



December 15, 2016
160361:EC



Jeanine Townsend, Clerk to the State Water Board
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-2000

via email only to: commentletters@waterboards.ca.gov

SUBJECT: COMMENT LETTER – BAY-DELTA PHASE II WORKING DRAFT SCIENCE REPORT

Dear Ms. Townsend:

The Sacramento Stormwater Quality Partnership (Partnership) appreciates this opportunity to provide comments on the October 2016 *Working Draft Scientific Basis Report for New and Revised Flow Requirements on the Sacramento River and Tributaries, Eastside Tributaries to the Delta, Delta Outflow, and Interior Delta Operations* (Working Draft Scientific Basis Report) prepared by the State Water Resources Control Board (State Water Board).

The Partnership is comprised of the County of Sacramento and the cities of Citrus Heights, Elk Grove, Folsom, Galt, Rancho Cordova, and Sacramento, which are co-Permittees of the general municipal separate storm sewer system (MS4) National Pollutant Discharge Elimination System permit (Order No. R5-2016-0040). The Partnership Stormwater Quality Improvement Program is more than twenty-five years old and protects local surface waters through implementation of key ongoing efforts, including new development standards and municipal programs. The Partnership is a technical advocate for surface water protection, including our participation in the Delta Regional Monitoring Program (RMP) and implementation of a comprehensive monitoring and assessment program to assess our program's effectiveness.

The Partnership's review of and comments on the Working Draft Scientific Basis Report are relevant to our stormwater management programs. The Partnership appreciates this opportunity to recommend specific minor improvements to the document that is well written, technically sound, and provides a good context for flow related impacts on the Delta. The Partnership has staff available to meet with State Water Board staff to discuss our programs and our comments provided in this letter, as needed.

GENERAL COMMENTS

The objective of the Working Draft Scientific Basis Report is to "support the update of the Bay-Delta Plan's protection of fish and wildlife beneficial uses in the Sacramento River watershed" related to the four categories of requirements that are flow or temperature based. The Working Draft Scientific Basis Report intends to identify the "best available science" supporting changes to the San Francisco Bay/Sacramento-San Joaquin Delta Estuary Water Quality Control Plan (Bay-Delta Plan).

We appreciate the statement within the Working Draft Scientific Basis Report that flow reductions can amplify the effects of “non-flow” stressors such as contaminants. We have suggested edits to Section 4.3 (Water Quality), which we believe will be helpful to clarify the following points:

- 1) Contaminants at low concentrations have not been demonstrated to have significant population level effects. However, generalized statements about “contaminants” can be confusing because of the varied and disperse sources, fate and transport, modes of action, and effects on “fish and wildlife” beneficial uses.
- 2) MS4 management programs for contaminants should be pragmatic such that feasibility of controls and the overall benefit to downstream water quality protection are priority considerations.
- 3) Improved processes for pesticide registration and use requirements by the Environmental Protection Agency (EPA) Office of Pesticide Programs (OPP) and the California Department of Pesticide Regulation (DPR) are the most effective means to protect water quality from pesticide related impacts. Pursuant to California Food and Agriculture Code Section 11501.1, MS4 agencies do not have authority to control the sale or private use of pesticides.

DETAILED COMMENTS

The following comments include recommendations for specific and minor revisions or clarifications related to the general comments.

- 1) Section 4.3, page 4-4

Contaminants are also affected by flows but are primarily discussed in this chapter.

While we support the intent of this statement, we recommend that additional clarification be added to provide clarity on the organization and objectives of the document.

Contaminants effects on fish and wildlife beneficial uses are also affected by flows but are primarily discussed in this chapter because any “non-flow” related effects could be amplified by flow reductions. However, these effects have not been demonstrated to have population level effects on their own. Magnitude amplification of effects under lower flows has also not been demonstrated and would result in constituent specific responses. Each contaminant may have different sources, degradation and transport through the system, and effects on fish and wildlife. While non-lethal effects on organisms can be assessed through laboratory studies, overall population effects can be difficult to discern from these isolated studies.

- 2) Section 4.3.1, page 4-4

Contaminants are introduced into Bay-Delta waterways by wastewater treatment works, agricultural and industrial discharges and urban storm water runoff.

There are a wide range of possible contaminant sources, and this section currently focuses on regulated sources. We request that the first introductory sentence be revised to better summarize all potential contaminant sources.

Contaminants are introduced into the Bay-Delta by ~~wastewater treatment works, agricultural and industrial discharges and urban storm water runoff~~ natural and anthropogenic sources. Several types of point and non-point discharges are regulated by the Water Boards through the Porter Cologne Water Quality Control Act and the Clean Water Act. These regulatory programs have substantially reduced “gross” pollution. When low-level concentrations are of concern, control programs should consider the feasibility of management programs to meet targets, relative contributions from sources, and the fate and transport of the contaminants of concern between the sources and locations of impairment.

3) Section 4.3.1, page 4-4

Some contaminants may also enter public drinking water sources and bioaccumulate in edible fish tissue to become a human health concern (Davis et al. 2013).

The cited reference is a study evaluating the human health impacts of fish consumption, primarily related to methylmercury. The sentence is not entirely supported by the Davis, *et al* 2013 reference and expands the conclusions of that work. We request the following revisions:

Some contaminants may also enter public drinking water sources and bioaccumulate in edible fish tissue and could reach unsafe consumption levels for humans or other species. to become a human health concern. Methylmercury has been found above safe consumption levels in certain species and certain locations in the San Francisco Bay, Delta, and other locations in California (Davis et al. 2013).

