

Dan Cloak Environmental Consulting

To: **Andria Ventura, Clean Water Action
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Cc: Clean Estuary Partnership participants

From: Dan Cloak
Environmental Technical Representative
to the Clean Estuary Partnership

Subject: **Environmental Technical Representative Final Report**

Date: 26 June 2006

Dischargers End Support for Advocates' TMDL Participation

In a special joint meeting late last month, BACWA¹ and BASMAA² decided not to renew funding for my work as Environmental Technical Representative. My contract expires 30 June 2006.

In a 6 June 2006 email, BACWA Executive Director Michele Pla stated:

A key goal of founding and funding the CEP was to assist the Water Board to develop and adopt TMDLs and other Basin Plan Amendments. **After five years and nearly \$5 million we as public agencies, including the Regional Water Board, have very little to show to the public...** (emphasis added)

According to the email, BACWA and BASMAA will now “attempt to identify through discussions with the Water Board a more effective strategy for achieving the goal of developing and adopting TMDLs,” and “intend to consider” renewed support for environmental advocates’ participation in TMDL development if and when the dischargers and the Water Board agree on a strategy.

¹ The Bay Area Clean Water Association (BACWA) represents the interests of municipalities and special districts which discharge wastewater to San Francisco Bay.

² The Bay Area Stormwater Management Agencies Association (BASMAA) represents the interests of Bay Area cities and towns which have NPDES permits governing the discharge of stormwater to creeks and the Bay.

What Happened?

Two events precipitated the BACWA/BASMAA decision to shut down the CEP.

- The State Board remanded the mercury TMDL back to the Regional Water Board on 7 September 2005, further delaying a process that began in 2002. The State Board also directed the Regional Water Board to mandate reductions in wastewater mercury discharges and make other changes advocated by environmental and environmental justice groups and by USEPA.
- When the CEP's Executive Management Board (EMB)³ met later that same month, the CEP's Program Manager reported *none* of the CEP's ongoing technical investigations would produce results in time to be incorporated in pending TMDLs.

Soon after, the EMB directed the CEP's Technical Committee and work groups to stop meeting. In the ensuing months, there was some discussion of reorganizing the CEP. However, at the 27 February 2006 EMB meeting, BACWA and BASMAA reported they were cutting off funding and the CEP was effectively dissolved.

Why did the CEP spend so much and accomplish so little?

I suggest four reasons:

1. The CEP didn't direct its resources to meet the stated needs and objectives of CEP participants.
2. The CEP partners missed opportunities to facilitate agreement about what would constitute reasonable and feasible implementation plans for pollutants.
3. Water Board staff pushed through a disputed mercury TMDL, thereby undermining the nascent spirit of cooperation among CEP participants.
4. Environmental and environmental justice advocates have different underlying assumptions, and understand facts in a different framework, than Water Board staff and discharger staff. These differing assumptions and frameworks hindered communication and mutual understanding.

1. Allocation and Direction of CEP Resources

Needs and Objectives of CEP Participants

The "bottom line" for NPDES-permitted dischargers is compliance. Permitted agencies must be able to comply with permit requirements using the resources available to them.

³ The CEP's Executive Management Board consists of the BASMAA and BACWA Chairs and the Regional Water Board's Executive Officer.

For municipal and industrial wastewater dischargers, the TMDLs presented both threats and opportunities. On the one hand, TMDLs, Site-Specific Objectives, and other Basin Plan Amendments could mandate reduced pollutant discharges. In that case, wastewater dischargers would have to implement more aggressive source control programs and, possibly, better treatment technology.

On the other hand, the TMDL/Basin Plan Amendment process will likely produce local standards *less* stringent than the default federally mandated standards for mercury, arsenic, and copper which would otherwise come into effect between now and 2010.

For stormwater pollution prevention programs, TMDLs have no real upside: TMDLs can only bring new program activities, more reporting, increased threat of noncompliance, and risk of third-party lawsuits. Stormwater dischargers have taken a generally defensive tack and have sought to limit expansion of their activities much beyond the *status quo*.

