CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

RESOLUTION NO. R2-2012-0088

APPROVING THE 2012 TRIENNIAL REVIEW OF THE SAN FRANCISCO BAY BASIN WATER QUALITY CONTROL PLAN AND ADOPTING A PRIORITY LIST OF BASIN PLAN PROJECTS

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

1. The San Francisco Bay Basin Water Quality Control Plan (Basin Plan) is the Regional Water Board's master water quality control planning document. The Basin Plan has been duly adopted by the Regional Water Board and approved by the State Water Resources Control Board (State Water Board), the Office of Administrative Law and U.S. EPA, where required.
2. The Basin Plan contains the San Francisco Bay Region's water quality standards, which consist of beneficial uses, water quality objectives, and implementation plans necessary to protect those uses.
3. In accordance with section 303(c)(1) of the federal Clean Water Act and section 13240 of the California Water Code (Water Code), the Regional Water Board has concluded its 2012 Basin Plan triennial review.
4. Regional Water Board staff prepared an issue paper entitled "Brief Issue Descriptions," dated March 2012, describing potential Basin Plan projects.
5. In accordance with State Water Board procedures, Regional Water Board staff circulated the candidate Basin Plan project descriptions and held a workshop on March 27, 2012, for the purpose of receiving public comments concerning the need for revisions to the water quality standards, (i.e., beneficial use designations, water quality objectives, etc.) established in the Basin Plan, as amended.
6. Taking into account public comments, Regional Water Board staff developed a staff report, dated September 2012, describing the 2012 Triennial Review process and the prioritized list of Basin Plan projects to be pursued over the next three years. The staff report describes water quality issues, the relative priority for investigating the issues, identifies which issues can be investigated with existing resources, and identifies additional issues along with the additional resources it will take to investigate and complete them.
7. The Regional Water Board provided to all interested parties both the *2012 Triennial Review Prioritized List of Basin Plan Projects* and the supporting staff report and notified these interested parties of its intent to adopt the Prioritized List in fulfillment of the 2012 Triennial Review.
8. The Regional Water Board held a public hearing on November 14, 2012, for the purpose of receiving testimony on the 2012 Triennial Review process and staff report.

9. The Regional Water Board reviewed, carefully considered, and responded to all written comments received on the September 2012 staff report and prioritized list of projects as well as oral testimony received relative to the 2012 Triennial Review.

NOW THEREFORE BE IT RESOLVED, THAT

1. The Regional Water Board hereby certifies completion of the 2012 Triennial Review and adopts the *2012 Triennial Review Prioritized List of Basin Plan Projects* as set forth in Attachment A to this Resolution; and

2. The Regional Water Board may address issues described in the 2012 Triennial Review staff report, but not included in Attachment A, as staff and external resources may become available; and

3. The entire Basin Plan shall remain in effect until such time that appropriate and specific amendments are adopted by the Regional Water Board and approved by the appropriate review authorities.

I, Bruce H. Wolfe, Executive Officer, do hereby certify the foregoing is a full, true and correct copy of a Resolution adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on November 14, 2012.

Digitally signed by Bruce H. Wolfe
Date: 2012.11.15 14:26:50 -08'00'

BRUCE H. WOLFE
Executive Officer

Attachment A – 2012 Triennial Review Prioritized List of Basin Plan Projects

ATTACHMENT A

2012 Triennial Review Prioritized List of Basin Plan Projects

PROJECT TITLE	**1. Complete Stream and Wetland Systems Protection Policy**	
CATEGORY	Beneficial Uses	
ISSUE SUMMARY	This project is to complete the Stream and Wetland Policy currently under development. The resulting Basin Plan amendment would address protection of stream and wetland systems, which include stream channels, wetlands, floodplains, and riparian areas. The amendment would help protect and restore the physical characteristics of these systems, including their connectivity and natural hydrologic regimes, in order to protect beneficial uses. The amendment would designate two beneficial uses of streams and wetlands: water quality enhancement and flood peak attenuation/flood water storage. These beneficial uses explicitly recognize that physical characteristics of water bodies contribute to better water quality and need to be protected via the Water Board's permitting programs in order to achieve the Water Board's mission of protecting all beneficial uses of the Region's water bodies. The project would result in an amendment that also includes new water quality objectives and an implementation plan that would set forth actions needed to attain the new water quality standards. The implementation plan would provide flexibility to account for a wide range of watershed conditions (e.g., degree of urbanization, watershed size, and surrounding land uses) and would establish a general framework for how to assess achievement of the water quality objectives associated with the new beneficial uses. Water Board staff, with U.S.EPA funding assistance, has been supporting the development of both the regional policy described above and the State Water Board's proposed wetland protection policy. Completion of the regional policy is pending completion of some elements of the State Water Board's policy to ensure coordination and consistency.	
PROPOSED BY:	Water Board	
SUPPORTED BY: *	U.S. EPA Baykeeper Zone 7 Wil Bruhns	
PRIORITIZED RANK: 1		**GENERALIZED RANK: HIGH**
SCORE: 79		**COMPLEXITY: HIGH**
ESTIMATED PERSONNEL-YEARS (PY): 1.0		**PY RUNNING TOTAL: 1.0**
IMPLEMENTING DIVISION: WATERSHED		

* Support expressed during the Triennial Review process except as noted.

