

Southern California Stormwater Monitoring Coalition 2014 Research Agenda

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INTRODUCTION

Collaboration is a powerful vehicle towards common understanding. The Southern California Stormwater Monitoring Coalition (SMC) exemplifies this collaborative synergy, having spent the last 10 years filling foundational gaps in knowledge about how to improve stormwater management. Creating monitoring infrastructure, deciphering stormwater mechanisms and processes, and assessing receiving water impacts have brought tremendous leaps in how dischargers and regulators address the challenging issues of urban runoff. Cumulatively, the SMC and its project partners has expended over \$6M to fill these data gaps.

The SMC has improved stormwater management as they have learned by implementing applied research projects (Table 1). The SMC addressed peak flow hydromodification, and the result was interim peak flow criteria and the development of monitoring and management tools for identifying and minimizing hydromodification impacts in at-risk stream segments. The SMC addressed stream biological assessments, and the result was an integrated, coordinated regionalized monitoring program that provides holistic views of ecosystem health and has become the foundation of California's upcoming biological integrity program. The SMC addressed low impact development (LID), and the result was a practitioners' manual on the most efficient designs for LID management practices. These are just a few examples of the meaningful impact from collaborative SMC projects. Virtually every project the SMC has undertaken has led to some change in stormwater management and/or policy.

Despite the success of the SMC, numerous stormwater issues persist and unresolved problems stymie regulatory and regulated agencies. After a decade of steadily improving progress, the remaining challenges are much more difficult to resolve. For example, the SMC can now identify where stream biological communities are impacted, but deciphering the cause(s) of the impact remain elusive. The SMC installs numerous structural control measures such as on-site retention basins, but optimal sizing, location, and flow controls have yet to be defined for the various precipitation and geologic conditions found throughout Southern California. The SMC now has quantifiable accuracy and precision limits for measuring routine, traditional pollutants

identified in regulatory permits, but have little idea about the occurrence or toxicity for thousands of non-traditional chemicals of emerging concern that may be impacting their stream.

The SMC is about to recommit to their interagency collaboration. A master agreement, the document that binds them together as an entity, will be signed before fiscal year-end. The master agreement calls for a Five-Year Research Agenda, a forward-looking list of issues to address as implementable projects. This document is that Research Agenda and it will serve as the road map for the SMC.

Full Text:

http://ftp.sccwrp.org/pub/download/DOCUMENTS/TechnicalReports/828_SMCResearchAgenda.pdf