For Regional Water Board staff, TMDLs present technical challenges and administrative headaches. On the one hand, TMDLs are a rare opportunity to re-craft water quality policy. Federal and state funding has been provided for salaries of Water Board staff working on TMDLs. Water Board staff gets the chance to direct scientific and engineering consultants (on the dischargers' dime) and to implement some interesting technical projects.

On the other hand there is increased pressure, from the State Board and USEPA, to get TMDLs approved and to begin cutting down the 303(d) list of pollutants impairing the Bay.

Environmental and environmental justice advocates discussed perspectives and aims on 8 April 2004, shortly after I came on board as Environmental Technical Representative⁴:

- The TMDL process is a very flawed way to deal with many pollutants, particularly the ones that are of most concern in San Francisco Bay. The concept of waste load allocations for point sources and load allocations for non-point sources assumes that the water body is well mixed (San Francisco Bay isn't), that there is an assimilative capacity (which isn't really applicable to bioaccumulative pollutants), and that "attainment" is an achievable goal.
- For advocates, the test of what is a "good" TMDL must be pragmatic: A good TMDL is a TMDL that includes measurable and verifiable actions that can reduce the environmental and human health impacts of pollutants.

At the 8 April 2004 meeting, we also agreed on the following preliminary guidance for my activities as Environmental Technical Representative:

- *Precautionary Principle*. Promote the view that pollutant controls and other environmentally beneficial actions should be implemented based on current knowledge and judgment rather than waiting for all

⁴ The bullet items are taken from the notes of that meeting.

uncertainties to be resolved. As a corollary, studies should focus on those items needed to get further protective actions underway as quickly as possible. As an example, it may be possible to get consensus on actions based on a simple conceptual model rather than spending time and money to develop a computer model.

- *Hot Spots.* Emphasize the need to implement remediation actions for places in the Bay and on land that are affected by high concentrations of pollutants, especially as these disproportionately affect disadvantaged communities and communities of color. Avoid allowing the TMDL analyses to be limited to Bay-wide averages.
- *Impacts.* As much as possible, use the TMDL process to find practical and implementable ways to reduce known impacts on human health, aquatic life, and other beneficial uses, as opposed to only meeting technical and regulatory requirements.
- *Public Trust.* Emphasize that the state's TMDL process should not be limited to Clean Water Act compliance but should also consider agencies' duty to protect public resources.

Prioritizing and Directing Technical Investigations

In recent months, Dischargers, Regional Water Board staff, and environmental advocates have had some refreshingly frank discussions. However, it's been too little and too late to repair the CEP.

The CEP's technical work—both consultant contracts and discussion forums—was never directed and organized to meet the participants' needs and objectives.

As I wrote nearly two years ago:⁵

The CEP's mission includes fostering dialogue and educating stakeholders about what is known—and about what is uncertain—about pollutant sources, fate, transport, and effects. The ongoing Mercury TMDL and BPA dispute is highlighting gaps in the CEP's ability to articulate and communicate this understanding. It is also showing that the CEP has not yet articulated a strategy for organizing and prioritizing technical investigations. Neither the CEP nor the Water Board has adequately outlined the process by which the CEP's technical investigations and summaries should be used in crafting proposed regulatory actions.

Closing these gaps is critical to the interests of the environmental and environmental justice communities. The potential benefit of the TMDL process, and the CEP's contributions to that process, rest on the potential to achieve consensus support for additional pollutant controls and other measures that can reduce the impacts of pollutants on human health and on wildlife. It is not

⁵ In my 22 July 2004 update.

yet clear how the CEP's technical activities will help achieve that consensus support.

