Appendix A

Resolution
and Staff Report

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

TENTATIVE RESOLUTION R2-2009-00XX

RECOMMENDING CHANGES TO THE LIST OF WATER BODIES AS REQUIRED IN SECTION 303(d) OF THE CLEAN WATER ACT

WHEREAS, the California Regional Water Quality Control Board, San Francisco Bay Region (Water Board), finds that:

1. Section 305(b) of the federal Clean Water Act requires the State to prepare a biennial update of an assessment of the waters within the State; and

2. Section 303(d) of the federal Clean Water Act requires the State to identify waters within the State for which water quality standards are not attained; and

3. The Water Board actively solicited water quality information from the public on December 4, 2006, and received 16 data and information submittals; and

4. Water Board staff assembled and considered all readily available data to assess water quality conditions and prepared fact sheets supporting recommendations for additions, deletions and changes to the existing list of impaired water bodies consistent with the Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List (Listing Policy); and

5. Water Board staff provided advanced notice and opportunity for public comment on the draft recommendations for public review during a 45-day public comment period commencing on October 30, 2008; and

6. Water Board staff developed written responses to all public comments received and revised the supporting staff report and water body fact sheets for the Water Board's consideration; and

7. The Listing Policy requires that the Water Board consider and approve each proposed list change as documented in a water body fact sheet; and

8. On January 14, 2009, the Water Board held a public hearing to consider the recommendations to change the 303(d) list; and

9. On February 11, 2009, the Water Board held a second public hearing to consider all testimony and comments, both oral and written, regarding the 2008 Water Quality Assessment and 303(d) list for the San Francisco Bay Region.

THEREFORE, BE IT RESOLVED that the Water Board approves each proposed 303(d) list addition, deletion or change as documented in the attached Staff Report.

BE IT FURTHER RESOLVED that the Water Board, in fulfillment of the requirements described in Sections 305(b) and 303(d) of the federal Clean Water Act, hereby authorizes the Executive Officer to transmit the Water Board's assessment, including recommended modifications to the section 303(d) list, as detailed in the attached Staff Report dated February 11, 2009, and associated water body Fact Sheets to the State Water Resources Control Board for approval of the 303(d) list and inclusion in the 2008 California Integrated Report on Water Quality.

I, Bruce H. Wolfe, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of a Resolution adopted by the Water Board, San Francisco Bay Region, on February 11, 2009.

_____

BRUCE H. WOLFE
Executive Officer

Attachment: Staff Report dated February 11, 2009, Evaluation of Water Quality Conditions for the San Francisco Bay Region - Proposed Revisions to Section 303(d) List

STAFF REPORT

EVALUATION OF WATER QUALITY CONDITIONS FOR THE SAN FRANCISCO BAY REGION

PROPOSED REVISIONS TO SECTION 303(d) LIST

February 2009

San Francisco Bay Regional
Water Quality Control Board

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1 Introduction

One of the San Francisco Bay Water Board's functions is to evaluate the water quality condition of waters in the San Francisco Bay Region. To accomplish this goal, staff gathers and evaluates data that are the basis of its water quality assessments. This staff report presents the results of staff's review and consideration of the available water quality data for the Region, including data submitted by the public. One important outcome of the assessment process is the identification of water bodies that are being proposed for inclusion on the list of impaired water bodies. Under federal Clean Water Act (CWA) regulations, the State is required every two years to report to the U.S. EPA on the status of water quality in the State (Section 305(b) water quality assessment), and provide a list of impaired water bodies (Section 303(d) list). Impaired water bodies are those where water quality standards are not met or expected to be met after implementation of technology based requirements of the CWA.

The 303(d) list of impaired waters must include a description of the pollutants causing the violation of water quality standards. As defined in CWA and federal regulations, water quality standards include the designated uses of a water body, the adopted water quality criteria, and the State's antidegradation policy. For water quality limited segments included on the 303(d) list, the State is required to develop a Total Maximum Daily Load (TMDL) to address the impairment. A TMDL is defined as the "sum of the individual waste load allocations for point sources and load allocations for non-point sources and natural background" (40 CFR130.2) such that the capacity of the water body to assimilate pollutant loadings (the loading capacity) is not exceeded. The federal requirement for setting priorities on which TMDLs will be developed is addressed in the State Board's *2004 Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List* (Listing Policy) by the establishment of schedules for TMDL development.

The last review of the 303(d) list and update occurred in 2006. The review was based on the Listing Policy developed in 2004. For the 2008 update, the Water Board is considering for approval, recommendations on the conditions of waters in the Region, applying the Listing Policy in the process.

This staff report presents the current status of water quality in the San Francisco Bay Region for water bodies with readily available data, and identifies the methods and data used to evaluate water quality status. The report identifies the proposed additions, deletions, and changes to the 2006 303(d) list. The water quality assessments also result in the identification of water bodies where water quality standards are met or where not enough information is available to accurately assess water quality. The results of the water quality assessments are compiled into a statewide integrated report referred to as the 303(d)/305(b) Integrated Report (Integrated Report) by the State Board.

The State Board will include the Water Boards' listing/delisting recommendations in its preparation of the statewide 303(d) list for submission to the U.S. EPA. The statewide 303(d) list will be part of the Integrated Report. The State Board's deliberative process will be conducted in 2009.

Appendix A of this staff report includes the public solicitation letters requesting that the public submit any and all available data to support the assessment of water quality in the Region. Appendix B provides a summary of the data received from the public and an assessment of data quality. Appendix C refers to the Fact Sheets supporting the 303(d) list change recommendations The Fact Sheets are available online at http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/TMDLs/303dlist.shtml

Fact Sheets showing water bodies that support at least some beneficial uses, water bodies not listed due to insufficient information and revisions to the 2006 303(d) list are also available for viewing by following the link above.

2 Listing Policy and Evaluation Criteria

The proposed 2008 303(d) list of impaired water bodies in the San Francisco Bay Region was developed in accordance with the Listing Policy (SWRCB 2004). The Listing Policy establishes a standardized approach for developing California's section 303(d) list. It outlines an approach that provides the rules for making listing decisions based upon different kinds of data and establishes a systematic framework for statistical analysis of water quality data. The Listing Policy also establishes requirements for data quality, data quantity, and administration of the listing process. Decision rules for listing and delisting are provided for: chemical-specific water quality standards; bacterial water quality standards; health advisories; bioaccumulation of chemicals in aquatic life tissues; nuisances such as trash, odor, and foam; nutrients; water and sediment toxicity; adverse biological response; and degradation of aquatic life populations and communities.

Listing and delisting decisions were made in accordance with the Listing Policy, using all applicable narrative and numeric water quality criteria contained in the San Francisco Bay Basin Plan and in the California and National Toxic Rules. The Listing Policy specifies the frequency of exceedance of applicable water quality objectives that is necessary to make a determination that the water is impaired. When applying narrative water quality criteria, staff used guidelines developed by the U.S. EPA and other government agencies together with findings published in the scientific peer-reviewed literature to interpret data and evaluate the water quality conditions.

3 Information Received and Analyzed

3.1 Data solicitation

Federal regulation [(40 CFR § 130.7(b)(5)] states that "Each State shall assemble and evaluate all existing and readily available water quality-related data and information" when developing the 303(d) list. In December 2006, Water Board staff solicited the public to submit any and all water quality data to be considered in preparation of the 2008 303(d) list and 305(b) report.

This solicitation established a data submittal deadline of February 28, 2007. On January 30, 2007, staff transmitted a notice clarifying that there were no limits on the type or format of data and information that the public could provide to the Water Boards for their assessment. The notices provided to the public can be found in Appendix A of this report.

Appendix B contains a summary of the data and information submitted to the Water Board for consideration in the 2008 303(d) listing process. We received 15 submissions in response to the data solicitation, including multiple requests to list water bodies, two requests to delist and/or not to list water bodies as well as data sets without any accompanying request to list or delist. Water Board staff evaluated the submitted data in accordance with the Listing Policy, taking into account spatial and temporal representativeness and quality (Appendix B). The submissions and listing requests covered four major categories of pollutants and stressors including (1) trash; (2) general water quality parameters such as dissolved oxygen and temperature; (3) nutrients and biostimulatory substances; and (4) suspended solids, sedimentation /siltation.

3.2 Data analysis and recommendations

The assessment process began by identifying and compiling all readily available water quality data as described above. Then, staff systematically reviewed these data sets. Due to the relatively limited number of data sets identified through the solicitation process, much of the effort focused on reviewing the available data collected by the Surface Water Ambient Monitoring Program (SWAMP) and the Regional Monitoring Program (RMP). Staff also developed an approach for interpreting the photographic and narrative documentation for trash relative to applicable water quality standards, consistent with the Listing Policy. In addition, beach water quality data collected by county health departments and stored in the State Board Beach Water Quality Database were evaluated to determine whether the most recently collected data would result in new listing or de-listing decisions for our Region. No changes to the 2006 303(d) list were identified.

The SWAMP data include field surveys of water column chemistry, sediment chemistry, sediment toxicity, and water toxicity data as well as ancillary data on factors such as flows, biological community and physical habitat indicators. SWAMP was designed to provide information necessary to effectively manage the State's water resources and, subsequently, facilitate assessment of water quality under sections 305(b) and 303(d) of the Clean Water Act. Objectives of SWAMP include: (1) assessing the physical, chemical, and biological condition of water bodies in each region in order to determine if water bodies are impaired and beneficial uses are being protected; (2) generating data and information during different seasonal conditions; and (3) generating data and information that is somewhat evenly distributed across a water body to provide a screening level assessment of water quality. These objectives ensure that the SWAMP data meet all quality requirements of the Listing Policy.

For the purpose of analyzing the data and developing the proposed revisions to the 303(d) list, the Listing Policy recommends a "line of evidence" approach to establish both whether a water body is impaired and what pollutant is causing the impairment. The lines of evidence in support

of listing and/or delisting decisions for each affected water body are summarized in a water body-specific fact sheet. Fact sheets were developed for each water body for which sufficient data were available to evaluate during the review.

3.2.1 SWAMP data evaluation

Over the 5-year period (2001 – 2005) SWAMP conducted water quality monitoring in 37 watersheds in the Region (SFBRWQCB 2007c, 2007d). Data were collected at multiple locations within each water body over three hydrologic cycles including the wet season (January through March), the spring/decreasing flow season (April through May) and the dry season (June through October). Altogether data from over 190 sampling locations were evaluated. Selected sites in each water body were sampled to determine benthic macroinvertebrate assemblages, temperature, dissolved oxygen, nutrients, trace metals, trace organic compounds, toxicity, and coliforms. Temporal variability in basic water quality (temperature, dissolved oxygen (DO), pH, and specific conductance) was determined by continuous deployment of field measurement devices. These continuous deployments typically lasted one to two weeks and were conducted three to four times per year. Water, sediment and tissue samples that were collected were analyzed to determine concentrations of more than 230 constituents.

