

# County of Santa Clara

Parks and Recreation Department

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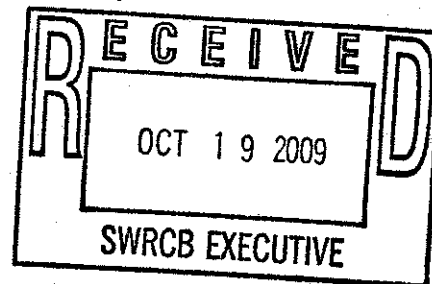
Public Comment  
Guadalupe River Watershed  
Deadline: 10/19/09 by 12 noon



October 16, 2009

Sent by Fax and U.S. Mail

Ms. Jeanine Townsend, Clerk  
State Water Resources Control Board  
P.O. Box 100  
Sacramento, CA 95812-0100



Fax: (916) 341-5621

**Subject:** *Comments on: Amendment to the Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) to Establish New Water Quality Objectives, Total Maximum Daily Loads (TMDLs), and an Implementation Plan, and to Vacate an Existing Water Quality Objective, for Mercury in the Guadalupe River Watershed*

Honorable Members of the State Water Resources Control Board:

The County of Santa Clara, Parks and Recreation Department, offers the enclosed comments on the above-referenced proposed action.

Over the past two decades, the County has undertaken remediation efforts directed to the elimination or control of mercury mining waste at multiple locations within the Almaden Quicksilver County Park at great public expense, and with the firm belief that the expenditure is warranted by the benefit to public health and affected aquatic ecosystems. With the same objectives in mind, the County proffers these comments.

The County strongly supports the establishment of a consistent regional program based on supported scientific evidence and achievable schedules. The County has been actively monitoring the research conducted by the San Francisco Bay and Central Valley Regional Water Quality Control Boards (Regional Boards) with respect to setting mercury total maximum daily load (TMDL) standards for many tributary water bodies of the San Francisco Bay Estuary. Of central concern to the County has been the limited technical understanding of the processes affecting mercury methylation and bioaccumulation – an understanding critical to the development of cost effective mercury management programs for such a diverse and complex natural system as the Bay and its tributaries.



Board of Supervisors: Donald F. Gage, George Shirakawa, Dave Cortese, Ken Yeager, Liz Kniss  
County Executive: Jeffrey V. Smith

### Concern: Data Lacking to Support Correlation between Sediment Mercury and Bioaccumulation

While the staff report and proposed Guadalupe River Watershed Basin Plan Amendment (BPA) document substantial efforts to collect and analyze soil, sediment, surface water and fish tissue sampling data throughout the Bay Area, there continues to be a dearth of technical understanding regarding effective mercury and methylmercury management actions. This is an overarching concern of the County. In particular, the proposed BPA still lacks a technical justification for its central management approach, which is premised on the notion that a reduction in the concentrations of total mercury in erodible soil and sediment will result in a reduction in the levels of methylmercury in fish tissue to (see Staff Report pp 6-8). It is not surprising that the staff report cannot provide technical support for a connection between mercury levels in sediment and fish, given the complex and site-specific processes that can cause sediment mercury to dissolve, become methylated, and magnified through the aquatic food chain into fish. Unfortunately it is also true that without such a data connection, there is no basis to conclude that reduction of mercury in erodible soil and sediment under the proposed TMDL and BPA would reduce mercury fish tissue concentrations.

We acknowledge that the State Water Resources Board may rationally opt for addressing erodible soils as part of a multi-prong approach to reducing mercury loading into the Bay. However, the Regional Board's focus on that standard given the absence of a demonstrated connection with reduction in fish tissue concentrations, is particularly troubling where, as in the New Almaden Quicksilver mining district, most of the significant concentrations of calcines – mercury mining waste – have already been addressed through remediation carried out under State oversight. If the Regional Board's objective is to first address the "low hanging fruit" represented by existing mining waste, that effort has already largely occurred in the Guadalupe River watershed. We advocate that the State adopt a regionally consistent approach for the TMDLs being established for the Bay, evaluating all of the potential solutions for addressing the loading issue. Specifically, the County recommends that the State take an approach for the Guadalupe BPA similar to that proposed for the Delta Estuary BPA.

The County has analyzed the proposed Delta BPA because the Delta Estuary and Guadalupe River watersheds present similar contamination issues. While the loading sources, and techniques and standards to address the problem areas may differ between the two BPAs, the approach taken in Delta BPA appears more appropriate to the situation in the Guadalupe River watershed and for the sake of consistency should be included in the Guadalupe BPA.