For a decade and a half, Regional Water Board planning staff has—through the Regional Monitoring Program, individual permit requirements, requests pursuant to Water Code Section 13267, and now through the CEP—made dischargers pay for technical studies of San Francisco Bay. However, the requests seemed haphazard, as if each demand was identified by staff members working on their own, separate, regulatory projects, with their own ideas on how to proceed. In some cases, Board staff demanded annual research budgets be set; then, in the absence of technical leadership by the agencies, consulting firms provided the project concepts and scopes of work to make use of the available funds.

As a collaborative partnership, the CEP may have been an opportunity to change that pattern.

There were some successes.

For example, the Conceptual Model/Impairment Assessment (CM/IA) reports for Legacy Pesticides, Dioxins, Selenium, and Diazinon and Pesticide-Related Toxicity in San Francisco Bay did a great job of compiling, summarizing and analyzing available information. The reports were produced inexpensively, and the consultants did an admirable job of incorporating comments from the CEP work groups and Technical Committee.

In fact, the reports—drafts of which were available in April 2004—essentially *completed* the work needed to prepare “technical TMDLs” for these pollutants. Also by this time, Water Board staff had completed project reports for mercury and PCBs. The technical work required to extend site-specific objectives for copper and nickel to the entire Bay (SSOs were adopted for the South Bay in 2000) was also largely complete.

In summary: the studies needed to prepare “technical TMDLs” for pollutants on the 303(d) list were done (at least in draft form) shortly after I came on Board as Environmental Technical Representative in early 2004.

However, the other part of the TMDLs—adequate, reasonable, and feasible implementation plans which could be supported by dischargers and advocates alike—needed a lot a more work.

2. TMDL Implementation Plans and Basin Plan Amendments

Efforts to Promote a Collaborative Approach

Throughout 2004 and 2005, I sought to redirect my CEP colleagues' attention, and to redirect CEP resources, toward building consensus on actions to control pollutants and to protect public health and wildlife from pollutant impacts. Some examples:

- At my suggestion, the Technical Committee held a special 28 April 2004 meeting to discuss implementation actions for legacy pesticides,

dioxins, diazinon/pesticide-related toxicity, and selenium in San Francisco Bay. This meeting was promising, but there was no follow-up.

- In a 21 April 2004 memorandum, I critiqued the strategy of spending most of the CEP's technical budget on the multi-box model. I followed up with comments in meetings, emails, and memoranda over the next year and a half, but to no avail.
- In August 2004, following up discussion in the Technical Committee, I prepared a 3-page project proposal to develop options for mitigating risks to public health due to pollutants in fish. The proposal noted advisories to limit fish consumption (including posting signs) had so far been the only option implemented to address health risks of pollutants in fish. The purpose of proposal was to investigate other "potential actions that might offset or mitigate specific health risks by improving the health status of persons and communities most likely to be affected by pollutants. Options may include reducing other pathways of exposure to environmental contaminants or mitigation of other factors linked to neurological and other health effects." In response, BACWA proposed creation of a Risk Reduction Work Group reporting to the EMB. The Risk Reduction Work Group bogged down as the dischargers sought to limit the group's scope to outreach and education activities and to spike any discussion of actions which could mitigate actual health impacts. However, CEP staff has identified a qualified technical leader for a project, and BASMAA and BACWA are funding a collaborative process to identify risk reduction options.
- BASMAA opposed discussing TMDL implementation in Technical Committee meetings, so in April 2005 I partnered with Dave Tucker, BACWA's Technical Committee representative, to bring the EMB a joint proposal. The proposal called for ad-hoc work groups to develop and review lists of implementation actions. Our idea was to identify potential pollution control actions and create a table summarizing the views of BACWA, BASMAA, and environmental advocates on each action. This, Dave and I thought, would assist Water Board staff to craft implementation plans that could be accepted by all parties. However, the EMB chose not to follow up the idea.
- In July 2005, I proposed eight studies for incorporation in the CEP's 2005-2006 technical budget. The study descriptions drew on previous work by SCVURPPP and by the CEP; each study would have added insight into the feasibility of controlling sources of PCBs and other pollutants in stormwater. Around this time, BASMAA and Water Board staff chose to move discussion of TMDL implementation for stormwater into the under-resourced and ill-fated stormwater Municipal Regional Permit process.
- In October 2005, I forwarded the idea of a "Commit-Pilot-Consider" model to Technical Committee, EMB, and Water Board staff members. The idea, drawn from a Southern California TMDL process, is for a group of stakeholder representatives to identify potential actions, evaluate each action's potential feasibility

