



April 21, 2008

Central Valley Regional Water Quality Control Board
Sacramento Main Office
11020 Sun Center Drive, #200
Rancho Cordova, CA 95670-6114

RE: Comments on the Proposed Methylmercury Basin Plan Amendment/TMDL for the Sacramento-San Joaquin River Delta Estuary.

Dear Chairman Longley, Vice Chair Hart, and Board Members Betancourt, Maki, Meraz, Mulholland, and Odenweller:

Clean Water Action, Baykeeper, and the Environmental Justice Coalition for Water, on behalf of our tens of thousands of California members, thank the Central Valley Regional Board for this opportunity to provide comments on the current version of the proposed methylmercury Basin Plan Amendment (BPA)/TMDL for the Delta. It is evident to us that the Regional Board Staff has exerted a great deal of energy and hard work in developing this plan. For instance, the TMDL Report is thoroughly researched, peer reviewed, and contains a well-considered and sophisticated analysis of mercury sources and fate within each of the Delta subareas. However, while we support a number of the aspects of this TMDL, we also have serious concerns. We offer the following comments and suggestions in the spirit of ensuring that we have the most comprehensive strategies and processes in place to truly address the mercury problem and protect our communities.

Our comments are based on our deep concern with the impacts of mercury, from both historical and contemporary sources, on wildlife and the environment as a whole, and the communities that depend on the Delta for a variety of benefits. Key among these benefits is fishing and our grassroots experience demonstrates that people in the region fish both for recreation and for basic subsistence as a result of cultural practices or economic need. We support these communities' fundamental right to fish and consume their catch, without risking their families' health and safety because of contamination. While we recognize that addressing the mercury problem in the Delta is complex, we believe that it is the responsibility of the Board to ensure that we do all we can to reduce methylmercury in the watershed in as rapid and complete a manner as possible. There is no longer any assimilative capacity for mercury and we must therefore seek to reduce levels at every opportunity.

Focus on Methylmercury—Protecting Subsistence Fishing Communities and Wildlife

We cannot overstate the importance of reducing methylmercury levels in order to protect the next generation of subsistence fishers, and we strongly support Staff's decision to focus on the bioaccumulative form of mercury in this TMDL. The plan does appropriately require that inorganic mercury is ultimately addressed as it can, given the correct circumstances, methylate and become

bioaccumulative. However, sufficiently reducing total mercury (inorganic and methylmercury) loads in the Delta will take many decades, while human subsistence fishers, as well as fish dependent wildlife are at risk now from mercury contamination. Consequently, actions to limit the amount of mercury being accumulated in fish tissue and moving up the food chain will be essential in protecting both wildlife and humans from exposure. While there is still much to be learned about methylation, research in this area is encouraging and pilot programs in other watersheds are showing positive initial results¹. Similar programs can and should be incorporated into the Delta TMDL as a means of reducing methylmercury loads and refining understanding of the methylation process.

Recommendation: We strongly recommend that the Board reject any proposal to renege on all of the work done to date to create this BPA as a methylmercury TMDL and to revise it to be a total mercury TMDL instead. We staunchly support the methylmercury focus of this TMDL and the recommendation to develop load allocations for both total mercury and methylmercury in the Delta as a means of protecting fishing communities in as expedient a manner as possible.

Fish Tissue Target—Not Protective of Subsistence Fishers

The purpose of the TMDL is to remediate the Delta in order to regain and protect its beneficial uses. The Clean Water Act does not condone only protecting a portion of these beneficial uses or only part of the population that takes advantage of them. Instead, the goal is to protect all populations that depend on a clean safe environment.

