, except Brian Branfireun who joined by phone.

Approximately 100 people were present, plus another 20 on the call-in line.

B. Phase 1 Activity Summary

Patrick Morris referenced the TMDL web site for updated information. The TMDL became effective Oct. 20, 2011. Relevant near-term deadlines are: (1) Control Study organizational letter reports due 6 mo; and (2) workplans due 18 mo. The TAC review period following each submittal is somewhat uncertain.

C. Methylmercury Science in Delta and Data Gaps

Janis Cooke described the methylmercury mass balance, and methylation and bioaccumulation processes and factors. She also mentioned potential effects of changes in flow through Delta. Individuals who spoke representing source categories were:

- Stephen McCord: Overview of NPS Workgroup; knowledge base will be appended to workplan for review by TAC

- Lisa Windham-Meyer: Synthesis of methylmercury processes in wetlands and irrigated agriculture. The synthesis was started with DRERIP then referenced 14 new (many local) studies. A key finding is that wetlands methylate and export with DOC. Other key findings address hydrologic controls, permanent vs seasonal wetlands, temporal and spatial variability. Comments from the TAC were that:
 - Salt pond research & effects of nutrients should be referenced
 - Wetland type matters
 - Diel effect is significant
 - Inconsistent effect of iron reducers, so add molybdate (a sulfate reduction inhibitor) to evaluate sulfate dependency
- Wes Heim: summarized ongoing project in Yolo Bypass to develop MeHg concentration and export load BMPs for seasonal wetlands (residence time, depth, biomass, vegetation type, source water); found major pulse at seasonal floodup, but always low in permanent wetlands; will eventually evaluate ultimate scale of possible BMPs while recognizing value of wetland type mosaic.
- Debbie Webster: Still organizing WWTPs, all new NPDES permits require effluent Hg monitoring; project will compile data, recommend ancillary monitoring, compare treatment processes, consider other constraints, and evaluate receiving water fate; all WWTPs reduce influent THg and MeHg, just to varying degrees.
- Hong Lin and Brian Laurenson: All MS4s combined represent <1% of MeHg load to the Delta; the SSQP is implementing its Stormwater Quality Improvement Plan per permit requirements (Hg being one target pollutant) and its Mercury Control Plan focused on THg; 60% of urban drainage goes into American River (not in the Delta TMDL); new developments are typically building wet detention basins; lots of monitoring data since 2002 for loads, land use comparisons, trends; SSQP's "watershed" model accounts for loads avoided by BMPs.
- Fred Gius: CCSB's sole purpose is sediment trapping; 50-yr lifespan then raise or dredge; Hg associated with serpentinite and mineral springs is largely uncontrollable; Described CCSB studies starting by DWR FloodSafe w USGS & UCD; 3-part study (1) CCSB sediment trap efficiency, (2) Hg loads I/O/within CCSB, (3) watershed sediment transport model [not yet scoped].

D. Study Guidelines; E. Study Plan Discussion; and F. More Time for Questions

The discussion notes are organized by general topic area, not chronologically.

TAC scope of work

The charge to the TAC was initiated by Regional Board staff and revised after discussion with Ecosystem Restoration Program staff and TAC members. Regional Board staff has posted the charge on its website

(http://www.waterboards.ca.gov/centralvalley/water_issues/tmdl/central_valley_projects/delta_hg/stakeholder_workgroup_mtgs/delta_hg_tac_duties.pdf), which is broadly: review workplans

and study reports' scientific rigor, validity, and robustness; advise, evaluate, and suggest alternatives based on those reviews.

TAC Meeting and Review Schedule

Regional Board planned for the TAC to meet twice to discuss Study Workplans: once after each deadline for submission of individual and collaborative Workplans. Staff originally expected the number of individual plans to be few, in which case a meeting by phone rather than in person may suffice. If a majority of collaborating groups can agree to submit plans before April 2013, then the TAC meeting could be held earlier. Early submittal would allow more time for work before mid-term reports are due. Regional Board is open to this possibility if everyone can agree to submit early.

Within the bounds of Ecosystem Restoration Program budget and TAC members' time, Regional Board will discuss with the TAC the options for getting comments "off schedule". The TAC is structured to operate as group, with complementary areas of expertise. It is likely not possible to convene the TAC, even by phone, each time a Workplan is submitted.

Similarly, responsible entities should work with Board staff to review initial results and consider possible amendments prior to submitting the mid-term progress reports in October 2015.

TAC role in the overall review and synthesis of control studies

TAC will review final reports in 2018. TAC's role is not to grade study workplans but to provide constructive criticism from a scientific perspective.

The TAC did not provide any expectations. Rather, they will be largely reactive.

There is no certainty in funding control studies. Lack of success in reasonable efforts to fund could allow delayed deadlines.

Control Study Workplan Guidance

The TAC will provide Janis with suggested improvements to the MeHg Control Study Guidance document. Janis will produce a revised Guidance in late March. Key suggestions were to:

- Organize the workplans (and studies) to address the hypothesis that control can meet allocation (% reduction).
- Be concise in Workplan, but append references used as knowledge base.
- Need baseline data pre control/change.
- Evaluate primarily vs allocations, secondarily vs 0.06 ng/L
- Evaluate results wrt beneficial uses. Collect ancillary information to fully consider overall costs (habitat loss, biotic effects) and benefits of adding design and management criteria that address methylmercury.
- Ballpark costs could help tier study options re benefits and certainty vs costs.
- Indicate where actions to comply with the TMDL may be countered by other Delta mandates such as CV Flood Control Plan, BDCP, and Delta Plan.
- Evaluate potential effect of increased frequency of long-duration flooding in Yolo Bypass
- Address long-term effects of climate change.

- New version of Guidance coming later March.
- TAC asking for very concise study plans “concept proposal” around August 2012:
 - Problem statement
 - Study objectives (SMART)
 - Control measures to be tested
 - Hypothesis and assumptions
 - Methods (analytes)

G. Next Steps

- Regional Board will post ppt’s on its TMDL web site as soon as possible.
- Regional Board will revise the CS Guidance by late March.
- Dischargers submit organizational reports, which will be posted on the TMDL web site
- Submit any questions for the TAC through Janis Cooke.
- Dischargers may submit workplan concept proposals in August for TAC review.