The first step of the water quality assessment involved screening all the data against the available water quality criteria and guidelines. For pollutants with applicable numeric water quality criteria, the impairment status was evaluated by comparing the concentration data with existing water and sediment objectives and standards contained chiefly in the San Francisco Bay Basin Plan, California and National Toxic Rules and U.S. EPA guidelines. When only narrative water quality objectives existed, staff identified evaluation guidelines protective of the beneficial use and specified the conditions above which impacts were minimal. Table 1 and Table 2 show a complete list of numeric criteria and evaluation guidelines used in this assessment.

Table 1: Water quality thresholds for 303(d) data screening of freshwater creeks for selected beneficial uses including aquatic life, municipal and domestic supply (MUN), agricultural supply (AGR) and water contact recreation (REC1)

Analyte	*Description of Standard*	*Numeric Limit*	*Units*	*Reference*
Field measures				
Temperature	Maximum, salmonid	24	° C	USEPA, 1977
	7-day mean, coho	14.8	° C	Sullivan *et al.*, 2000
	7-day mean, steelhead	17	° C	Sullivan *et al.*, 2000
Oxygen, dissolved	Minimum, warmwater	5	mg/L	Basin Plan, 2007b
	Minimum, coldwater	7	mg/L	Basin Plan, 2007b
pH	Range	6.5 to 8.5	S.U.	Basin Plan, 2007b
Specific conductance	Min for AGR	200	µS	Basin Plan, 2007b
	Max for AGR	3000	µS	Basin Plan, 2007b
	Max for MUN	900	µS	Basin Plan, 2007b
Salts – AGR only	***Salt thresholds apply only to waters with AGR beneficial use assigned.***			
Boron	Maximum	0.5	mg/L	Basin Plan, 2007b
Chloride	Maximum	142	mg/L	Basin Plan, 2007b
Metals	***Cadmium, copper, nickel, silver, and zinc values assume a hardness of 100 mg/L CaCO3. Values at other hardness levels must be calculated using formulas in the Basin Plan.***			
Arsenic, dissolved	1-hour average WQO	340	µg/L	Basin Plan, 2007b
	4-day average WQO	150		
Cadmium, total	1-hour average WQO	3.9	µg/L	Basin Plan, 2007b
	4-day average WQO	1.1		
Chromium VI, dissolved	1-hour average WQO	16	µg/L	Basin Plan, 2007b
	4-day average WQO	11		
Copper, dissolved	1-hour average WQO	13	µg/L	Basin Plan, 2007b
	4-day average WQO	9		
Lead, dissolved	1-hour average WQO	65	µg/L	Basin Plan, 2007b
	4-day average WQO	2.5		
Mercury, total	1-hour average WQO	2.4	µg/L	Basin Plan, 2007b
	4-day average WQO	0.025		
Nickel, dissolved	1-hour average WQO	470	µg/L	Basin Plan, 2007b
	4-day average WQO	52		
Selenium, total	4-day average WQO	5	µg/L	Basin Plan, 2007b
	1-hour average WQO	20		
Silver, dissolved	1-hour average WQO	3.4	µg/L	Basin Plan, 2007b
Zinc, dissolved	1-hour average WQO	120	µg/L	Basin Plan, 2007b
	4-day average WQO	120		
Metals -- MUN only	***These Metals thresholds apply only to waters with MUN beneficial use assigned.***			
Manganese, total	Maximum	50	µg/L	Basin Plan, 2007b
Mercury, total	Maximum	2	µg/L	Basin Plan, 2007b
Organics				
PCBs	Freshwater Criterion Continuous Concentration	0.014	µg/L	CTR
Chlorpyrifos	4-day average (chronic)	0.015	µg/L	CVRWQCB, 2006
Dacthal (DCPA)	Instantaneous maximum AWQC	14300	µg/L	CVRWQCB, 2008
Diazinon	1-hour average	0.1	µg/L	SFBRWQCB, 2005
Disulfoton (Disyston)	Instantaneous maximum	0.05	µg/L	CVRWQCB, 2008

Analyte	Description of Standard	Numeric Limit	Units	Reference
Field measures				
	AWQC			
Endosulfan	Continuous 4-day average	0.056	µg/L	CTR
	Instantaneous maximum	0.22		CTR
HCH, gamma- (gamma-BHC, Lindane)	Maximum 1-hour average	0.95	µg/L	CTR
Parathion, methyl	Instantaneous maximum AWQC	0.08	µg/L	CDFG
Thiobencarb	Instantaneous maximum AWQC	3.1	µg/L	CDFG
Pathogens – Water Contact Recreation (REC1)				
E. coli (freshwater)	Steady state (all areas)	126	MPN /100 mL	US EPA, 1986
	Designated beach (max)	235		
Fecal coliform	Geometric mean	200	MPN /100 mL	Basin Plan, 2007b
	90th percentile	400		
Total coliform	Median	240	MPN /100 mL	Basin Plan, 2007b
	Maximum	10000		
Coliforms – MUN only	***MUN thresholds are DOHS recommendations for surface water that serves as drinking water source.***			
Fecal coliform	Geometric mean	<20	MPN /100 mL	Basin Plan, 2007b
Total coliform	Geometric mean	<100		
Toxicity -- Basin Plan	***Two-sample t-tests (one-tailed, alpha = 0.05) were performed on station data versus control data.***			
For *Ceriodaphnia and Pimephales*, the null hypothesis tested was that the station response was less than (less growth, survival, etc) the control response.		80	%	Basin Plan (2007b) - "There shall be no chronic/acute toxicity in ambient waters." (3.3.18)
For Selenastrum, where we are testing that station responses are greater than (more growth) or less than (less growth) the control, these two-sample tests have an alpha of 0.10.		80	%	

CTR - (Federal Register, Part III; EPA; 40 CFR Part 131 Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California; Rule. May 18, 2000)

CDFG - California Department of Fish and Game, Office of Spill Prevention and Emergency Response, Hazard Assessment and Water Quality Criteria documents for pesticides (various dates), http://www.cdpr.ca.gov/docs/sw/hazasm.htm

Table 2: Freshwater sediment quality pollutant thresholds for 303(d) data screening

SQG type:	**Probable effect concentration**		***Reference***
Analyte	*mg/kg*	*µg/kg*	
Metals			MacDonald et al. 2000
Arsenic	33		
Cadmium	4.98		
Chromium	111		
Copper	149		
Lead	128		
Mercury	1.06		
Nickel	48.6		
Zinc	459		
Organics			MacDonald et al. 2000
Anthracene		845	
Fluorene		536	
Naphthalene		561	
Phenanthrene		1170	
Benz(a)anthracene		1050	
Benzo(a)pyrene		1450	
Chrysene		1290	
Fluoranthene		2230	
Pyrene		1520	
PAH (total)		22800	
PCB (total)		676	
Chlordane		17.6	
Dieldrin		61.8	
DDD (sum op + pp)		28	
DDE (sum op + pp)		31.3	
DDT (sum op + pp)		62.9	
DDT (total)		572	
Endrin		207	
Heptachlor epoxide		16	
HCH, gamma		4.99	

Toxicity	***Two-sample t-tests (one-tailed, alpha = 0.05) were performed on station data versus control data.***
For *Hyalella*, the null hypothesis tested was that the station response was less than (less growth, survival, etc) the control response. 80% of the control group was the threshold for sediment toxicity.	Basin Plan (2007b) - "There shall be no chronic/acute toxicity in ambient waters." (3.3.18)

3.2.2 Trash

Trash is not a new problem for the Bay Region, but it is a continuing problem both as an aesthetic nuisance, as a serious threat to aquatic life in tributaries, and as a threat to marine life in estuaries and oceans. Data suggest that plastic from trash persists for hundreds of years in the environment and can pose a threat to wildlife through ingestion, entrapment and entanglement, and this plastic can leach potentially harmful chemicals to the aquatic environment. During the 2002 303(d) listing update effort, Staff discussed the water quality impacts associated with trash at some length (SFRWQCB 2001). Water Board staff found that trash threatened water quality in all urban creeks, lakes, and shorelines. Rather than listing all urban creeks at that time, the Water Board urged municipalities to implement trash control measures, assess trash impairments in their jurisdictions and document these assessments in annual reports submitted to the Board. Since 2002, Water Board staff has developed, refined, and implemented (2002 through 2005) a rapid trash assessment method as part of SWAMP (SFBRWQCB 2007a). Other local entities, e.g., the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP), also collected trash assessment data. The water quality assessments for trash conducted for this 303(d) update are based on the results of the rapid trash assessment method and interpretation of data submitted by the public using a similar approach.

The data solicitation for this update resulted in the submission of a large quantity of trash-related data and accompanying requests for 303(d) listings. These data consisted mainly of photographs and narrative documentation on the status of trash levels for specific water bodies. In addition to these data, staff compiled and considered rapid trash assessment data collected by SWAMP as well as similar trash assessment data collected by SCVURPPP. The two types of trash data, photographs and trash assessment results, required distinct evaluation methodologies described below. Because there are no numeric water quality criteria for trash, the trash data were reviewed according to the "weight of evidence" guidelines established in section 3.11 of the Listing Policy. After reviewing these data in accordance with the Listing Policy, there were several water bodies for which we did not have compelling evidence to place them on the 303(d) list. These water bodies are identified in Table 3 below. The water bodies recommended for placement on the 303(d) list for trash impairment are identified in Table 4 below, and the lines of evidence are described in detail in the Fact Sheets (Appendix C).

Relevant Beneficial Uses and Water Quality Objectives

Several beneficial uses may be adversely impacted by trash, including recreation, aquatic life, wildlife habitat, and navigation. However, data were not readily available to allow staff to evaluate all beneficial uses possibly impaired by trash. Instead, we focused our review on evaluating impairment of the non-contact water recreation (REC-2) and wildlife habitat (WILD) beneficial uses, because these uses can be most easily evaluated through review of available trash data. Impairment of REC-2 can be readily evaluated based on the level of trash present. Impairment of WILD can be evaluated based on the level of certain types of trash associated with threat to wildlife, a beneficial use that implicitly includes aquatic life.

