

Proposed SWAMP Monitoring in the San Diego region for FY 12/13

Task 1: Cyanotoxin project

In the San Diego region, and statewide, no monitoring program is in place to routinely monitor for cyanotoxins in water bodies. Therefore, the San Diego Water Board started a screening study in 2012 to screen streams and freshwater wetlands for cyanotoxin presence. Preliminary results show that cyanotoxins occur in most of the streams and freshwater wetlands that were sampled. Funding allocated from this work order will be used to screen lakes/reservoirs and coastal wetlands in the San Diego region.

Task 2: Implementation of monitoring and assessment framework

The mission of the San Diego Water Board is to protect and restore the chemical, physical, and biological integrity of waters in the San Diego Region. To enable the San Diego Water Board to carry out its mission more strategically and more effectively, the San Diego Water Board developed a new framework that outlines a new approach to monitoring and assessment. The approach is conceptually simple, logical, systematic, question-driven, and water body-oriented, and it has been successfully used elsewhere in California. The framework outlines a collaborative process for implementation of the framework. Previous SWAMP funding already supported programs that improved monitoring and assessment of San Diego region's watersheds and water bodies. Funding from this work order will be used to pay a facilitator to help with the implementation of the monitoring and assessment framework, help with collaborative process with the stakeholders, and evaluate the implementation of the framework.

Task 3: Monitoring for Forester Creek restoration site

To this date, only few restorations for streams were conducted in San Diego County although it is known that half of the stream miles are degraded. One of the largest restorations that were conducted was in Forester Creek. Forester Creek is located in the San Diego River watershed and drains into San Diego River. The creek was a concrete-lined undersized flood channel that regularly flooded the area of Santee and the water quality of the creek was poor. In 2006, the City of Santee started a \$40-million Forester Creek Improvement Project. The Forester Creek Improvement Project involved the widening and naturalization of a 1.2 mile segment of the Forester Creek channel within the City of Santee with the multi-purpose goals of benefiting the natural habitat, improving water quality, and increasing the channel's flood control capacity. Funding from this work order will be used to monitor the restoration site for several parameters to evaluate if the multi-purpose goals were achieved. Monitoring for this project is also partly funded by the San Diego Water Board's lab contract.

Task 4: Monitoring to support the collaborative monitoring program in the San Diego river watershed

For the past two years, allocations from the SWAMP R9 program supported the monitoring coordination for the San Diego River watershed. The purpose of this work was to improve monitoring and assessment of San Diego river watershed through watershed coordination and program integration. The goals of the project were: (1) Providing a framework for periodic and comprehensive assessments of watershed condition, (2) Expanding the monitoring of ambient conditions related to key beneficial uses to the entire watershed, and (3) Improving the coordination and cost-effectiveness of disparate monitoring efforts. The program design was developed by a multi-stakeholder workgroup and was modeled on analogous efforts in other watersheds in southern California. The stakeholder group developed monitoring programs for the San Diego river watershed that address four key management questions: (1) Are our aquatic ecosystems healthy?, (2) Is it safe to swim?, (3) Is it safe to eat fish and shellfish?, and (4) Is the water safe to drink?. Funding allocated through this work order will help support the monitoring programs for the aquatic health and the safe-to-eat-fish questions that were developed by the stakeholder groups.

Task 5: Monitoring for non-perennial stream project

73% of all stream resources in the San Diego region are nonperennial. These resources have received relatively less attention than perennial streams, and they are currently excluded from most monitoring efforts. Furthermore, existing maps (such as the National Hydrography Dataset) do not adequately represent the location and extent of nonperennial streams. Consequently, the functions and services they provide are not well documented. As new protection policies and programs are developed at the state and regional levels, more complete information on the extent and condition of all aquatic resources in the region will be required. Preliminary research in the region has shown that at least some nonperennial streams are ecologically similar to perennial streams, and assessment tools based on benthic community structure can be used in nonperennial streams. Key step in evaluation of any assessment tool is clearly defining reference condition. In order to test range of applicability of the tool, there is a need to test at a range of reference sites representing natural physical and hydrologic gradients. So far, very few reference nonperennial streams have been sampled in southern California. Data from a variety of minimally disturbed nonperennial streams, representing key environmental gradients (including hydrology, geology, and climate), is necessary to determine where benthic communities (both benthic macroinvertebrates and algae) can be used for assessments effectively. This project is also partly funded by Basin Planning funds to the San Diego Water Board. Funds allocated through this work order will be used to pay for sample collection, and analysis.