DEVELOPMENT AND IMPLEMENTATION OF AN INTEGRATED WATERSHED-WIDE MONITORING PROGRAM FOR THE SAN GABRIEL RIVER (CALIFORNIA)

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The San Gabriel (California) River Regional Monitoring Program (SGRRMP) was developed to address inefficiencies and improve coordination between existing, disparate monitoring programs. Monitoring in the watershed had historically been conducted by numerous agencies focused on compliance monitoring of point source discharges. This single objective monitoring was not well coordinated and had limited spatial coverage, poor data comparability between programs, and redundancies between monitoring programs. This led the Los Angeles Regional Water Quality Control Board to require development of a watershed-wide monitoring program.

The development of the monitoring design brought together watershed stakeholders that included regulators, NPDES permittees and citizen groups who are vested in water quality and ecosystem health. The first step in this process was for the workgroup to develop a list of monitoring questions and assess the ability of current monitoring to answer these questions. Next, the workgroup recommended monitoring designs to effectively and efficiently answer these questions. The resulting program is a multi-level monitoring framework that combines probabilistic (ambient) and targeted sampling for water quality, toxicity, macroinvertebrate bioassessment, and habitat condition. The goals of the program are to describe overall watershed condition, determine whether specific water quality objectives are being met, and assess relative human health risk due to swimming and fish consumption.

Program coordination for the initial sampling event for this program included standardizing field protocols and data transfer formats, laboratory intercalibration, and schedule coordination. Sampling for this program has been conducted in 2005, 2006 and 2007. Results to date illustrate clear patterns that distinguish the upper (un-developed) portions and lower (developed) portions of the watershed in terms of water quality and habitat condition. Furthermore, results of the ambient assessment provide context for evaluating water quality and stream conditions below permitted discharge locations. Finally, the results are helping to identify areas where expanded monitoring or special studies should be focused.

Funding for the overall long-term program has been achieved by streamlining compliance monitoring programs and reducing redundancy between programs. Resources saved by improving efficiency have been reallocated to currently unfunded watershed monitoring needs or to special studies.

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