Beneficial uses adversely impacted by trash are, in turn, supported by the following set of narrative water quality objectives and Basin Plan prohibitions. The Basin Plan (Table 4-1, Prohibition Number 7) prohibits discharge of "rubbish, refuse, bark, sawdust, or other solid

wastes into surface waters or at any place where they would contact or where they would be eventually transported to surface waters, including flood plain areas." The Basin Plan (Section 3.3.6) also has a narrative objective for floating material, "waters shall not contain floating material, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses." Last, the Basin Plan (Section 3.3.13) has a narrative objective for settleable material, "waters shall not contain substances in concentrations that result in the deposition of material that cause nuisance or adversely affect beneficial uses."

Table 3: List of water bodies with insufficient evidence to establish trash impairment

Water Body	Designated/Potential Uses	Supporting Data
Adobe Creek	Non-Contact Recreation and Wildlife Habitat	RTA [1], Photos
Alamitos Creek	Non-Contact Recreation and Wildlife Habitat	RTA
Alhambra Creek	Non-Contact Recreation and Wildlife Habitat	Photos
Arroyo Corte Madera del Presidio	Non-Contact Recreation and Wildlife Habitat	Photos
Arroyo Los Positas	Non-Contact Recreation and Wildlife Habitat	RTA
Arroyo Mocho	Non-Contact Recreation and Wildlife Habitat	RTA
Arroyo Seco	Non-Contact Recreation and Wildlife Habitat	Photos
Barron Basin	Non-Contact Recreation and Wildlife Habitat	RTA
Berryessa Creek	Non-Contact Recreation and Wildlife Habitat	RTA
Calabazas Creek	Non-Contact Recreation and Wildlife Habitat	Photos
Corte Madera Creek	Non-Contact Recreation and Wildlife Habitat	Photos
Lagunitas Creek	Non-Contact Recreation and Wildlife Habitat	RTA
Las Trampas Creek	Non-Contact Recreation and Wildlife Habitat	Photos
Lafayette Creek	Non-Contact Recreation and Wildlife Habitat	Photos
Ledgewood Creek	Non-Contact Recreation and Wildlife Habitat	Photos
Los Gatos Creek	Non-Contact Recreation and Wildlife Habitat	RTA, Photos
McCoy Creek	Non-Contact Recreation and Wildlife Habitat	Photos
Pacheco Slough	Non-Contact Recreation and Wildlife Habitat	Photos
Randall Creek	Non-Contact Recreation and Wildlife Habitat	RTA
Rodeo Creek	Non-Contact Recreation and Wildlife Habitat	RTA
San Gregorio Creek	Non-Contact Recreation and Wildlife Habitat	RTA
San Ramon Creek	Non-Contact Recreation and Wildlife Habitat	Photos
Sulphur Creek	Non-Contact Recreation and Wildlife Habitat	Photos
Thompson Creek	Non-Contact Recreation and Wildlife Habitat	RTA
Upper Penitencia Creek	Non-Contact Recreation and Wildlife Habitat	RTA
Vista Grande Canal	Non-Contact Recreation and Wildlife Habitat	Photos
Walnut Creek	Non-Contact Recreation and Wildlife Habitat	Photos
Wildcat Creek	Non-Contact Recreation and Wildlife Habitat	RTA
Yerba Buena Creek	Non-Contact Recreation and Wildlife Habitat	RTA

[1] RTA – Rapid Trash Assessment

Evaluation of Trash Assessment Results

The Water Board's rapid trash assessment method generates site-specific scores on a scale from 0 to 120, with higher scores indicating cleaner sites. The method also documents the number of pieces of trash per one hundred feet of stream or shoreline, and the rate of return of trash under different hydrologic conditions. The trash assessment protocol involves picking up and tallying all of the trash items found within the defined boundaries of a site. When repeated several times throughout a year, this procedure allows for the assessment of temporal changes in impairment, usage patterns, and trash deposition rates under wet and dry weather conditions (SFBRWQCB 2007a).

The Rapid Trash Assessment (RTA) method evaluates six parameters of trash impacts (level of trash, number of items found, threat to wildlife, threat to human health, illegal dumping, and trash accumulation). For purposes of determining impairment status, Water Board staff evaluated the magnitudes of the "level of trash" and "threat to aquatic life" parameters. If the "level of trash" parameter score fell in the 'poor condition category' (scores 0-5), REC-2 is deemed not supported. According to the RTA, the "poor condition" score corresponds to a level of trash that "distracts the eye on first glance. Stream, bank surfaces, and immediate riparian zone contain substantial levels of litter and debris (>100 pieces). This score suggests that the site is being used frequently by people: many cans, bottles, and food wrappers, blankets, clothing." SCVURPPP developed a similar "level of trash" parameter that can be interpreted similarly. Water Board staff reason that if there is sufficient trash to "distract the eye on first glance" and there are substantial levels of litter and debris, then the non-contact beneficial use would be impaired.

The second RTA parameter considered is the "threat to aquatic life" category. If this parameter score fell in the 'poor condition' category (scores 0-5), then WILD is deemed not supported. According to the RTA, the 'poor condition' score corresponds to a "large amount (>50 pieces) of transportable, persistent, buoyant litter (such as hard or soft plastics, balloons, styrofoam, cigarette butts); toxic items (such as batteries, lighters, or spray cans); large clumps of yard waste or dumped leaf litter; or large amount (>50 pieces) of settleable glass or metal."

Water Board staff used the "threat to aquatic life" parameter to assess impairment to wildlife habitat beneficial uses (WILD) because the type of trash measured by this parameter is particularly problematic for wildlife (including aquatic life). The two primary problems that trash poses to wildlife are entanglement and ingestion. Mammals, turtles, birds, fish, and crustaceans all have been affected by entanglement in or ingestion of floatable debris. Many of the species most vulnerable to the problems of floatable debris are endangered or threatened. Entanglement is harmful to wildlife because it can cause wounds that can lead to infections or loss of limbs and also cause strangulation, suffocation, drowning, or limited escape from predators (EPA 2002). Ingestion of trash can lead to starvation or malnutrition if the ingested items block the intestinal tract, preventing digestion, or accumulate in the digestive tract, making the animal feel "full" and lessening its desire to feed. Ingestion of sharp objects can damage the mouth, digestive tract and/or stomach lining and cause infection or pain. Ingested items can also block air passages and prevent breathing, thereby causing death (EPA 2002).

The Urban Rapid Trash Assessment (URTA) developed by SCVURPPP is a very slightly modified version of the original SWAMP RTA. It was modified to make it easier to apply in urban creeks, and the way in which category scores are interpreted was also modified. However, the URTA has an identical parameter assessing threat to aquatic life (wildlife) by characterizing the amount of "Transportable, Persistent, Buoyant Litter." If the raw score for this parameter fell in the marginal urban or poor condition category (scores 0-10, corresponding to a count of 76-200 pieces of such litter), then WILD is deemed not supported.

Although Water Board staff only considered the "level of trash" and "threat to aquatic life" parameters for determining impairment status, the SWAMP and SCVURPPP trash assessment methods have four additional parameters that can provide additional information about both the condition and cause of the trash encountered during assessment (SFBRWQCB 2007a). The assessments include a parameter indicating the total number of trash items counted on the 100-foot stream reach, both above and below the high water line. This is an efficient parameter to use to obtain a rough comparison of the trash impacts between sites, but it can be misleading because sometimes trash items are broken into many pieces, thus inflating the count.

The "threat to human health" parameter accounts for the number of items that are dangerous to humans who wade or swim in the water, and the presence of pollutants that could accumulate in fish in the downstream environment, such as mercury. The worst conditions for this parameter have the potential for the presence of dangerous bacteria or viruses, such as with medical waste, diapers, and human or pet waste. The "illegal dumping and littering" parameter relates to direct placement of trash items at a site, with "poor" conditions assigned to sites that appear to be dumping or littering locations based on adjacent land use practices or site accessibility. Finally, the "accumulation of trash" parameter can be used to distinguish trash that is transported from upstream locations from dumped trash. This is accomplished by noting indications of age and transport. Faded colors, silt marks, trash wrapped around roots, and signs of decay suggest downstream transport, indicating that the local drainage system facilitates conveyance of trash to water bodies.

Evaluation of Photographic Evidence for Trash

Nearly 900 photos of trash impacts were submitted and evaluated to make impairment determinations. These photos presented a fundamental impairment assessment challenge: how to interpret what can be seen in the photos relative to beneficial use impairment? The method we employed was to view the photos as if the water body was being assessed according to the RTA procedure. One of the co-authors of the RTA inspected every photograph and attempted to establish the RTA score for the "level of trash" and "threat to aquatic life" parameters, which relates to impairment of REC-2 and WILD, respectively. One of the first objectives of this photo inspection was to determine if the quantity and quality of the photos were sufficient to establish these parameter scores. Some photos were not clear enough to accomplish this.

In order to establish that the "Level of Trash" parameter was in the poor condition category, we required that reach-scale (i.e., showing most or all of the reach of the creek being photographed) and close-up photos of stream reaches must demonstrate a similar level of trashiness as the 'poor condition' category of the RTA assessment parameter. In other words,

we determined if the visual impression of the photos was consistent with the visual impression the evaluator might have experienced during actual RTA assessments for locations scoring in the 'poor condition" category. A similar determination was made for each photo relative to the "threat to aquatic life" parameter.

Spatial and Temporal Representativeness of Trash Impairment

As a general rule, water bodies recommended for inclusion on the 303(d) list for trash are those for which there is evidence of trash problems persisting through space and time. We applied this rule to trash assessment data and photographic data. In order to recommend listing, we typically required both that the water body contain two or more sites that show evidence of trash impairment (according to assessment or photo documentation) and that evidence of trash impairment existed on two or more occasions. There were instances in which a listing recommendation was made based on data for multiple occasions but only at one location if there were no other data available, but these were very rare exceptions. For San Francisco Bay listings, if shoreline or creek mouth sites satisfied these data sufficiency requirements, we recommended that the applicable bay segment be listed. In fact, for the bay segments recommended for listing (Central and Lower), there were at least two shoreline or creek mouth locations with unacceptably high levels of trash.

3.3 Fact sheet development

Water Board staff developed a Fact Sheet for each water body - pollutant combination that resulted in a listing or delisting recommendation, summarizing the data used to make the decision, the criteria used, and the basic water body characteristics. Figure 1 shows a template provided by the State Board and lists all categories of information required to develop a fact sheet and characterize the cause of impairment.

