



SWAMP PARTNERSHIP WITH THE BAY AREA REGIONAL MONITORING COALITION

What is it?

The Municipal Regional Stormwater NPDES Permit (Permit) was adopted by the San Francisco Bay Regional Water Quality Control Board on October 14, 2009. In early 2010, San Francisco Bay Area public agencies joined together to form the Bay Area Stormwater Management Agencies Association (BASMAA) Regional Monitoring Coalition (Coalition) to coordinate and oversee water quality monitoring required by the Permit. The Coalition monitoring plan will answer the questions:

- Are water quality objectives, both numeric and narrative, being met in local receiving waters, including creeks, rivers and tributaries?
- Are conditions in local receiving waters supportive of or likely to be supportive of beneficial uses?

In addition, the unique probabilistic sample design of the Coalition Creek Status and Trends Survey will be able to answer additional management questions such as:

- What is the condition of aquatic life in creeks in the San Francisco Bay Area?
- What are the major stressors to aquatic life?
- What are the long term trends in water quality in creeks over time?

The San Francisco Bay Regional Water Quality Control Board's Surface Water Ambient Monitoring Program (R2 SWAMP) has joined the Coalition to assist with sampling perennial and non-perennial creeks and rivers in the Bay Area. Additional participants include the Clean Water Program of Alameda County (ACCWP), Contra Costa Clean Water Program (CCCWP), San Mateo County Wide Water Pollution Prevention Program (SMCWPPP), Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP), Fairfield-Suisun Urban Runoff Management Program

(FSURMP), City of Vallejo and Vallejo Sanitation and Flood Control District (Vallejo). In addition, the draft Phase II NPDES permit allows municipalities in the North Bay to join this large-scale monitoring program.

Region 2 SWAMP staff will assist this collaboration by sampling 10 sites per year over the five year study (2012-2016). These sites will be spread across the five counties of Solano, Contra Costa, Alameda, Santa Clara and San Mateo. SWAMP will specifically sample sites in non-urban environments in order to document stream conditions in relatively undisturbed habitats to provide a much needed frame of reference for the urban sites sampled under the NPDES permit. Sampling methods will include SWAMP [protocols](#) for bioassessment including benthic macroinvertebrates and algae in addition to quantitative physical habitat assessment and testing for basic water chemistry.

Why is it important?

The Coalition is a new monitoring collaborative for freshwater creeks that follows in the footsteps of the San Francisco Estuary Regional Monitoring Program (RMP). A major focus of this project is coordination among stormwater agencies, which will improve consistency and efficiency, resulting in financial savings and a uniform dataset. Water Board support of this program is vital to promote regional monitoring initiatives, which are able to better address the ambient conditions of aquatic resources because this program relies on a probabilistic sample design that allows observed conditions to be extrapolated across the region.

This monitoring effort will increase the number of reference sites available in the San Francisco Bay Area. Reference sites are necessary to develop interpretative tools such as the Bay Area Index of Biotic Integrity (IBI) for non-perennial streams, a numeric metric used to quantify the biological condition in local streams and creeks. The IBI is a tool that provides a numeric score based on the benthic macroinvertebrates (bottom-dwelling animals) found in a stream or river. Quantitative scoring tools such as IBIs allow the State to objectively assess stream health. Reference sites also help provide information on the physical, chemical, and biological condition of streams with minimal human disturbance.

This project follows recommendations by the 2006 SPARC review of California's SWAMP program to leverage its funds with other programs and meets many SWAMP Core Implementation Priorities listed in the 2010 SWAMP Strategy including: 1) implementing regional monitoring programs; 2) guiding development of assessment tools that will be developed from this project and existing data (Bay Area IBI and Bio-objectives numeric tool); and 3) engaging Water Board regulatory programs (NPDES) to integrate SWAMP monitoring designs.

How will this information be used?

These data will be submitted to the California Environmental Data Exchange Network ([the California Environmental Data Exchange Network](#)) and be available to partners in the water quality community and general public. This project will also contribute data for the statewide 305(b) report because the sampling design was developed so that Coalition data can be integrated with data from the SWAMP statewide design, contribute data for 303(d) assessments, contribute data which can be used to enforce anti-degradation policy, and help evaluate non-point source and stormwater BMP effectiveness.

This monitoring project has implications for other statewide Water Board activities. Data generated in this study will contribute to the broader dataset used to develop statewide biological objectives, numeric criteria based on the macroinvertebrate community which will relate to the aquatic life beneficial use.

For more information on biological objectives [click here](#).