PROJECT TITLE	**2. Develop Nutrient Water Quality Objectives**
CATEGORY	Water Quality Objectives
SUMMARY	The Basin Plan does not currently include numeric water quality objectives protective of nutrient-related impairments, such as excessive algae growth, unnatural foam, odor, and other impacts associated with excessive nitrogen and phosphorous. The major focus of this project would be to develop an assessment framework for nutrients for San Francisco Bay, but it would also include evaluating statewide efforts to address nutrients for freshwater and coastal estuaries. This is both a national and local high priority water quality concern. The State Water Board is in the process of developing a freshwater nutrient policy that includes narrative nutrient objectives along with numeric guidance to translate the narrative objectives into numeric water quality objectives. The approach is based on the Nutrient Numeric Endpoint (NNE) framework, which establishes numeric endpoints based on the response (e.g., algal biomass, dissolved oxygen, etc.) of a water body to excessive nutrient concentrations. The State Water Board held a public scoping meeting in October 2011 and is also initiating peer review of its policy's technical foundation. As part of our project, Water Board staff would track this effort and evaluate the policy's application for fresh waters in the Region that could result in changes to the Basin Plan involving nutrient objectives and implementation thereof. For San Francisco Bay, Water Board staff is currently working on developing a nutrient strategy for the Bay, and the Bay-specific NNE framework developed as part of our project would be integral to that strategy. The framework would be the foundation both for assessing the Bay's impairment status relative to nutrients, eutrophication and for developing a nutrient monitoring, modeling and management strategy for the Bay. Staff is already working collaboratively with stakeholders to develop the regional nutrient strategy. Program resources are available to provide funding for the Southern California Coastal Water Research Project (SCCWRP) and the San Francisco Estuary Institute (SFEI) to support staff on this project. In addition, this project would build on the State Water Board's efforts to develop an approach to address nutrients statewide. In addition, a State and Regional Technical Advisory Group has been established by the State Water Board to support application of its NNE framework to California estuaries. The State Water Board has contracted with SCCWRP to develop an estuarine classification system, review candidate nutrient-related indicators for all estuaries, explore revision of dissolved oxygen objectives, and review studies supporting a numeric endpoint for macroalgae on estuarine tidal flats.
PROPOSED BY	U.S. EPA, State Water Board
SUPPORTED BY	Regional Water Board, State Water Board, Baykeeper, City of San Jose, Zone 7, Bay Area Clean Water Agencies, Central Contra Costa Sanitary District, Westlands Water District, Santa Clara Valley Water District, U.S. EPA

PRIORITIZED RANK: 2	**GENERALIZED RANK: HIGH**
SCORE: 70	**COMPLEXITY: HIGH**
ESTIMATED PERSONNEL-YEARS (PY): 3.0	**PY RUNNING TOTAL: 4.0**
IMPLEMENTING DIVISION: PLANNING AND TMDL	

PROJECT TITLE	**3. Development and Implementation of Biological Objectives**	
CATEGORY	Water Quality Objectives	
SUMMARY	This project would develop San Francisco Bay-specific biological objectives for perennial and non-perennial streams. Biological objectives set the biological quality goal, or target, to which water quality can be managed, rather than the maximum allowable level of a stressor (pollutant or other water quality condition) that affects the aquatic life in that water body. Biological assessments provide direct measures of the cumulative response of the biological community to all sources of stress; they measure the condition of the aquatic resource to be protected. Therefore, biological objectives are more integrative and environmentally relevant goals for the protection of aquatic life than the objectives based on stressors that are currently in the Basin Plan. U.S. EPA is encouraging states to adopt biological objectives, and several states, such as Ohio and Florida, have already done so. In California, the Surface Water Ambient Monitoring Program (SWAMP) has been collecting the information needed to develop biological objectives. In the San Francisco Bay Region, SWAMP has collected bioassessment data by monitoring watersheds and is currently collaborating with other watershed monitoring programs to develop Bay Area-specific indices of biotic integrity (IBI) for both perennial and non-perennial streams. The State Water Board is in the process of conducting CEQA review of forthcoming statewide biological objectives for perennial streams and rivers. This project would use available data from stormwater programs, Region 2 SWAMP, the Perennial Streams Assessment Program, and the Reference Condition Management Program to develop San Francisco Bay-specific biological objectives for perennial and non-perennial streams and the associated implementation plans. The biological objectives framework relies on a combination of biological, physical, and chemical monitoring to account for natural variation through water body classification and modeling, and relies on bioassessment data to measure aquatic life directly. Biological objectives are coupled with numeric biological standards (e.g., IBI or observed vs. expected ratio scores) that provide a direct measure of the beneficial use being protected.	
PROPOSED BY	U.S. EPA	
SUPPORTED BY	State Water Board, Regional Water Board Baykeeper U.S. EPA	
PRIORITIZED RANK: 2		**GENERALIZED RANK: HIGH**
SCORE: 70		**COMPLEXITY: HIGH**
ESTIMATED PERSONNEL-YEARS (PY): 1.0		**PY RUNNING TOTAL: 5.0**
IMPLEMENTING DIVISION: PLANNING AND TMDL, WATERSHED		

