



February 17, 2017

Jeanine Townsend, Clerk to the Board State Water Resources Control Board  
1001 I Street, 24th Floor  
Sacramento, CA 95814

Via email: [commentletters@waterboards.ca.gov](mailto:commentletters@waterboards.ca.gov)

**Subject: Comment Letter -- Beneficial Uses and Mercury Objectives**

Dear Ms. Townsend

On behalf of the Bay Area Clean Water Agencies (BACWA), we thank the State Water Resources Control Board (State Water Board) for the opportunity to comment on the Proposed Part 2 of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California—Tribal and Subsistence Fishing Beneficial Uses and Mercury Provisions (Beneficial Uses and Mercury Provisions). BACWA is a joint powers agency whose members own and operate publicly-owned treatment works (POTWs) and sanitary sewer systems that collectively provide sanitary services to over 7.1 million people in the nine-county San Francisco Bay (SF Bay) Area. BACWA members are public agencies, governed by elected officials and managed by professionals who protect the environment and public health. Our member agencies are proud of the work we've been doing to reduce mercury discharges through traditional pretreatment controls and innovative pollution prevention strategies.

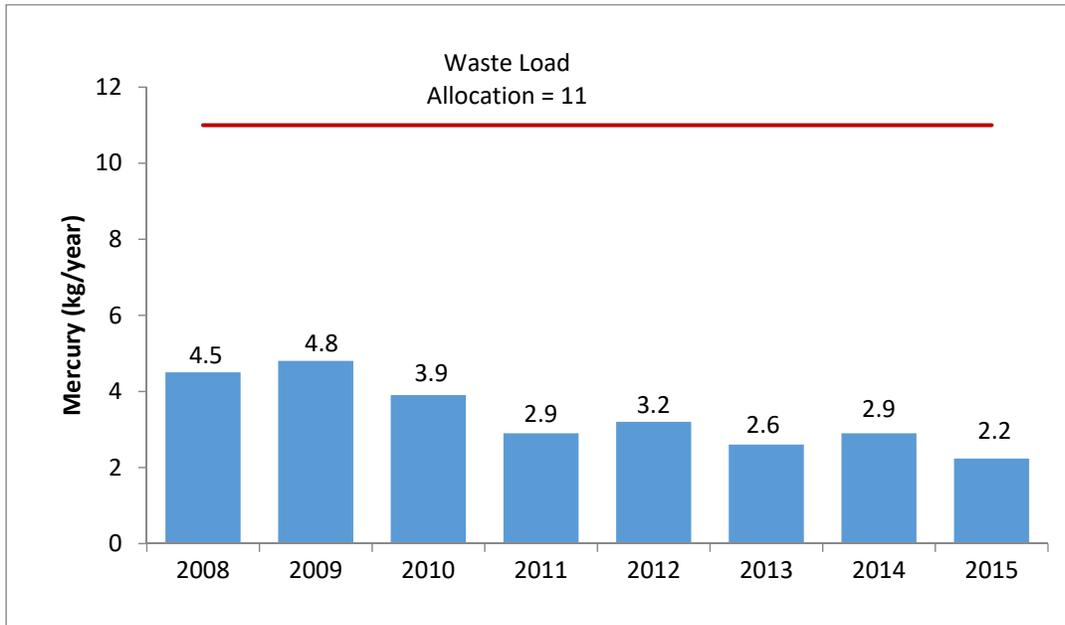
BACWA supports the protection of tribal and subsistence uses. However, we are concerned that implementation requirements for tribal and subsistence beneficial uses will be both onerous and ineffective. As summarized below, most mercury loading to San Francisco Bay and much of Northern California is legacy pollution from the California Gold rush. Decades of mercury source reduction in the modern economy have succeeded in reducing public wastewater treatment facilities to *de minimis* sources, at best. Meanwhile, mercury concentrations in fish tissue over the same period have not measurably dropped. It will serve no constructive purpose to establish a water quality goal and implementation plan that cannot succeed.