Region:
Water Body Segment:

Pollutant:
Decision: *List/De-List*

Weight of Evidence
RWQCB Staff Recommendation

Line of Evidence:

Fraction:	*Options for this field are none, not recorded, total, dissolved (does not include suspended), and total dissolved.*
Matrix:	*Options for this field are tissue, water, sediment, N/A. This is the monitoring data sample medium.*
Beneficial use(s):	*Find appropriate beneficial use in your Region's Basin Plan.*
Water Quality Objective/Criteria:	*Find in Basin Plan or use CTR or other appropriate water quality objective or criterion and completely cite it here and reference where you found it.*
Evaluation Guideline:	*If the objective is narrative, use the appropriate evaluation guideline and completely cite it here and reference where you found it.*
Data Used to Assess Water Quality:	*Summarize data assessed here. What is the total number of samples? How many of these samples exceed the objective/criterion/guideline?*
Data References:	*Cite the data reference used for this assessment.*
Spatial Representation:	*Where were the samples collected? How many stations, etc?*
Temporal Representation:	*When were the samples collected? What was the sampling timeframe, etc?*
Water Body Specific Information:	*Environmental conditions or factors that might effect data used in assessment [e.g. Fire/Flood/Dry Year event, etc.]*
Data Quality Assessment	*Excellent, good, fair, poor, unknown, and none*
QAPP Information:	*Clearly describe the quality assurance plan or document that applies to the data used for this assessment. Reference the QA plan that was used. For example: "Quality Control for the chemical analysis portion of this study was conducted in accordance with Standard Operating Procedure QAQC001.00 (Segawa, 1995)."*

Figure 1: Fact sheet template for the 303(d) List

4 Listing Decisions

4.1 Proposed additions to the 303(d) list of impaired water bodies

Table 4 shows all proposed additions to the 303(d) list. Much more comprehensive information is available regarding these new proposed listings in the Fact Sheets (Appendix C). Locations of the water bodies evaluated as impaired during the 2008 listing period are shown in Figure 2 and Figure 3.

Table 4: Proposed 2008 additions to 303(d) list of impaired water bodies

Water Body	Beneficial Uses	Pollutant/ Cause of impairment
Almaden Lake	Commercial and Recreational Collection of Fish, Shellfish, or organisms	Mercury (tissue)[1]
Almaden Reservoir	Commercial and Recreational Collection of Fish, Shellfish, or organisms	Mercury (tissue)[1]
Arroyo Las Positas Creek	Warm Freshwater Habitat	Nutrient/Eutrophication Biological Indicators
Arroyo Mocho Creek	Cold Freshwater Habitat (potential)	Temperature
Codornices Creek	Cold Freshwater Habitat	Temperature
Kirker Creek	Warm Freshwater Habitat	Pyrethroids[2] Water Toxicity
Mount Diablo Creek	Cold Freshwater Habitat	Water Toxicity
Permanente Creek	Cold Freshwater Habitat	Selenium Water Toxicity
San Mateo Creek Lower	Wildlife Habitat	Sediment Toxicity
Stevens Creek	Cold Freshwater Habitat	Temperature
Suisun Creek	Cold Freshwater Habitat	Dissolved Oxygen Temperature
Old Alameda Creek	Non-Contact Recreation and Wildlife Habitat	Trash
Baxter Creek	Non-Contact Recreation and Wildlife Habitat	Trash
Cerrito Creek	Non-Contact Recreation and Wildlife Habitat	Trash

[1] The Guadalupe River Watershed TMDL is expected to address this impairment

[2] San Francisco Bay Urban Creeks Diazinon TMDL approved by USEPA on 5/16/07 will address pyrethroids impairment in Kirker Creek.

Water Body	Beneficial Uses	Pollutant/ Cause of impairment
Codornices Creek	Non-Contact Recreation and Wildlife Habitat	Trash
Colma Creek	Non-Contact Recreation and Wildlife Habitat	Trash
Coyote Creek	Non-Contact Recreation and Wildlife Habitat	Trash
Damon Slough	Non-Contact Recreation and Wildlife Habitat	Trash
Grayson Creek	Wildlife Habitat	Trash
Guadalupe River	Non-Contact Recreation and Wildlife Habitat	Trash
Kirker Creek	Wildlife Habitat	Trash
Matadero Creek	Wildlife Habitat	Trash
Permanente Creek	Wildlife Habitat	Trash
Petaluma River	Non-Contact Recreation and Wildlife Habitat	Trash
Rindler Creek	Non-Contact Recreation and Wildlife Habitat	Trash
San Francisco Bay (Central) shoreline	Non-Contact Recreation and Wildlife Habitat	Trash
San Francisco Bay (Lower) shoreline	Non-Contact Recreation and Wildlife Habitat	Trash
San Francisquito Creek	Non-Contact Recreation and Wildlife Habitat	Trash
San Leandro Creek Lower	Non-Contact Recreation and Wildlife Habitat	Trash
San Mateo Creek	Non-Contact Recreation and Wildlife Habitat	Trash
San Pablo Creek	Non-Contact Recreation	Trash
San Tomas Creek	Wildlife Habitat	Trash
Saratoga Creek	Wildlife Habitat	Trash
Sausal Creek	Wildlife Habitat	Trash
Silver Creek	Wildlife Habitat	Trash
Stevens Creek	Wildlife Habitat	Trash
Strawberry Creek	Non-Contact Recreation and Wildlife Habitat	Trash

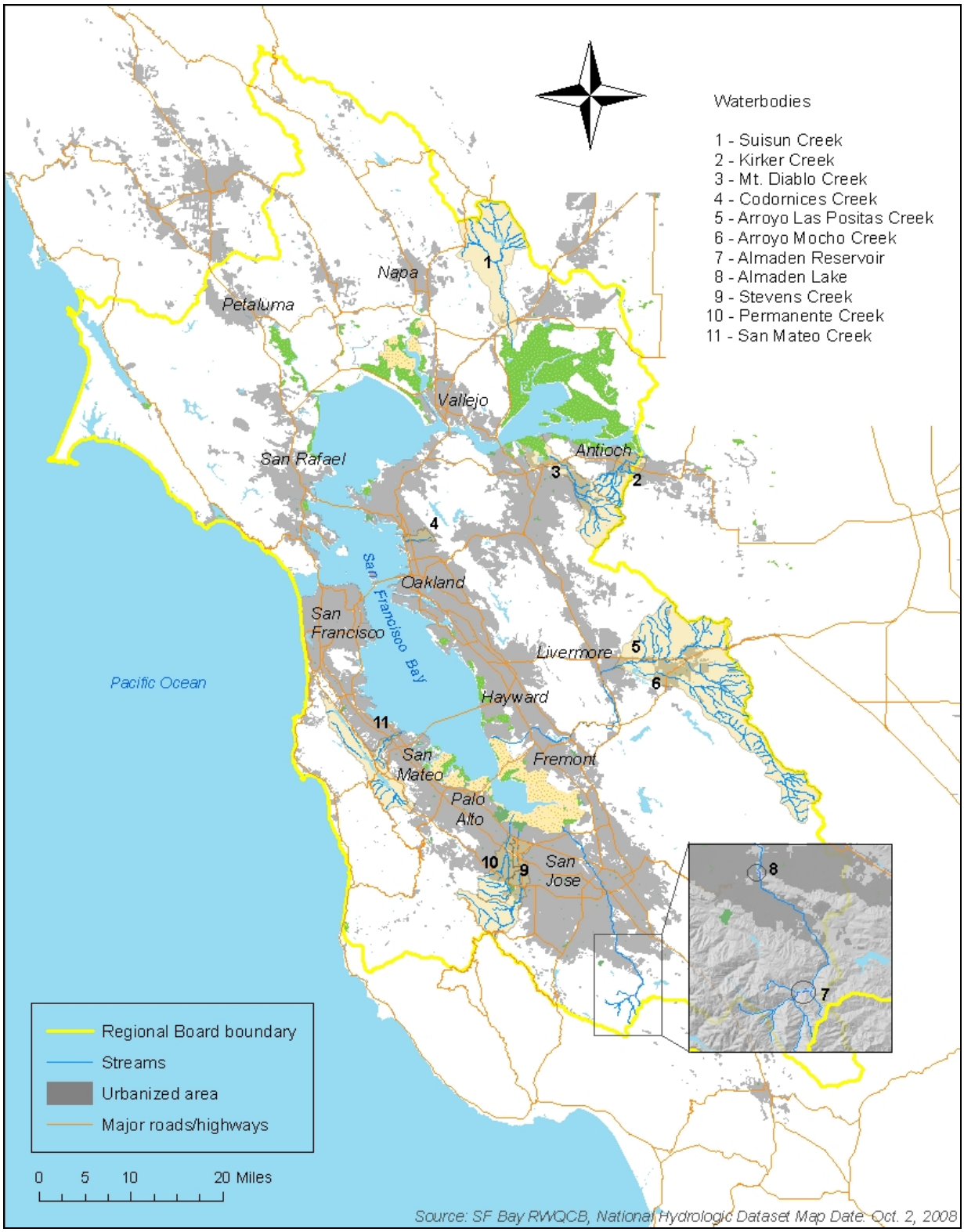

Figure 2: Proposed 2008 new 303(d) listings for toxicants and conventional pollutants

