

Framework for Developing Hydromodification Monitoring Program

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EXECUTIVE SUMMARY

In recognition of the pervasive effects of hydromodification (i.e. alteration of runoff patterns associated with change in land use that result in change in physical channel conditions) on southern California streams, many municipalities are now required to develop hydromodification management programs. Monitoring the effectiveness of these programs is critical because hydromodification management is in its infancy, and there is much to be learned from early efforts. This document is intended to provide a framework to assist state agencies, local jurisdictions, and municipal stormwater permittees in developing detailed hydromodification monitoring plans to address specific management and reporting needs.

Monitoring the effects of hydromodification is challenging. Physical changes associated with changes in runoff are difficult to assess because they can result from a combination of contemporary land-use changes, legacy land practices (e.g. grazing), and stochastic events (e.g. floods and fires). Furthermore, channel adjustments can occur dramatically and rapidly after extended periods of apparent stability and can vary over small distances. Separating out the effects of human activity from natural cycles of channel evolution further complicates hydromodification monitoring and requires much longer term monitoring than traditional water quality programs.

Given the need for long-term commitment and investment, we propose a tiered approach to hydromodification monitoring. This tiered approach can be implemented in phases with different elements being prioritized based on management information needs, condition of managed streams, and available resources. Monitoring for each element is based on one or more directed questions that guide specific monitoring designs:

Full Text

http://ftp.sccwrp.org/pub/download/DOCUMENTS/TechnicalReports/752_HydromodMonitoringFramework.pdf