The staff recommendation to adopt of a fish tissue objective based on consumption of 32 grams/day (one meal a week) is not valid because it is based on averages taken over a large population and ignores the significance of variations of fish consumption within that population. While it is difficult to provide an exact number of subsistence fishers, or those who eat much more than one meal a week, our organizations work with populations with close cultural ties to fishing, and/or are disadvantaged and depend on fishing to provide nutritious food for their families. In addition, the Department of Public Health has interacted with a broad range of community groups who work with populations consuming high amounts of Delta caught fish. Given this reality, the BPA and TMDL need to consider the ethnic distribution of among the region's fishers, the cultural and economic motivations for subsistence fishing, the disproportional risk born by disadvantaged communities and vulnerable populations such as children and pregnant women, disparities in community health and healthcare, and the ultimate impacts that such health disparities have on the quality of life and economic prospects of disadvantaged communities. It is not acceptable, or defensible to set goals and implementation requirements that will not ensure, albeit over time, that the watershed will be restored for the benefit of *all* our communities.

Staff's Alternative 5, which is in line with the US Environmental Protection Agency's recommendation of a rate of 142.4 grams/day, would allow 4 to 5 meals a week of Delta fish. This is closer to actual fishing practices in many of the region's communities, and thus a far more appropriate fish tissue target for this TMDL. Furthermore, we disagree with Staff 's reasoning that a more protective goal "may not be achievable or reliably measured..." (BPA p. 23). Method detection limits for mercury have been lowered repeatedly over recent years, and they will no doubt continue to decrease over the 24-year period recommended for TMDL implementation. Most importantly, if the more protective fish tissue objective cannot be achieved now, but is most appropriate for the protection of public health, then it should be

¹ An example of such a pilot program would be that done by the Santa Clara Valley Water District related to methylmercury loads in local reservoirs in the Guadalupe River watershed.

adopted with the express purpose of promoting the maximum reductions in methylmercury and thereby improving health outcomes as much as possible.

Recommendation: The BPA should adopt a fish tissue objective that is protective of subsistence fishers and their families (Alternative 5). Furthermore, the proposed surveillance and monitoring program (BPA P. 18, BPA Report Section 4.3.4, p. 68) should tie the selection of monitoring locations as closely as possible to areas of subsistence fishing.²

Eight Year Study Period-Delays Known Opportunities to Reduce Loads

The BPA proposes two phases for implementation: 8 years of more study (Phase I), followed by 15 years of program implementation (Phase II). While we recognize the complexity of methylmercury control and the time involved with fully addressing 150 years of mercury pollution, such an implementation strategy does not in turn recognize the urgent need to begin reducing levels as our population continues to grow and our fishing communities are impacted. Instead, it seems to lean on scientific inquiry as a handy rationale for delaying needed action, rather than a genuine adaptive management approach, which would start methylmercury-control actions now based on the best available existing knowledge, and use the early results of those actions as the best guide to improving the control plan.

While some best management practices are expected to be implemented in the first 8 years to reduce mercury levels, there are no quantitative goals for specific sources to meet. It is therefore unclear to us how the effectiveness of such practices will be measured or how we will ensure that they are being implemented fully, if at all. More importantly, it is unclear on what Staff is basing the assumption that in 8 years we will have gained significantly more knowledge to establish specific actions, especially when the TMDL is already the result of years of study and analysis.

We do not support a phased approach that delays implementation and does not require measurable reductions in methyl and inorganic mercury over the next 8 years. The reality is that we will never know everything about mercury, methylation, or even the Delta itself. However, we do need to move forward as expeditiously as our knowledge at any given point will allow and there needs to be established, numeric goals to measure our progress, hold dischargers accountable, and ensure that all sources of both methyl and inorganic mercury are reducing their loads.

Staff does identify a number of control actions that can and should be incorporated into the TMDL for immediate implementation instead of delaying until 2016. These include:

- Stopping contaminated sediment from entering the Delta from such sources as the Cache Creek Settling Basin,
- Wetlands management, including in the Yolo Bypass, to reduce methylmercury production, and
- Constructing planned permanent barriers in the southern Delta to control sulfate concentrations which can affect methylation rates.