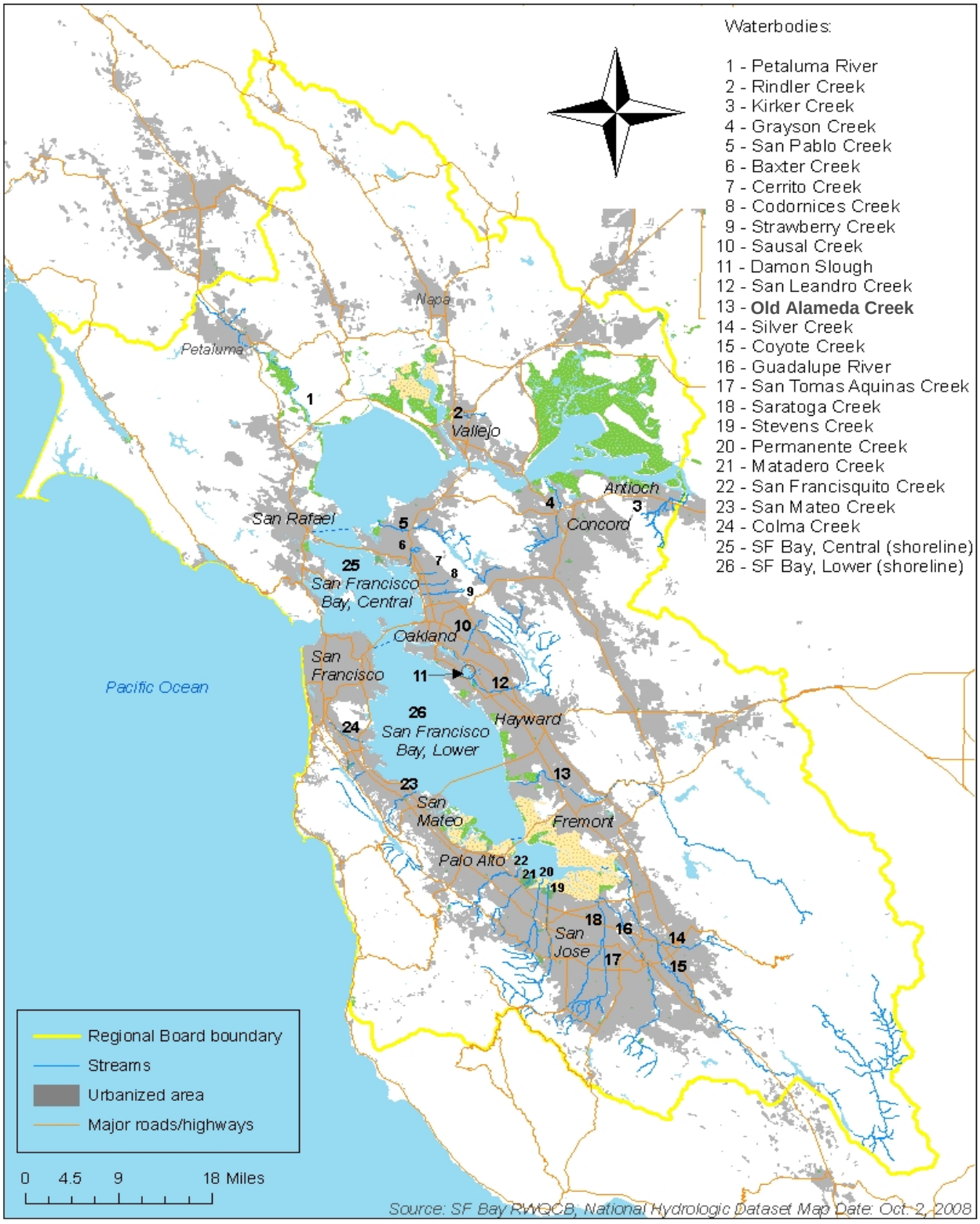

Figure 3: Proposed 2008 303(d) listings for trash

4.2 Proposed delisting and status change

Delist nickel in Sacramento San Joaquin Delta, San Pablo Bay, Suisun Bay

Based on the readily available data and information, there is strong justification for removing these water segment-pollutant combinations from the section 303(d) list in the Water Quality Limited Segments category. The Basin Plan contains nickel water quality objectives of 8.2µg/L as a 4-day average and 74µg/L as a 1-hour average. Data collected by the Regional Monitoring Program and Special Copper/Nickel study from 1993 through 2005 showed that none of the 59 analyzed water samples from the Sacramento San Joaquin Delta exceeded the water quality objectives, none of the 107 analyzed water samples from San Pablo Bay exceeded the water quality objectives, and none of the 96 analyzed water samples from Suisun Bay exceeded the objectives.

Change listing status: Castro Cove, Richmond (San Pablo Basin) - addressed by action other than TMDL

This water body was listed in 2006. Since that time a cleanup and abatement order (Order No. R2-2006-0078) requiring remediation of sediment contamination in the listed portion of Castro Cove was issued. The cleanup action involves removal of contaminated sediment and supports other abatement measures in place, such as the mercury TMDL approved by USEPA on February 12, 2008. Cleanup is underway and, upon its completion, it is expected that this water body will meet applicable water quality standards.

In November 2007, the Water Board received a Monitoring and Risk Management Plan that includes post-dredging confirmation monitoring to demonstrate that chemical contamination in the sediment has been reduced to levels that no longer pose unacceptable ecological risk. The cleanup completion is scheduled for 2010, and it is expected that this action will attain beneficial uses. Therefore, we recommend that Castro Cove be moved from the 303(d) list requiring a TMDL to the 303(d) list of water bodies being addressed by an action other than a TMDL.

4.3 TMDL schedule

All water body-pollutant combinations on the section 303(d) list are assigned with a proposed TMDL completion date. The maximum time that can elapse between 303(d) listing and TMDL completion is 13 years. Accordingly, we have assigned all new listings a TMDL completion date of 2021. This does not suggest that all new listings have the same priority, but rather that the factors determining TMDL priorities have not yet been evaluated as part of this listing process. These factors will be considered through our continuing planning process and with input from our Board and stakeholders. These factors include:

- Water body significance;
- Severity of pollution;
- Degree of impairment;

- Potential threat to human health and the environment;
- Water quality benefits of ongoing activities in the watershed;
- Potential for beneficial use protection and recovery;
- Degree of public concern;
- Availability of funding; and
- Availability of data and information to address the water quality problem.

4.4 Do-Not-List recommendations

This section presents two categories of water bodies for which a "do not list" decision was made. Table 5 lists good quality waters. For these waters there are sufficient data to determine that at least some beneficial uses are supported, and no data are available that suggest non-attainment of beneficial uses. Fact sheets for each of these recommendations are available online (Appendix C).

Table 5: Do Not List recommendations: Some beneficial uses supported

Water Body	Designated/Potential Uses	Supporting Data
Easkoot Creek	Aquatic Life/ Cold Freshwater Habitat	Benthic macroinvertebrate bioassessment
		Temperature
		Dissolved Oxygen
Pine Gulch Creek	Aquatic Life/ Cold Freshwater Habitat	Benthic macroinvertebrate bioassessment
		Temperature
		Dissolved Oxygen
Redwood Creek	Aquatic Life/ Cold Freshwater Habitat	Benthic macroinvertebrate bioassessment
		Temperature
		Dissolved Oxygen
Rodeo Creek	Aquatic Life/ Cold Freshwater Habitat	Benthic macroinvertebrate bioassessment
		Temperature
		Dissolved Oxygen
Tennessee Valley Creek	Aquatic Life/ Cold Freshwater Habitat	Benthic macroinvertebrate bioassessment
		Temperature
		Dissolved Oxygen
Webb Creek	Aquatic Life/ Cold Freshwater Habitat	Benthic macroinvertebrate bioassessment
		Temperature
		Dissolved Oxygen

Table 6 lists water body-pollutant combinations, for which there was insufficient information to determine whether or not water quality standards are being attained. In some cases, there

are a small number of water quality standard exceedances, but they are insufficient to demonstrate impairment in accordance with the Listing Policy. Thus, for these water body-pollutant combinations, more data should be collected to allow for a definitive determination in a subsequent listing cycle. The Fact Sheets for these water body-pollutant combinations, other than for trash assessment, are provided in Appendix C, online.

Table 6: Do Not List recommendations: Insufficient information to determine if beneficial uses are attained

Water Body	Designated/Potential Uses	Supporting Data
Arroyo Viejo Creek	Aquatic Life/ Warm Freshwater Habitat	Toxicity sediment Cr , Cu, As, Ni – sediment
Audubon Canyon Creek	Aquatic Life/ Cold Freshwater Habitat	Nitrate
Codornices Creek	Aquatic Life / Warm Freshwater Habitat	Dissolved oxygen
Glen Echo Creek	Aquatic Life/ Warm Freshwater Habitat	Toxicity sediment As, Cr, Cd, Cu, Pb, Hg, Ni – sediment Cu, Pb, Ni, Zn – water
Lion Creek	Aquatic Life/ Warm Freshwater Habitat	Dissolved oxygen
Lobos Creek	Aquatic Life/ Warm Freshwater Habitat	Toxicity water Toxicity sediment
Morses Gulch Creek	Aquatic Life/ Cold Freshwater Habitat	Nitrate
Mt Diablo Creek	Aquatic Life / Warm Freshwater Habitat	Dissolved oxygen Toxicity sediment
Peralta Creek	Aquatic Life / Warm Freshwater Habitat	Toxicity sediment Pyrethroids Diazinon
Permanente Creek	Aquatic Life / Cold Freshwater Habitat	Toxicity sediment
San Leandro Creek, Lower	Aquatic Life / Warm Freshwater Habitat	Chromium
Stevens Creek	Aquatic Life / Warm Freshwater Habitat	Dissolved oxygen
Temescal Creek	Aquatic Life/ Warm Freshwater Habitat	Toxicity water Cu, Pb, Ni, Zn – water
Walker Creek	Aquatic Life / Cold Freshwater Habitat	Temperature

4.5 Editorial revisions to the 2006 303(d) list

In addition to the proposed status changing actions, we reviewed and clarified the decision language for water bodies on the 303(d) list adopted in 2006. In particular, careful consideration was given to updating the expected schedules for TMDL completion. In addition, the updated list reflects U.S. EPA approval of TMDLs adopted since the 2006 303(d) list was approved. All of these revisions are editorial in nature and do not change the listing status of any water body. These revisions to the 2006 303(d) list of impaired water bodies are shown in Appendix C, online.

5 303(d)/305(b) Integrated Report

The 303(d)/305(b) Integrated Report will be prepared by State Board based on the information submitted in this report and similar information prepared by all the other Regions. The Integrated Report will then be submitted to the U.S. EPA. All of the assessments reflected in the Fact Sheets included in this report will be used to determine which category to assign to the evaluated water bodies. Additional Fact Sheets may be prepared for non-303(d) listed water bodies for inclusion in the Integrated Report.

The US EPA defines five non-overlapping categories for use in the integrated assessment (USEPA 2005). These categories include:

Category 1: All designated uses are supported, no use is threatened;

Category 2: Available data and/or information indicate that some, but not all of the designated uses are supported (see Table 5 above);

Category 3: There is insufficient available data and/or information to make a use support determination (see Table 6 above);

Category 4: Available data and/or information indicate that at least one designated use is not being supported or is threatened, but a TMDL is not needed; and

Category 5: Available data and/or information indicate that at least one designated use is not being supported or is threatened, and a TMDL is needed (Table 4 above).

The 2008 Integrated Report adopted by State Board will include the 303(d) listing changes approved by each Regional Water Board. Categories 4 and 5 reflect those water bodies placed on the 303(d) list.