Total mercury loads to the San Francisco Bay are about 920 kg/year, per SFEI's 2015 estimate, and as reported in their Multi-Year Synthesis Report<sup>1</sup>. Bay Area POTWs have decreased their aggregate loads from 4.5 kg/yr in 2008 to 2.2 kg/yr in 2015 through the implementation of a very successful mercury TMDL, as shown in Figure 1, below. We've achieved these reductions

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<sup>1</sup> *Sources, Pathways and Loadings: Multi-Year Synthesis with a Focus on PCBs and Hg*. Prepared by McKee L.J, A.N. Gilbreath, J. A. Hunt, J. Wu, and D. Yee. San Francisco Estuary Institute, Richmond, California. December 15, 2015.

largely by the implementation of very successful dental amalgam programs, mercury reduction in hospitals, thermometer exchange programs and many other examples.

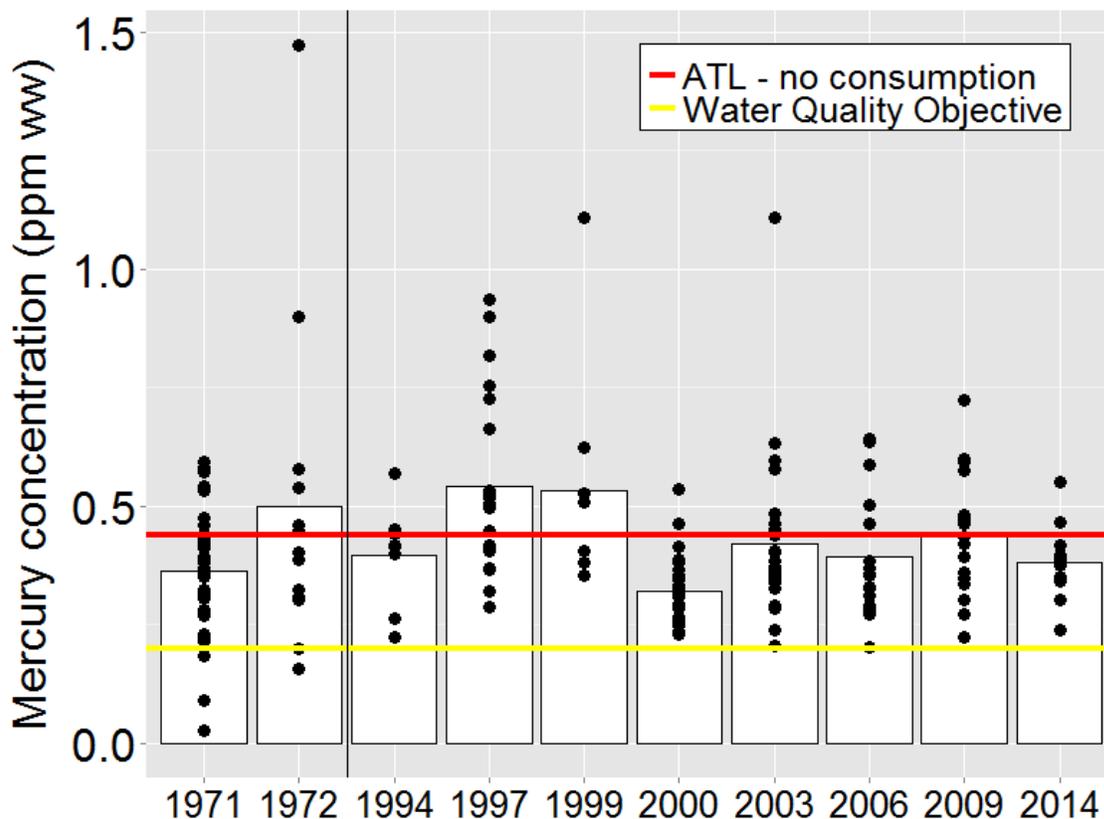


**Figure 1. Aggregate loads of mercury from municipal POTWs from 2008 to 2015, as reported to the San Francisco Bay Regional Water Quality Control Board.**

Mercury concentrations in rivers draining old mining watersheds near San Jose range from several hundred to tens of thousands of nanograms per liter<sup>1</sup>. In contrast, Hg concentrations in wastewater effluent range from 1 to fifteen nanograms per liter<sup>2</sup>. While BACWA agencies have reduced their inputs of mercury to the Bay more than ten-fold in the last 50 years, concentrations in Bay fish remains the same, as shown in Figure 2, below<sup>3</sup>. Even if our member agencies were to cease discharge altogether, concentrations of mercury in fish tissues will not decline any faster, due to the enormous reservoir of mercury-containing sediments already in the Bay and the legacy mining sources upstream. Setting water quality-based effluent limits that do not differentiate between significant and insignificant sources will be tremendously costly and will not have any positive impact on achieving mercury reductions in fish tissues.