Other actions, that would combine immediate implementation with the need for further study, should be required in Phase I. In particular, agencies responsible for flood conveyance flows, water management and storage, and dredging should immediately evaluate and undertake actions which have the potential to

² CalFed's Fish Mercury Project, which has been providing essential information on mercury concentrations in fish in the Bay-Delta region, also provides a model for community involvement in deciding where monitoring should occur and what species are key in order to protect public health.

reduce methylmercury production, conduct characterization and control studies to evaluate those actions and identify any additional actions to reduce methylmercury production, and implement the additional actions without delay. Furthermore, this requirement should apply to ongoing operations of these agencies, rather than being triggered by new projects or operational changes and expansions (BPA, p. 10).

Recommendation: Methylmercury control actions, based on the best currently available information, should be incorporated into the TMDL and BPA now, with specific goals, evaluation requirements, and timelines. This includes ongoing operations of water agencies, in addition to new or expanded projects. The remediation plan should then be adapted as studies and evaluation measures provide more information over time.

Requiring Reductions from All Sources—Necessary Steps

As we have already said, there is no assimilative capacity in the Delta for further contributions of methylmercury, meaning that reductions will be needed from all sources, irrespective of the amount coming from any particular source. We therefore support the decision to incorporate allocations for in-Delta sources, including all wastewater treatment plants and municipal storm sewer systems that discharge to subareas not in attainment of the water-quality objective, in addition to allocations for tributary (streams) and other upstream sources that are seen as major contributors of methyl and inorganic mercury.

Evaluation and implementation of measures needed to achieve compliance with the water quality objective should be phased in immediately during Phase I rather than following the 8-year delay provided in the BPA (BPA, p. 7). In order to ensure that we achieve these reductions, we advocate that the following be incorporated into the TMDL requirements:

- Load reductions for MS4s (stormwater) during Phase I should be in line with reductions required for San Francisco Bay MS4s, rather than the TMDL's proposed "no change" policy of setting limits based on the 90th percentile of samples collected between 2000 and 2010 (BPA, p. 9).
- Any new wastewater facilities should be designed and constructed to meet the water quality objective or at least to provide state-of-the-art performance with regard to methylmercury discharges, rather than having a "floating" standard based on the first 12 months of operation, as is provided in the BPA (BPA, p. 7).

We would respectfully add that in evaluating the foreseeable methods by which NPDES-permitted wastewater treatment plants might comply with methylmercury allocations (BPA report, p. 82), the Board should consider that upgrades in treatment processes would also reduce discharges of pollutants other than methylmercury, and the benefits of such reductions should be taken into account when selecting a method of compliance. Such consideration also supports the cost effectiveness of such upgrades.

It is our understanding that the contributions of mercury from upstream sources, including any of the mines, dredge fields, and areas above dams that are either not completely preventing downstream mercury flows or that may be removed in the upcoming years will be addressed in separate TMDLs developed for specific tributaries. Once again, however, the Delta methylmercury TMDL should establish and stipulate what reductions are necessary from these sources in order to assure that we achieve water quality and fish tissue objectives. The Delta itself has been given such a load allocation in the San Francisco Bay TMDL, which means that its objectives must not only ensure the health of the Delta, but reduce its impacts on its downstream neighbor.

Recommendation: Because of the lack of assimilative capacity in the Delta, the TMDL should require evaluation and implementation of necessary measures to attain water quality standards in Phase I from all sources discharging into impaired subareas, including stormwater and wastewater facilities. New wastewater facilities should employ state of the art technology to meet water quality standards and treatment upgrades should be considered in light of their ability to reduce not only methylmercury, but other contaminants as well. Finally, this TMDL should include methyl and total mercury load allocations for upstream sources that will be addressed in other TMDLs.