6 References

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APPENDIX A

PUBLIC SOLICITATION
for Water Quality Information

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Linda S. Adams
Secretary for
Environmental Protection

State Water Resources Control Board

Executive Office

Tam M. Doduc, Board Chair
1001 I Street • Sacramento, California 95814 • (916) 341-5615
Mailing Address: P.O. Box 100 • Sacramento, California • 95812-0100
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Arnold Schwarzenegger
Governor

December 4, 2006

To: Interested Persons

NOTICE OF PUBLIC SOLICITATION OF WATER QUALITY DATA AND INFORMATION FOR 2008 INTEGRATED REPORT – LIST OF IMPAIRED WATERS AND SURFACE WATER QUALITY ASSESSMENT [303(d)/305(b)]

This letter initiates the solicitation period to request from interested persons data and information regarding water quality conditions in surface waters of California. Information gathered will be used to provide the basis both for identifying and listing impaired waters and for assessing overall surface water quality conditions in California.

Background Information
Every two years, the State of California is required by federal Clean Water Act section 303(d) and Title 40, Code of Federal Regulations section 130.7 to develop and submit to the U.S. Environmental Protection Agency (USEPA) for approval a list of polluted waters or water quality limited segments (distinct portions of rivers, streams, lakes, ocean waters, etc.). This list is commonly referred to as the "Section 303(d) List" or the "List of Impaired Waters." California's 2006 list has been adopted and is available at: http://www.waterboards.ca.gov/tmdl/303d_lists2006.html. The State Water Board's policy regarding listing criteria may be found at: http://www.waterboards.ca.gov/tmdl/303d_listing.html.

The list includes water bodies not meeting water quality standards (beneficial uses, water quality objectives/criteria and the State's anti-degradation policy) that are not, or are not expected to be, attained with the implementation of technology-based controls. In addition, currently-listed water bodies can be delisted when evidence reveals that such impacts have ceased, impacts never existed, or the water body is meeting water quality standards. As required by federal law, listed water bodies will be scheduled for development of total maximum daily loads (TMDLs) or other appropriate regulatory actions. A TMDL is the total maximum daily load of a pollutant that can be discharged daily into a given water body and still ensure the attainment of applicable water quality standards. In addition, Clean Water Act section 305(b) requires states to submit to USEPA for approval a report assessing statewide surface water quality.

2008 Integrated Report

For the 2008 update, the List of Impaired Waters and the Surface Water Quality Assessment will be combined into an Integrated Report. This Report is due to USEPA by April 1, 2008. The USEPA integrated reporting guidelines can be viewed at: http://www.epa.gov/owow/tmdl/2006IRG/report/2006irg-report.pdf

Development of Integrated Report
Data and information for the 2006 list were submitted to the State Water Resources Control Board (State Water Board). However, for the 2008 update, data and information are to be submitted to each Regional Water Quality Control Board (Regional Water Board), which will then compile and approve regional lists. Enclosure 1 provides Regional Water Board contact information. Enclosure 2 identifies each of the nine Regional Water Boards and some of the major water bodies within each Region. **To be considered in this review process, data and information must be submitted to the appropriate Regional Water Board no later than February 28, 2007.**

The State Water Board will compile the regional lists into a statewide list and consider it for adoption. Following State Water Board adoption, the list will then be combined with the Regions' surface water quality assessments into an Integrated Report, as described above, and submitted to USEPA for approval by April 1, 2008.

Since the data and information gathered in this solicitation will contribute to the preparation of a statewide assessment of surface water quality, please do not limit your data and information submissions to only those data that show standards are not met. Data that show standards are being met should also be submitted, as these data and information are extremely important to a proper understanding of the health of the waters of the State. More detailed information about the overall process and requirements for submitting water quality data and information can be found in Enclosure 3.

The tentative schedule for conducting the review and approval of portions of the Integrated Report is shown below. The schedule may change depending on the amount of data to be assessed and the resources available to perform the assessment.

Activity	Date
Beginning of solicitation period for data and information	December 2006
End of solicitation period for data and information	February 28, 2007
Regional Water Boards' approvals of the regional lists and water quality assessment	September 2007 through December 2007
Submittal of Regional Water Boards' portions of the List and Report to State Water Board	December 2007
State Water Board approval of statewide Integrated Report and submittal to USEPA	April 2008

Should you have questions regarding data or information you wish to submit or about this notice, please contact the respective Regional Water Board contact (see Enclosures 1 and 2). You may also contact Craig J. Wilson at the State Water Resources Control Board at 916-341-5560 (cjwilson@waterboards.ca.gov).

Sincerely,

Thomas Howard

Thomas Howard
Acting Executive Director

Enclosures

cc: Ms. Alexis Strauss, Director
Water Division (WTR-1)
U.S. Environmental Protection Agency,
Region 9
75 Hawthorne Street
San Francisco, CA 94105

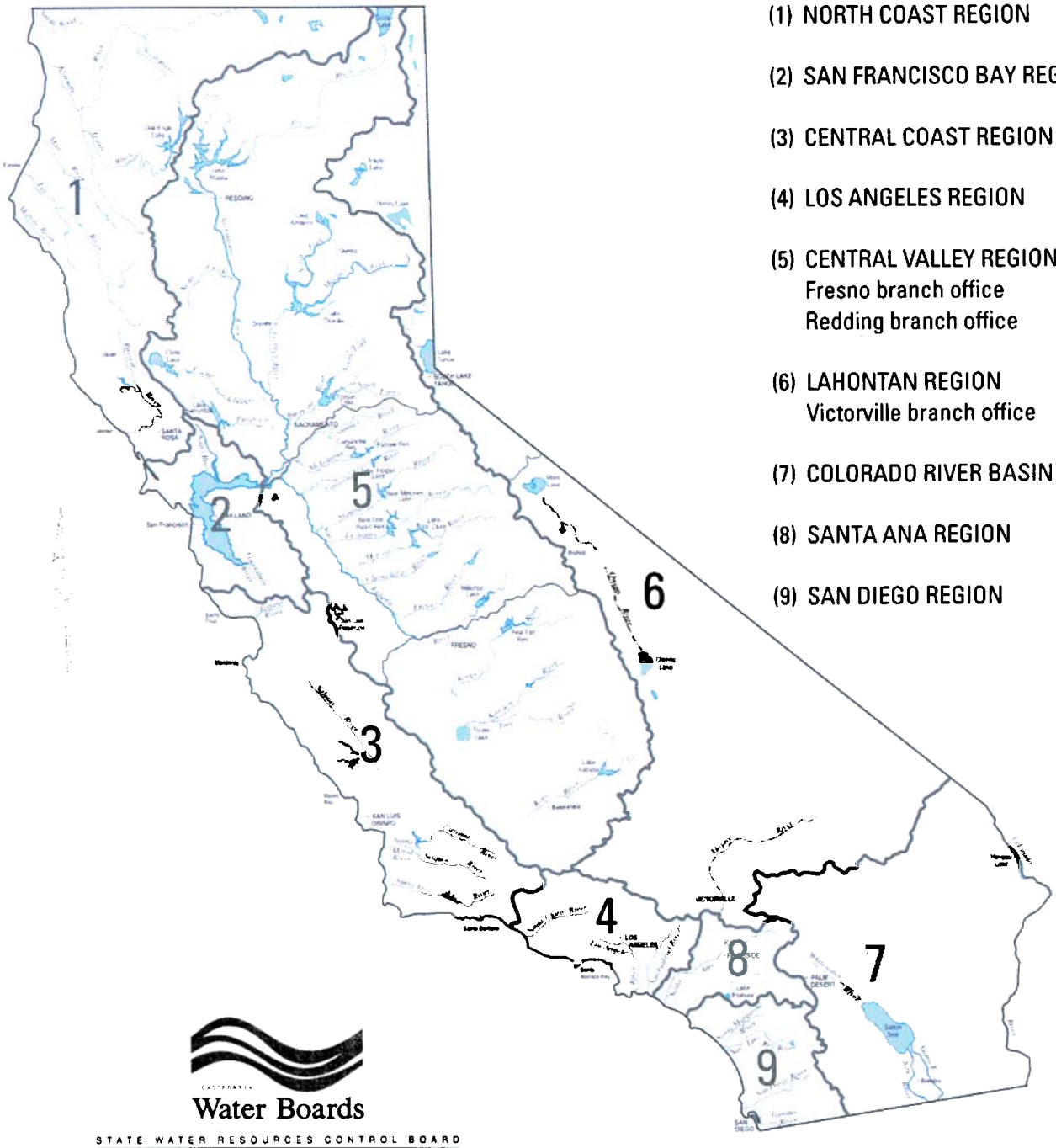
All Regional Water Quality Control Boards

Enclosure 1

Regional Water Board Contacts
Integrated Report (List of Impaired Waters and Surface Water Quality Assessment)

Regional Water Board	Regional Water Board Address	Contact Name Phone Number e-mail address
(1) North Coast	5550 Skylane Blvd., Suite A Santa Rosa, CA 95403	Bruce Gwynne 707-576-2661 bgwynne@waterboards.ca.gov
(2) San Francisco Bay	1515 Clay St., Suite 1400 Oakland, CA 94612	Naomi Feger 510-622-2328 nfeger@waterboards.ca.gov
(3) Central Coast	895 Aerovista Place, Suite 101 San Luis Obispo, CA 93401	Mary Adams 805-542-4768 madams@waterboards.ca.gov and Lisa McCann 805-549-3132 lmccann@waterboards.ca.gov
(4) Los Angeles	320 W. Fourth Street, Suite 200 Los Angeles, CA 90013	Deborah Neiter 213-576-6783 dneiter@waterboards.ca.gov
(5) Central Valley	11020 Sun Center Drive #200 Rancho Cordova, CA 95670-6114	Gene Davis 916-464-4687 gmdavis@waterboards.ca.gov and Joe Karkoski 916-464-4668 jkarkoski@waterboards.ca.gov
(6) Lahontan	2501 Lake Tahoe Blvd. So. Lake Tahoe, CA 96150	Judith Unsicker 530-542-5462 junsicker@waterboards.ca.gov
(7) Palm Desert	73-720 Fred Waring Drive, Suite 100 Palm Desert, CA 92260	Logan Raub 760-776-8966 lraub@waterboards.ca.gov
(8) Santa Ana	3737 Main Street, Suite 500 Riverside, CA 92501-3348	Pavlova Vitale 951-782-4920 pvitale@waterboards.ca.gov
(9) San Diego	9174 Sky Park Ct., Suite 100 San Diego, CA 92123-4340	Lesley Dobalian 858-637-7139 ldobalian@waterboards.ca.gov and Julie Chan 858-627-3926 jchan@waterboards.ca.gov

California Regional Water Quality Control Boards



(1) NORTH COAST REGION

(2) SAN FRANCISCO BAY REGION

(3) CENTRAL COAST REGION

(4) LOS ANGELES REGION

(5) CENTRAL VALLEY REGION
Fresno branch office
Redding branch office

(6) LAHONTAN REGION
Victorville branch office

(7) COLORADO RIVER BASIN REGION

(8) SANTA ANA REGION

(9) SAN DIEGO REGION

Water Boards

STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

Specific information regarding this solicitation and the ensuing section 303(d) Listing/Delisting process:

1 The Regional Water Boards will utilize the existing statewide policy, "Water Quality Control Policy for Developing California's Clean Water Act section 303(d) List" (Listing Policy) to guide the solicitation, review, and assessment of supporting data and information and to decide which candidate water bodies are to be placed on or removed from the section 303(d) List. All readily available data and information submitted pursuant to this solicitation will be reviewed and assessed using the Listing Policy. Requirements for data and information specified in the Listing Policy — including those for quality control and assurance, temporal and spatial characteristics, and minimum sample sizes — will be followed when reviewing all data and information. The Listing Policy may be viewed at: http://www.waterboards.ca.gov/tmdl/303d_listing.html.