4) Section 4.3.1, page 4-4

The Central Valley and San Francisco Bay Regional Water Quality Control Boards and State Water Board have various efforts underway to address these and other contaminants. These efforts are complimentary to the State Water Board’s efforts to update the Bay-Delta Plan.

We appreciate this key point that there are existing regulatory programs that are significantly addressing water quality issues. It is helpful to clearly state that these efforts are sufficient to address water quality concerns not related to Delta flows.

The Central Valley and San Francisco Bay Regional Water Quality Control Boards and State Water Board have various efforts underway to address these and other contaminants. These efforts are complimentary supported by to the State Water Board’s efforts to and are sufficient without additional changes to update the Bay-Delta Plan.

5) Section 4.3.1.1, page 4-5 to 4-6

*Urban runoff samples collected in Sacramento, Stockton and Vacaville have been found to contain pyrethroid insecticides and caused death or reduced swimming ability to the amphipod *Hyaella azteca* in bioassays (Werner et al. 2010a). Wastewater effluent samples were also found to contain quantifiable concentrations of pyrethroids, suggesting that significant loading of pyrethroids may occur from wastewater treatment*

facilities (Weston and Lydy 2010). A pyrethroid pesticide control program for Central Valley Rivers and the Delta is being developed by the California Regional Water Quality Control Board, Central Valley Region.

The Partnership appreciates the inclusion of this summary of a current statewide issue for MS4 agencies. We recommend noting that studies have not identified direct pesticide related pelagic organism toxicity and that pesticide related toxicity will be managed in great part through implementation of the State Water Board's STORM Project 6a. We recommend the following minor edits:

Urban runoff samples collected statewide, including in Sacramento, Stockton, and Vacaville ~~have been found to~~ contained pyrethroid insecticides and caused death or reduced swimming ability to the amphipod *Hyaella azteca* in bioassays (Werner et al. 2010a). Wastewater effluent samples were also found to contain quantifiable concentrations of pyrethroids, suggesting that ~~significant~~ non-negligible loading of pyrethroids may occur from wastewater treatment facilities (Weston and Lydy 2010). These studies have not identified direct mortality effects on pelagic organisms and were not designed to evaluate population level effects. A pyrethroid pesticide control program for Central Valley Rivers and the Delta is being developed by the California Regional Water Quality Control Board, Central Valley Region. The State Water Board has also initiated an effort to develop the Statewide Framework for Urban Pesticide Reduction (STORMS Project 6a).

6) Section 4.3.1.3, page 4-7

Additional sources of NH₄ to the Delta include agricultural and urban runoff, atmospheric deposition and internal nutrient cycling (Novick and Senn 2013).

The Novick and Senn (2013) study only evaluates source contributions within the San Francisco Bay, and does not evaluate sources from the larger upstream Delta watershed. The Central Valley Regional Water Quality Control Board Drinking Water Policy Workgroup developed conceptual and computational models of source loading to the Delta¹ that demonstrate different source loading patterns than in the San Francisco Bay. We request the following clarifying changes:

Additional sources of NH₄ directly to the San Francisco Bay Delta include agricultural and urban runoff, atmospheric deposition and internal nutrient cycling (Novick and Senn 2013). Modeling evaluations of the upstream Delta NH₄ sources suggest different relative contributions from these anthropogenic and natural sources (Central Valley Drinking Water Policy Workgroup, 2012) than in the San Francisco Bay, likely due to different land use area distributions.

¹ Central Valley Drinking Water Policy Workgroup. *Synthesis Report*. February 21, 2012. http://www.waterboards.ca.gov/centralvalley/water_issues/drinking_water_policy/dwp_wrkgrp_synthesis_rpt.pdf

7) Section 4.3.1.6, page 4-8

The San Francisco Bay and Central Valley Regional Water Quality Control Boards adopted mercury TMDL control programs for San Francisco Bay and the Delta.

This section does not clearly state that the TMDL control programs will only, at best, remove a small fraction for the methylmercury load and that there are significant relationships between water management and the production and release of methylmercury (“open water sediment flux” and “wetlands sediment flux”) in the Delta sources². We recommend the following addition:

The San Francisco Bay and Central Valley Regional Water Quality Control Boards adopted mercury TMDL control programs for San Francisco Bay and the Delta. Generally, these TMDLs identified legacy mining activities as the primary source of methylmercury, but also include control programs for regulated sources. The Delta TMDL identified “open water sediment flux”, “wetlands sediment flux”, and “upstream tributaries” as the most significant sources of methylmercury to the Delta.

In closing, we appreciate the State Water Board’s efforts to develop this draft document and the opportunity to provide these comments. Partnership staff are available to meet with State Water Board staff to further discuss these comments, including the coordination of STORMS Project 6a and other Central Valley pesticide control and stormwater management programs. Please contact Dave Tamayo (916-874-8024) or Elissa Callman (916-808-1424) with questions on these comments.

Yours truly,



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cc:

Chris Fallbeck, City of Citrus Heights
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Bill Forrest, City of Galt
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² Regional Water Quality Control Board Central Valley Region. *Sacramento – San Joaquin Delta Estuary TMDL for Methylmercury Staff Report.*