Exposure Reduction Requirements—Need to Be Explicit

The TMDL does appropriately include the State Board’s language on exposure reduction (State Board Order 2005-0060). However, we are concerned that evaluation of programs to reduce exposure focuses primarily on risk communication, and not the development and implementation of *community driven* actions that reduce *actual* exposure by providing alternatives/options for fishers so that they can put food on the table and/or fulfill their cultural traditions. Furthermore, the list of potential actions in the BPA Report (p. 58) does not include potential actions which, in addition to reducing exposure, could also “mitigate health impacts to those people and communities most likely to be affected by mercury in Delta fish.” (State Board Order 2005-0060).

Recommendation: Reporting and evaluation requirements for permittees’ exposure reduction efforts should include activities related to the development and implementation of community driven programs that reduce actual exposure by providing options for those who, despite accurate information, continue to consume contaminated fish at unsafe levels for economic or cultural reasons. We further suggest that the last bullet listed should be amended to read:

“Coordination with affected communities to develop other risk management programs as needed, possibly including providing access to fish with less mercury or other protein sources and supporting or funding programs which address community health problems exacerbated by consumption of mercury in fish”.

Offsets—Prevent Disproportionate Impacts

While offsets are often seen by dischargers as an economically sound, and thus logical way to meet their permit requirements, they often resulted in at worst, additional pollution impacting local communities that are already over burdened and at best, a continuation of a status quo by which disadvantaged communities continue to be impacted by contamination and environmental degradation, while other more fortunate populations benefit from pollution reductions. Offsets can also create disincentives to do everything within reason to eradicate or aggressively reduce the production of pollution. For these reasons, offsets should be generally discouraged and pollution prevention activities and improved treatment technologies should be prioritized.³

We do recognize that there may be times when a discharger, particularly public agencies who do not generate pollution but who must deal with it from other original sources, cannot meet their permit requirements despite doing all that is currently possible. There may be benefits to then allowing them to

³ As discussed in the previous section, treatment technologies and the expense associated with them should be evaluated with the recognition that they can address multiple contaminant problems.

put resources toward addressing contamination elsewhere, so as to advance achieving water quality standards. However, offsets should only be allowed as a last resort if the discharger can demonstrate that they have done all they could to reduce their own load and with strict requirements to work with the impacted communities to identify an offset project that will benefit those that are most directly impacted.

Recommendation: The methylmercury TMDL would require public review and Board approval before dischargers could comply with their permits through offsets during Phase II. Such a structure should be fully incorporated earlier in Phase I with clear parameters outlined in the BPA that prioritize pollution prevention and reductions at the discharger's facilities. Furthermore, the offset should provide benefits and pollution relief for the community most directly impacted by the pollution being offset. Before gaining Board approval, dischargers should work with impacted communities to identify such benefits and projects.



Mercury, particularly methylmercury, poses a serious threat both to our human communities and the health and sustainability of our natural ecosystems. While we recognize that change will not occur overnight, we are also acutely aware that each child or pregnant woman who is exposed through their diet to high levels of mercury today is at risk and the impacts can be irreversible. For these reasons, the TMDL must:

- Be based on goals that will protect subsistence fishers who consume high levels of Delta caught fish (Alternative 5, allowing 4-5 meals a week),
- Be aggressive in staunching the bleeding of further mercury from all sources into the watershed, with particular focus on bioaccumulative methylmercury/
- Not allow for delay in taking actions that, based on our current understanding will both reduce overall mercury levels, and, in particular, methylmercury as a means of protecting fishing communities (instead, incorporate a true adaptive management structure to enable remediation strategies to be improved as new data come to light),
- Ensure that community based exposure reduction strategies are developed, implemented, and evaluated to ensure actions to reduce *actual* exposure and to mitigate health impacts, and
- Set stringent parameters on potential offset projects to make certain that pollution prevention and the discharger's load reduction is prioritized first, and that projects that are implemented as a last resort ensure that impacted communities realize benefits and pollution relief.

As organizations that prioritize our watersheds as well as the environmental health of our local communities, we have offered the recommendations contained herein in the spirit of working with the Board to strengthen the methylmercury TMDL. Please do not hesitate to contact us if you have any questions or if we can be of any assistance.

Sincerely,

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