2. Any person including, but not limited to, private citizens, public agencies, local, State, and federal governmental agencies, non-profit organizations, and businesses possessing information regarding the quality of the State's waters, may contribute data and information pursuant to this solicitation. Data submitted may be in electronic format (see 6. and 7. below), narrative form (see 8. below) or photographic form (see 9. below).

3. All new available data and information will be considered. The following data need not be submitted to the Regional Water Boards for consideration:

    a. Data submitted as part of the 2006 section 303(d) List update;
    b. Data that are already in the Regional Water Boards' files (e.g., data submitted as part of a discharger's monitoring and reporting program). Note that data from State and federal agencies (e.g., the United States Geological Survey (USGS), the California Department of Pesticide Regulation, etc.) also need not be submitted, as the Regional Water Boards will be soliciting data from these agencies directly.

4. All new data and information must be received by the respective Regional Water Board (see Enclosures 1 and 2) by the close of business on February 28, 2007. Please note that any information received after February 28, 2007 will not be used for the 2008 section 303(d) List or for compiling the section 305(b) Report, but will be considered in developing the 2010 section 303(d) List and section 305(b) Report.

5. Any interested person may request reassessment of a water body on the existing section 303(d) List. The interested person must:

    a. Describe the reason(s) the listing is inappropriate and clearly state the reason the interested party would come to a different outcome, and
    b. Provide the data and information necessary to enable the Regional Water Board to conduct a complete reassessment.

6. Information (see 10. and 12. below) submitted should include the following

    a. The name of the person or organization providing the information;
    b. The name of the person certifying the completeness and accuracy of the data and information and a statement describing the standard's exceedances;
    c. Mailing address, telephone numbers, and email address of a contact responsible for answering questions about the information submitted;
    d. Identification of any specific software used to format the information and definitions for any codes or abbreviations used, if applicable;
    e. Bibliographic citations for all published information provided;

f. If computer model outputs are included in the information, provide bibliographic citations and specify any calibration and quality assurance information available for the model(s) used; and
g. The name and exact area of the water body the information concerns, including:

    i. Geographical Information System (GIS) data files (ArcGIS mxd or ArcView shapefiles); or
    ii. Very clear hard copy maps indicating the area the information concerns; (e.g., mark sample location on a USGS 7.5 minute topographic quad map along with the quad sheet name); or
    iii. Provide location latitude/longitude; and
    iv. Metadata for any GIS data must be included. The metadata must detail all the parameters of the projection, including datum.

7. Data (see 11. and 12. below) submitted should contain the following:

    a. To the extent feasible, all data submitted must be submitted in electronic form, i.e., in spreadsheet, database, or ASCII formats;
    b. A hard-copy of all data submitted should also be provided;
    c. References to Web sites will not be accepted *in lieu* of the actual data;
    d. Metadata for the field and lab data, i.e., when measurements were taken (date and time), locations (unique site code, latitude and longitude, and water body name), number of samples, analytes, units of measurement, methods, detection limits, and other relevant factors;
    e. The name and exact area of the water body the information concerns, including:

        i. GIS data files (ArcGIS mxd or ArcView shapefiles); or
        ii. Very clear hard copy maps indicating the area the information concerns; (e.g., mark sample locations on a USGS 7.5 minute topographic quad map along with the quad sheet name); or
        iii. Provide location latitude/longitude; and
        iv. Metadata for any GIS data must be included. The metadata must detail all the parameters of the projection, including datum.

    f. A copy of the quality assurance procedures including a Quality Assurance Project Plan (QAPP). A QAPP or equivalent document must be available and contain, at a minimum, the following:

        i. Objectives of the study, project, or monitoring program;
        ii. Methods used for sample collection and handling;
        iii. Field and laboratory measurement and analysis;
        iv. Data management, validation, and recordkeeping (including proper chain of custody) procedures;
        v. Quality assurance and quality control requirements;
        vi. A statement certifying the adequacy of the QAPP (plus name of person certifying the document); and
        vii. A description of personnel training.

    g. A site-specific or project-specific sampling and analysis plan for numeric data should also be available containing the following:

        Data quality objectives or requirements of the project;
        A statement that data quality objectives or requirements were achieved;

iii. Rationale for the selection of sampling sites, water quality parameters, sampling frequency and methods that assure the samples are spatially and temporally representative of the surface water and representative of conditions within the targeted sampling timeframe; and
iv. Documentation to support the conclusion that results are reproducible.

h Data from citizen volunteer water quality monitoring efforts require the name of the group and indication of any training in water quality assessment completed by members of the group. Data submitted by citizen monitoring groups should meet the data quality assurance procedures as detailed in the Listing Policy - section 6.1.4 and as shown above (7.g.).

8. For narrative and qualitative submittals, the submission must:

a. Describe events or conditions that indicate impacts on water quality;
b. Provide linkage between the measurement endpoint (e.g., a study that may have been performed for some other purpose) and the water quality standard of interest;
c. Be scientifically defensible;
d. Provide analyst's credentials and training;
e. Be verifiable by the State Water Board or Regional Water Board; and
f. Identify the name and exact area of the water body the narrative or qualitative information concerns, including:

i. GIS data files (ArcGIS mxd or ArcView shapefiles); or
ii. Very clear hard copy maps indicating the area the information concerns; (e.g., mark sampling locations on a USGS 7.5 minute topographic quad map along with the quad sheet name); or
iii. Provide location latitude/longitude; and
iv. Metadata for any GIS data must be included. The metadata must detail all the parameters of the projection, including datum.

9. For photographic documentation, the submission must:

a. Identify the date and time;
b. Identify the name and exact area of the water body the narrative or qualitative information concerns, including:

i. GIS data files (ArcGIS mxd or ArcView shapefiles); or
ii. Very clear hard copy maps indicating the area the information concerns; (e.g., mark photographic locations on a USGS 7.5 minute topographic quad map along with the quad sheet name); or
iii. Provide location latitude/longitude; and
iv. Metadata for any GIS data must be included. The metadata must detail all the parameters of the projection, including datum.

c. Provide a thorough description of photograph(s);
d. Describe the spatial and temporal representation of the photographs;
e. Provide linkage between photograph-represented condition and condition that indicates impacts on water quality;
f. Provide photographer's rationale for area photographed and camera settings used; and
g. Be verifiable by the State Water Board or Regional Water Board.

10. For purposes of this solicitation, "information" includes any documentation that a water body is or is not meeting, or is or is not likely to meet, existing water quality standards (i.e., beneficial uses of water, water quality objectives/criteria, and the State's non-degradation policy as listed

in the State's Water Quality Control Plans [Basin Plans], statewide water quality control plans [e.g., the California Ocean Plan], the California Code of Regulations, and pertinent federal laws and regulations).

11 "Data" are considered to be numeric information (i.e., measurements of specific physical, chemical, or biological characteristics in aquatic environments).

12. Data and information provided may pertain to individual water body segments, entire water bodies, or whole watersheds.

13. The section 303(d) List and the section 305(b) Report update efforts are not designed, intended, or able to change existing water quality standards. Persons interested in recommending changes to existing water quality standards should contact the respective Regional Water Board.

14. Please send all data and information to the respective Regional Water Board office. **Submittals should be addressed to the attention of the Regional Water Board contact listed in Enclosure 1.**

State Water Resources Control Board

Executive Office

Linda S. Adams
Secretary for
Environmental Protection

Tam M. Doduc, Board Chair
1001 I Street • Sacramento, California 95814 • (916) 341-5615
Mailing Address: P.O. Box 100 • Sacramento, California • 95812-0100
Fax (916) 341-5621 • http://www.waterboards.ca.gov

Arnold Schwarzenegger
Governor

January 30, 2007

To: Interested Persons

CLARIFICATION OF NOTICE OF PUBLIC SOLICITATION OF WATER QUALITY DATA AND INFORMATION FOR 2008 INTEGRATED REPORT – LIST OF IMPAIRED WATERS AND SURFACE WATER QUALITY ASSESSMENT [303(d)/305(b)]

The intent of this letter is to clarify the Notice dated December 4, 2006 regarding the 2008 integrated report described above. There are no limits on the data and information that the public can provide to the Regional Water Quality Control Boards (Regional Water Boards) for their assessment as part of the development of the 2008 integrated report. Federal regulation [(40 CFR § 130.7(b)(5)] states that "Each State shall assemble and evaluate all existing and readily available water quality-related data and information to develop the list required by §§ 130.7(b)(1) and 130.7(b)(2)." The Regional Water Boards will accept any and all data and information.

As stated in the Notice dated December 4, 2006, all data previously submitted to the State Water Resources Control Board (State Water Board) for consideration during the 2006 listing cycle need not be re-submitted, as the State Water Board will make the data available to the Regional Water Boards for consideration for the 2008 integrated report. However, even though it is not necessary, the public may also re-submit such data.

Furthermore, Enclosure 3 of the Notice dated December 4, 2006 contained suggestions and staff preferences for format of data submittals. It was not then, and is not now, the intent of the State Water Board to limit submittals to these format suggestions. The Regional Water Boards will also accept Web addresses that link to actual data. As stated above and in the Notice dated December 4, 2006, all data will be considered.