<sup>2</sup> Per POTW Reporting via the San Francisco Bay Mercury and PCB Watershed Permit

<sup>3</sup> *Contaminant Concentrations in Fish from San Francisco Bay, 2014. SFEI Contribution #806.*, Sun, J., J.A. Davis, S. N. Bezael, J.R.M. Ross, A. Wong, R. Fairey, A. Bonnema, D.B. Crane, R. Grace, R. Mayfield, and J. Hobbs. 2017. Regional Monitoring Program for Water Quality in San Francisco Bay, Richmond, CA. *In preparation.*



**Figure 2. Mercury concentrations (ppm ww) in striped bass from San Francisco Bay, 1971-2014 (draft data).** Bars indicate average concentrations. Points represent individual fish, with the exception of six composite samples (3 fish each) analyzed in 2014. To correct for variation in fish length, all plotted data have been calculated for a 60-cm fish using the residuals of a length vs. log (Hg) relationship calculated for each year. Total length for composites was calculated as the average total length of the individual fish in each composite. The 2014 relationship and data do not include fish collected in Artesian Slough, which reflect unique mercury sources and were collected in 2015. Data were obtained from CDFW historical records (1971-1972), the Bay Protection and Toxic Cleanup Program (1994), a CalFed-funded collaborative study (1999 and 2000), and the Regional Monitoring Program (1997, 2000, 2003, 2006, 2009, and 2014). No statistically significant long-term trend was observed (linear regression:  $p=0.08$ ,  $R^2=0.01$ )

While BACWA appreciates that the implementation requirements in the staff report explicitly carve out existing TMDLs, our members are concerned that these new beneficial uses may have the unintended consequence of forcing a reopening of the SF Bay Mercury TMDL. Very few of our members would be able to meet the extremely low water quality-based effluent limits that would be calculated from water quality objectives associated with the new beneficial uses. Even with advanced treatment, there is no guarantee that agencies would be able to achieve mercury concentrations below 1 ng/L since most agencies have already optimized their pollution prevention alternatives under the current TMDL. In response to such low effluent limits, agencies would also need to stop accepting reverse osmosis concentrate from current and future water recycling projects, since this by-product will increase the mercury concentrations in POTW effluent, although it would not increase loads to the Bay.

BACWA is concerned that by adopting the proposed provisions, the Water Board may be making a decision that would unintentionally lead to the reallocation of resources away from more pressing issues (e.g. such as repairing aging infrastructure to control SSOs, preparing for

sea level rise, studying effects of nutrients and potential technologies for reducing nutrient loads, and planning resource recovery projects) to efforts focused on controlling mercury to levels that would have a negligible effect on water quality in the SF Bay ecosystem. While it may be possible to implement regulatory “fixes” to avoid these unintended consequences such as variances, BACWA believes that the State Water Board shares our goal to get the regulation right from the get-go.

BACWA is further concerned that State Water Board has not provided analysis of other constituents, such as selenium or PCBs that may be impacted by the proposed Beneficial Uses. Additionally, if the Tribal Cultural Beneficial Use is interpreted to include fish quantity, there may be significant unintended regulatory consequences that limit water recycling in the future, if a recycled water project reduces freshwater inputs into water bodies.

BACWA supports the comments provided by the Summit Partners, including recommendations on language for a State Water Board adoption resolution. We hope these changes will be incorporated to the proposed Beneficial Uses and Mercury Provisions, so that the implementation requirements do not unfairly burden insignificant sources of mercury such as POTWs, but will be targeted towards actions that would have a meaningful impact in reducing mercury in the water environment.

Please let us know if you would like to discuss our comments and recommendations in more detail.

Respectfully Submitted,



David R. Williams  
Executive Director  
Bay Area Clean Water Agencies

cc: BACWA Executive Board  
Tom Mumley, San Francisco Bay Regional Water Quality Control Board  
Eric Dunlavey, Permits Committee Chair  
Christian Dembiczak, Permits Committee Vice-Chair