(high/medium/low) and effectiveness (high/medium/low), and categorize each potential action as “commit,” “pilot,” or “consider” based on those evaluations. As with previous efforts, this sparked some interest and discussion, but the CEP did not commit time or resources to collaborative planning of pollution control measures.

In summary, CEP participants sometimes endorsed the *idea* of a collaborative approach to planning TMDL implementation, but the dischargers and Water Board staff declined to follow through on opportunities to put that idea into practice.

3. The Mercury TMDL

Environmental and Environmental Justice Advocates' Issues

Water Board staff met with Baykeeper 15 October 2003 to discuss environmental and environmental justice community comments on the “final” mercury TMDL Project Report. I was not at this meeting; it was held months before my CEP involvement started.

The main issues raised at that meeting⁶ were unresolved when the Board adopted the TMDL a year later. Many of these same issues are still being discussed now:

- Mercury from airborne sources may be more bioavailable than mercury in mine waste.
- Discharge of a pollutant to a water body with no assimilative capacity is not allowable under the Clean Water Act.
- Bird egg targets need to be low enough to protect all species, including the least tern.
- The Bay mercury TMDL needs to be coordinated with the Guadalupe mercury TMDL and the Delta mercury TMDL.
- Aggregate (group) discharge limits reduce accountability of individual dischargers.
- Stormwater loading estimates are highly uncertain, and it is unlikely the allocated load reductions can be achieved.
- The approach for validating stormwater load reductions leaves too much responsibility in the hands of the dischargers. Instead, there should be clear, rigorous metrics and standards for implementation of control measures.

Regional Water Board staff provided advocates the opportunity to repeat these same points during meetings a year later. However, Water Board staff never took seriously the need to resolve these issues. Had they done so, the contentious hearings in Oakland and Sacramento, the remand, the revision, and the associated delays might well have been avoided.

⁶ According to the record of the meeting prepared by CONCUR.

I think each of these issues has a solution which would enable dischargers to stay in compliance, avoid potential third-party lawsuits, and do so with reasonable increases beyond existing efforts.

If those technical and regulatory solutions were not identified and discussed, it is only because Water Board staff never convened a process to do so. Instead, staff told themselves it was sufficient to “balance” the concerns of dischargers and advocates. Water Board staff has called this philosophy toward issues raised by dischargers and advocates a “balance of unhappiness,” but I’ll call it “let’s you and him fight.” It practically guarantees TMDLs and other regulatory actions will be contentious.

As the experience with the mercury TMDL demonstrates, by “balancing” comments rather than investigating and trying to resolve them, Water Board staff also misses key opportunities to correct regulatory and technical flaws in the documents they produce.

I believe no collaborative TMDL process can succeed unless Water Board staff abandons the “balance of unhappiness,” “let’s you and him fight” philosophy.

Advocates’ list of mercury-TMDL-related issues changed little between the September 2003 meeting and the September 2005 remand.

As required by the agreement funding my work, I answered environmental and environmental justice advocates’ technical questions about the TMDL and the feasibility of implementation measures. Many of the advocates’ technical questions related to whether Water Board staff’s TMDL analysis *proved* that more aggressive implementation measures would not accelerate reductions in the amount of mercury in San Francisco Bay fish.

If mercury from wastewater or stormwater sources is significantly more likely to become bioavailable than mercury in the mass of mining debris at the bottom of the Bay—a possibility contemplated in the TMDL staff report and supported by CEP studies and other scientific literature—then wastewater and stormwater loading reductions might reduce mercury in fish more rapidly than the 120 years projected in the staff report.