PROJECT TITLE	**4. Develop Site-Specific Objectives for Dissolved Oxygen in San Francisco Bay**
CATEGORY	Water Quality Objectives
SUMMARY	This project would update the dissolved oxygen (DO) objectives in the Basin Plan. The Basin Plan currently includes a minimum water quality objective of 5.0 mg/L for DO in all tidal waters downstream of the Carquinez Bridge and 7.0 mg/L upstream of the Carquinez Bridge. These objectives were adopted in the 1975 Basin Plan and have remained unchanged. Recent scientific understanding of the DO tolerance of estuarine and marine organisms, as well as new methods for setting protective limits, may provide the technical basis for improved and more consistent objectives to protect beneficial uses. As part of the nutrient numeric endpoint project for coastal estuaries underway at the Southern California Coastal Water Research Project, an evaluation of the scientific basis for DO objectives for estuaries and enclosed bays in California has been conducted. This work may inform the update of DO objectives for the San Francisco Bay Region. Updating the DO objectives is especially important in view of the dramatic increase in opportunities for restoration of unique habitats around Bay margins. In addition, there are no Suisun Marsh-specific DO objectives. These unique habitats include extensive tidal wetlands and slough networks as well as pans and other ponded areas. However, DO concentrations in shallow water habitats such as tidal wetlands and slough networks vary much more than in the main water mass of San Francisco Bay and frequently exhibit concentrations less than 5.0 mg/L and certainly less than 7.0 mg/L. Because restoration efforts of habitats around Bay margins cannot consistently demonstrate compliance with permit conditions derived from the 5.0 mg/L DO objective, it is appropriate to explore the possibility of developing new or site-specific DO objectives for tidal wetlands, slough channels, managed ponds, shallow subtidal habitats, and other shoreline habitats. In addition, this project would coordinate with the project to develop a nutrient assessment framework for San Francisco Bay, as it is expected that DO would be proposed as a primary indicator. As such, the existing DO objectives should be evaluated for various habitats in San Francisco Bay Region.
PROPOSED BY	Regional Water Board
SUPPORTED BY	Bay Area Clean Water Agencies City of San Jose Central Contra Costa Sanitary District Westlands Water District, South Bay Salt Pond Restoration Project
PRIORITIZED RANK: 3	**GENERALIZED RANK: HIGH**
SCORE: 64	**COMPLEXITY: HIGH**
ESTIMATED PERSONNEL-YEARS (PY): 2.0	**PY RUNNING TOTAL: 7.0**
IMPLEMENTING DIVISION: NPDES, WATERSHED, NPS/PLANNING	

PROJECT TITLE	**5. Amend Wet Weather Overflows Implementation**	
CATEGORY	Implementation Plans	
SUMMARY	This project would amend the Basin Plan's implementation plans for addressing wet weather overflows. The Basin Plan currently contains a conceptual approach for evaluating wet weather discharge conditions where polluted stormwater or process wastewater bypasses normal treatment. This approach uses three levels of treatment corresponding to the three types of beneficial uses commonly affected by wet weather overflows (water contact recreation, non-contact water recreation, and shellfish harvesting). In 2007, the State Water Board found the wet weather permit and time schedule order (TSO) issued to the East Bay Municipal Utility District to be inconsistent with the federal Clean Water Act mandate that municipal wastewater treatment facilities achieve secondary treatment at a minimum. State Water Board Order 2007-0004 remanded the permit and TSO back to the Regional Water Board for revision and directed the Regional Water Board to amend the Basin Plan to delete language that conflicts with the Clean Water Act. The Regional Water Board has adopted a revised permit and a stipulated order that no longer allow discharges from wet weather facilities to the Bay. This project would amend Section 4.9.2 and Table 4-4 of the Basin Plan to update the relevant language there.	
PROPOSED BY	State Water Board	
SUPPORTED BY	Baykeeper	
PRIORITIZED RANK: 4		**GENERALIZED RANK: HIGH**
SCORE: 62		**COMPLEXITY: LOW**
ESTIMATED PERSONNEL-YEARS (PY): 0.5		**PY RUNNING TOTAL: 7.5**
IMPLEMENTING DIVISION: NPDES		