### Recommendation: Phased Approach

The proposed Delta Estuary BPA acknowledges that a phased approach is needed to identify and remediate the main culprits for contamination and bioaccumulation. This approach is further supported by the U.S. Environmental Protection Agency (USEPA). According to the USEPA's 1991 document, "Guidance for Water Quality-Based Decisions: The TMDL Process" (EPA 440/4-91-001), "...if there are not adequate data and predictive tools to characterize and analyze the pollution problem with a known level of uncertainty, a phased approach may be necessary." Similar to the Delta, the Guadalupe River Watershed is quite complex and although much analysis has already been conducted, the County recommends additional analyses to arrive

at an appropriate mercury standard for naturally mineralized areas, and to identify and implement the most effective methods for managing sediment deposition into the watershed.

Under the Bay Regional Board's proposed TMDL Implementation Plan, a proposed 0.2 ppm standard for mercury in erodible soils is established throughout the watershed, with the County required to study erosion of mercury waste into the watershed, recommend methods to stop such erosion, and presumably implement erosion control measures in order to meet that numeric limit within the first ten years of the Plan. Ten years and millions of dollars later, we may eventually determine if controlling erosion with a numeric limit in this fashion, was an effective approach.

Under the phased approach adopted by the Central Valley Board, the first Phase of the TMDL implementation would involve field investigations of mercury in soil and sediment within the park, and integration of that research with other studies of the factors that may contribute to the methylation and bioaccumulation of mercury in fish. At that point the County would then propose focused efforts to reduce mercury loading in the Guadalupe watershed. Ongoing monitoring of efficacy of actions taken to reduce mercury bioaccumulation and loading of bioavailable mercury will provide for an appropriate adaptive management program for controlling mercury containing soils and naturally occurring mercury sediments within the park.

Recommendation: Flexibility for Adjusting Sediment Mercury Limits in Mineralized Areas

Almaden Quicksilver County Park is located in an area that has a high concentration of naturally occurring sediment mercury, as well as the rare serpentine habitat. It is not reasonable to set the same sediment mercury standards for mineralized (deposits containing naturally occurring sediment mercury) and non-mineralized areas. Indeed, those differences between mineralized versus non-mineralized areas represent the difficulty inherent in the "one size fits all" 0.2 ppm sediment approach proposed in the Guadalupe BPA. The proposed 0.2 ppm erodible soil standard could require elimination or armoring of large areas of natural soils within the park, at great cost in monetary terms, as well great ecological damage<sup>1</sup>.

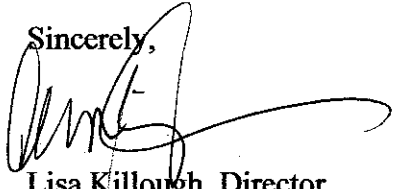
One size does not fit all, as, indeed, the Bay Regional Board itself recognized in its Walker Creek mercury TMDL, applying a 5 mg-Hg /Kg suspended sediment associated with the Gambonini mercury mine and a 0.5 mg-Hg/Kg of suspended sediment for other areas, rather than the 0.2 mg-Hg/Kg standard applied to "background" areas. Likewise, the Delta BPA acknowledges the differences between mineralized and non-mineralized areas and proposes to allow a higher concentration of sediment mercury in mineralized areas than non-mineralized areas. The County recommends a parallel, consistent regional approach, and allow the County to conduct a study to determine the appropriate limit for sediment mercury in the park.

To reiterate, the County supports the need to address mercury contamination affecting the Guadalupe River watershed. In the same spirit, we offer these comments with the sincere desire of attaining an effective and consistent regional approach that will ultimately benefit the watershed and San Francisco Bay.

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<sup>1</sup> The rare serpentine soils and related ecology, found at many locations within the County including Almaden Quicksilver County Park, provide critical habitat for such endangered species as the Bay Checkerspot Butterfly. These areas are likely to be disturbed by steps required under the proposed Guadalupe TMDL.

Sincerely,

A handwritten signature in black ink, appearing to read 'Lisa Killough', with a long, sweeping horizontal flourish extending to the right.

Lisa Killough, Director  
Santa Clara County Parks and Recreation Department

c: Gerald F. George, Pillsbury Winthrop Shaw Pittman  
Katherine Harasz, Deputy County Counsel  
Sylvia Gallegos, Deputy County Executive