Regrettably, Board staff’s regulatory documents (most notably the 13 May 2005 letter from Bruce Wolfe to State Board staff) obscured this key technical point.

I believe a fair analysis of the available evidence leads to the conclusion that we simply *don’t know* how quickly the amount of mercury in Bay fish might be reduced. We do know it could take a long time, but that insight, in itself, is insufficient to decide how much additional pollution-control effort is warranted.

To reach consensus on such a policy, participants have to consider underlying assumptions and values.

4. Differing Assumptions

As Environmental Technical Representative, I worked with two groups:

1. Engineers and scientists representing dischargers and the Water Board.
2. Activists and attorneys representing non-governmental advocacy organizations.

I believe there is a disconnect—a persistent communication gap, a difference in frameworks of reference—between the two groups. On more than one occasion members of each group read the same proposed regulatory language and came to radically different conclusions regarding the meaning and intent of that language.

The two groups have different underlying (typically unspoken) assumptions about environmental quality and pollution control.

One such assumption regards the permissible concentration or quantity of pollutants that may be discharged. Scientists' and engineers' professional practice focuses on setting and meeting discharge standards. Scientists and engineers tend to assume dischargers possess a "right" to discharge up to that level.

From advocates' point of view, any discharge of contaminants harms the public commons and tends to disproportionately affect the most vulnerable members of society.

Engineers and scientists also tend to assume there is a "balance" between the benefit of living in an industrial society and the inevitable, but manageable environmental damage which results. (Or, as the oil companies' technical representative pointed out to me at a CEP meeting: "We all drive, don't we?")

The two groups have different assumptions here as well. Engineers and many scientists have professional training in cost-benefit analysis, a method of gauging such "balance." The underlying assumption of cost-benefit analysis is that costs and benefits are shared.

The environmental justice movement undermines this convention and points out that environmental costs and monetary benefits are, in reality, distributed unequally.

These differing assumptions have set the stage for ongoing difficulties in achieving consensus on water-quality-planning policy. In particular, Dischargers feel threatened by advocates' basic belief that *any* pollutant discharge is likely to be harmful—and socially unjust to boot.

I believe long-term trends in science and in society favor the advocates' point of view.

The nature of bioaccumulative pollutants, lower and lower detection limits, evidence that the human population carries a pollutant body burden which affects public health, growing evidence that some pollutants have subtle effects on endocrine balance, and more evidence that exposure to multiple pollutants has synergistic effects—all this information points toward the conclusion there is no guaranteed "safe" level for many environmental contaminants.

Growing income inequality, and resurgent racial discrimination, will inevitably clash with the demographic trend toward a majority-minority

California electorate. This sets the stage for increased government efforts to redress the grievances of economically and socially disadvantaged communities, including efforts to reduce those communities' disproportionate exposure to pollutants and to mitigate the effects of that exposure.

In Closing: A New Basis for Consensus on TMDL Implementation

This divide in assumptions and underlying beliefs—between scientists and engineers working for dischargers and regulators on the one hand, and environmental and environmental justice advocates on the other—is an obstacle to achieving consensus on TMDL implementation.

However, the divide is not insurmountable. I believe consensus is possible if each side turns away from abstract, general, and ideological debate and instead focuses on envisioning a set of control actions which meet the “bottom line” requirements of dischargers, the Water Board, and environmental and environmental justice advocates alike.

Surely, there is a set of initial actions—backed by a commitment to continuous improvement and adaptive implementation—which:

- Is within the capabilities of dischargers to achieve.
- Can meet with approval by the State Board and USEPA.
- Meets advocates' “bottom line” of being socially responsible by doing all that is reasonable and feasible to protect human health and the environment.

Finding that set of actions seems a worthy objective should the dischargers choose to renew the CEP or launch another effort to develop consensus TMDLs.