Should you have questions regarding this clarification, please contact the respective Regional Water Board contact (see Enclosure). You may also contact Craig J. Wilson at the State Water Board at 916-341-5560 (cjwilson@waterboards.ca.gov).

Sincerely,

Thomas Howard
Acting Executive Director

Enclosure

cc: Ms. Alexis Strauss, Director
Water Division (WTR-1)
U.S. Environmental Protection Agency,
Region 9
75 Hawthorne Street
San Francisco, CA 94105

All Regional Water Quality Control Boards

Regional Water Boards
Section 303(d) List and Section 305(b) Report Contacts

Regional Water Board	Regional Water Board Address	Contact Name Phone Number e-mail address
(1) North Coast	5550 Skylane Blvd., Suite A Santa Rosa, CA 95403	Bruce Gwynne 707-576-2661 bgwynne@waterboards.ca.gov
(2) San Francisco Bay	1515 Clay St., Suite 1400 Oakland, CA 94612	Naomi Feger 510-622-2328 nfeger@waterboards.ca.gov
(3) Central Coast	895 Aerovista Place, Suite 101 San Luis Obispo, CA 93401	Mary Adams 805-542-4768 madams@waterboards.ca.gov and Lisa McCann 805-549-3132 lmccann@waterboards.ca.gov
(4) Los Angeles	320 W. Fourth Street, Suite 200 Los Angeles, CA 90013	Deborah Neiter 213-576-6783 dneiter@waterboards.ca.gov
(5) Central Valley	11020 Sun Center Drive #200 Rancho Cordova, CA 95670-6114	Gene Davis 916-464-4687 gmdavis@waterboards.ca.gov and Joe Karkoski 916-464-4668 jkarkoski@waterboards.ca.gov
(6) Lahontan	2501 Lake Tahoe Blvd. So. Lake Tahoe, CA 96150	Judith Unsicker 530-542-5462 junsicker@waterboards.ca.gov
(7) Palm Desert	73-720 Fred Waring Drive Suite 100 Palm Desert, CA 92260	Logan Raub 760-776-8966 lraub@waterboards.ca.gov
(8) Santa Ana	3737 Main Street, Suite 500 Riverside, CA 92501-3348	Pavlova Vitale 951-782-4920 pvitale@waterboards.ca.gov
(9) San Diego	9174 Sky Park Ct., Suite 100 San Diego, CA 92123-4340	Lesley Dobalian 858-637-7139 ldobalian@waterboards.ca.gov and Julie Chan 858-627-3926 jchan@waterboards.ca.gov

APPENDIX B

SUMMARY OF DATA RECEIVED AND DATA QUALITY EVALUATION

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Summary of Data Received
as a Result of Solicitation Process in February 2007

REQUESTS TO LIST					
Water Body	**Pollutant/ Water quality parameter**	**Data Source**	**Spatial Representation**	**Temporal Representation**	**Data Quality**
Guadalupe River, Los Gatos Creek, Richmond Marsh, San Rafael Creek, Wildcat Creek, Stevens Creek	**Trash**	**Save the Bay** Photographic documentation and estimates of trash loads	1-4 locations on each water body	Data collected in January and February 2007	Medium – photographic documentation
Guadalupe River, Coyote Creek	**Trash**	**GCRCD**: Guadalupe-Coyote Resource Conservation District Photographic and narrative documentation of trash, debris, channel blockages, encampments and dumping	5 locations on Coyote Creek and 1 location on Guadalupe River	Data collected in March 2002, May 2005, and May 2006	Medium – photographic documentation
Bay area storm drain channels, creeks, wetlands and San Francisco Bay Damon Slough, Eastshore Park, Strawberry Creek, Temescal Creek, Adobe Creek, Alameda Creek, Alhambra Creek, Arroyo Seco, Coyote Creek, Richardson Bay shoreline, Aquatic Park Lagoon, Calabazas Creek, Colma Creek, Corte Madera Creek, Middle Harbor Park shoreline, Frontage Road Beach, Grayson Creek, Guadalupe River, Lafayette Creek, Lake Merritt, Las Trampas Creek, Ledgewood	**Trash/Gross pollutants**	Roger B. James & Lawrence P. Kolb Photographic and narrative documentation over a 10-year period	1-5 locations on each water body	Data collected mainly in winter months from 1997-2007, majority in 2006 and 2007	Medium – photographic documentation

REQUESTS TO LIST					
Water Body	**Pollutant/ Water quality parameter**	**Data Source**	**Spatial Representation**	**Temporal Representation**	**Data Quality**
Creek, Matadero Creek, McCoy Creek, Pacheco Slough, Rindler Creek, San Leandro Creek, San Mateo Creek, San Rafael Creek, San Pablo Creek, San Ramon Creek, San Tomas Aquino Creek, Sausal Creek, Stevens Creek, Sulphur Creek, Vista Grande Canal, Walnut Creek, 54th Ave. Creek (tidal near Oakport)					
Rodeo Creek	**Sediment**	**Muir Heritage Land Trust** No quantitative data, geomorphic assessment and creek analysis (*Geomorphic and Hydrologic Assessment of Fernandez Ranch* prepared by Watershed Sciences	N/A	N/A	No data submitted
Willow Creek (tributary of Wildcat Creek near Saratoga)	**Sediment**	Margaret Giberson of Los Gatos	Willow Creek	1985-1991, 2002	Law – old (1985-1991, 2002) photographic documentation of sediment runoff
San Francisco Bay – areas adjacent to dredge material disposal sites	**Suspended sediment**	Fred Krieger of Berkeley Narrative evidence and references to USGS mapping, SFEI assessments of sediment loadings, RMP data and a White Paper on Herring	San Francisco Bay	N/A	No data submitted

REQUESTS TO LIST					
Water Body	**Pollutant/ Water quality parameter**	**Data Source**	**Spatial Representation**	**Temporal Representation**	**Data Quality**
Abbotts Lagoon and associated tributaries in Point Reyes National Park	**Biostimulatory substances, dissolved oxygen, un-ionized ammonia**	Fred Krieger of Berkeley Link to the USGS report http://pubs.usgs.gov/sir/2005/5261/sir_2005-5261.pdf *Assessment of Hydrologic and Water Quality Data Collected in Abbotts Lagoon Watershed, Point Reyes National Seashore, California, during Water Years 1999 and 2000*	Eleven monitoring locations including 3 locations in Abbotts Lagoon and 8 locations in unnamed tributaries draining into Abbotts Lagoon	Old data collected from November 1998 through August 1999. Quarterly sampling at the 3 lagoon sites and one perennial tributary and sampling of two storm events at several tributary sites	Old data. Medium quality – limited quality control procedures
Lake Chabot and its tributary Rindler Creek (Solano County)	**Trash, dissolved oxygen, sediment**	**Friends of Lake Chabot** Data not submitted, reference made to the data collected by the Vallejo Sanitation and Flood Control District	N/A	N/A	No data submitted
California Ocean Waters	**Carbon dioxide**	**Center for Biological Diversity** No data submitted. Scientific papers and supporting documentation on acidification of ocean waters	N/A	N/A	No numerical data submitted

REQUESTS NOT TO LIST / DE-LIST / OTHER					
Water Body	**Pollutant/ Water quality parameter**	**Data Source**	**Spatial Representation**	**Temporal Representation**	**Data Quality**
Urban Creeks – Santa Clara Basin Adobe Creek, Alamitos Creek, Barron Creek, Berryessa Creek, Calabazas Creek, Coyote Creek, El Camino Storm Drain Channel, Guadalupe River, Los Gatos Creek, Silver Creek, Matadero Creek, Penitencia Creek, Permanente Creek, Randall Creek, Rodeo Creek, San Francisquito Creek, San Tomas Creek, Saratoga Creek, Stevens Creek, Thompson Creek	**Trash and water quality data**	**SCVURPPP:** Santa Clara Valley Urban Runoff Pollution Prevention Program Photographic and narrative documentation of creeks impacted by trash including additional physical, chemical and biological data	1-3 locations on each water body	Data collected 1 to 3 times per location from 2004 through 2006	High Quantitative Trash Assessment Methodology documented in separate report
Lake Merced	**Dissolved oxygen, pH**	**San Francisco Public Utilities Commission** Data submitted in support of not listing Lake Merced on the 303(d) list	Four monitoring locations in Lake Merced including 2 locations in South Lake Merced and 1 location in North and 1 in North East section of the lake.	DO and pH measured from 4 to 8 times a year over a period from 05/27/2004 to 12/20/2006	Quality control procedures unknown
Lake Del Valle Reservoir	**Basic water quality, conventional chemistry, E. coli, Total coliform, Giardia and Cryptosporidium**	**Alameda Food Control and Water Conservation District** Data submitted to document good quality of the drinking water supply. Request to modify the current 303(d) listing of the reservoir for Hg and PCBs to state that there is no threat to treated drinking	Seven monitoring locations at 3 water bodies - including 3 locations at the Lake Del Valle and 4 locations at major inputs to the South Bay Aqueduct	Samples collected from December 2005 through March 2006	Description of the QA/QC protocols not included

REQUESTS NOT TO LIST / DE-LIST / OTHER					
Water Body	**Pollutant/ Water quality parameter**	**Data Source**	**Spatial Representation**	**Temporal Representation**	**Data Quality**
		water supply.			
San Francisco Bay	**Selenium**	**Western State Petroleum Association** Request to de-list Literature review and interpretation of selenium concentration data in San Francisco Bay and the likely toxicological effects of selenium.	N/A	N/A	RMP data available – high quality
Mount Diablo Creek	**Temperature, dissolved oxygen, pH, conductivity, bacteria**	**Friends of Mount Diablo Creek** Data provided for ongoing assessment of Mount Diablo Ck.	Six sampling locations (3 sites on the main stem of Mount Diablo Ck and 3 sites on the local tributaries)	Physico-chemical parameters measured monthly from March 2006 through February 2007. E coli and total coliforms measured at 3 sites in July and August 2006	QA/QC protocols included
N/A	**Pesticides**	**DPR**[1]: Department of Pesticide Regulation - links to the Surface Water Database containing pesticides data for California waterways. **No specific data submitted.**	Contra Costa, San Mateo, Solano and Santa Clara County,	Old data (1992-1998)	High

[1] The database comprises a limited amount of pesticide data (diazinon, chloropyrifos, diuron, metha diuron) collected more than 10 years ago from 12 creeks within Region 2 boundaries.

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APPENDIX C

WATER BODY FACT SHEETS

available online at

http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/TMDLs/303dlist.shtml