PROJECT TITLE	**6. Update the Basin Plan's Toxicity Testing Requirements**	
CATEGORY	Water Quality Objectives	
SUMMARY	The State Water Board is developing an amendment to the Toxicity Control Provisions of the Policy for Implementation of Toxic Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California. That amendment would update procedures for assessing the potential for chemicals to cause toxicity to aquatic life in surface waters. This project would update the Basin Plan to be consistent with the forthcoming statewide policy. Currently, there are inconsistencies between different State and Regional Water Boards' toxicity testing requirements that result in uneven protections for aquatic life and an unequal playing field for waste dischargers. By adopting numeric toxicity objectives, the State Water Board would establish a clear, consistent definition of toxicity. By contrast, existing narrative toxicity objectives can be subject to a vast range of interpretations. The State Water Board policy currently proposes a new statistical approach, endorsed by U.S. EPA, to be applied consistently throughout California. The new approach, called the Test of Significant Toxicity (TST), incorporates the latest statistical approach and benefits from extensive peer review. This statewide policy would supersede aspects of our Basin Plan's current toxicity policy, so this project would amend the Basin Plan's sections on toxicity (3.3.18 and 4.5.5.3) to conform to the policy. In addition, the statewide policy would allow for some Regional Water Board implementation discretion, which could result in this project proposing possible Basin Plan revisions or additions.	
PROPOSED BY	U.S. EPA (in 2009)	
SUPPORTED BY	State Water Board	
PRIORITIZED RANK: 5		**GENERALIZED RANK: HIGH**
SCORE: 61		**COMPLEXITY: LOW**
ESTIMATED PERSONNEL-YEARS (PY): 0.3		**PY RUNNING TOTAL: 7.8**
IMPLEMENTING DIVISION: NPDES		

PROJECT TITLE	**7. Contaminants of Emerging Concern**
CATEGORY	Implementation Plans
SUMMARY	Contaminants of Emerging Concern (CECs) pose a significant challenge in that there are many chemicals in use for which there are no water quality objectives. While there is a growing body of information about the likelihood of some of these contaminants contributing to impacts on beneficial uses, for many there is still a lack of toxicity and environmental occurrence information. This project would create a framework for decision-making about management actions required to address CECs in the San Francisco Bay Region. As an outgrowth of its recycled water policy, the State Water Board established a scientific advisory panel to determine which CECs should be monitored in treated wastewater prior to use for groundwater recharge or as irrigation water. The State Water Board is currently considering amendments to its policy to include a list of CECs to monitor. A second effort was also initiated by the State Water Board, engaging the same scientific advisory panel, to assist in developing a CECs monitoring strategy for coastal, ocean and inland waters. A report entitled *Monitoring Strategies for CECs in California's Aquatic Ecosystem* was released this year. The panel took a risk-based screening approach to develop a list of CECs that should initially be monitored for those CECs where information about toxicity and occurrence is available. In the last decade, the Regional Monitoring Program (RMP) has been conducting special studies on the occurrence, fate and toxicity of CECs in San Francisco Bay. Building on this work and the recommendations of the panel, the RMP will be developing an ongoing monitoring strategy for CECs. This project would involve adopting a management and regulatory strategy for CECs and updating Section 4.26.3 of the Basin Plan's Chapter 4, Implementation Plan, which discusses the Regional Water Board's historic approach to Emerging Toxic Pollutants of Concern. It is anticipated that a tiered risk-based approach would be used to make decisions about the need for management actions, e.g., controls, monitoring and the need for developing water quality objectives.
PROPOSED BY:	Regional Water Board
SUPPORTED BY:	Regional Water Board Baykeeper et al supported development of Water Quality Objectives for CECs

PRIORITIZED RANK: 6	**GENERALIZED RANK: HIGH**
SCORE: 60	**COMPLEXITY: MEDIUM**
ESTIMATED PERSONNEL-YEARS (PY): 1.0	**PY RUNNING TOTAL: 8.8**
IMPLEMENTING DIVISION: PLANNING AND TMDL, NPDES	