

Southern California's First Approved Hydromodification Management Plan Overview of the San Diego HMP

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The San Diego Hydromodification Management Plan is scheduled for approval by the San Diego Regional Water Quality Control Board on June 9, 2010. Upon approval, the San Diego HMP will be the first approved HMP in Southern California. Adoption of the San Diego HMP will mark a shift toward susceptibility-based approaches in hydromodification management.

Specifically, the San Diego HMP designates flow control approaches based upon the receiving channel susceptibility to erosion, as opposed to using a single lower flow threshold as prescribed in previously-approved HMPs in California. Project-specific lower flow thresholds will be determined with a combination of stream assessment tools and critical flow calculations specific to the receiving stream.

HMP applicability will be determined through use of a decision matrix outlined in the HMP document. Certain exemptions may be applied for situations where projects discharge runoff directly to a hardened conveyance system (which extends to another exempt system) or where projects discharge to a large river conveyance system, reservoir, or tidally-influenced area. In some situations, the HMP also allows for the implementation of stream restoration solutions.

For most development projects, the HMP strongly encourages use of Low Impact Development (LID) integrated facilities to provide both water quality treatment and hydromodification flow control. The San Diego HMP project includes development of a BMP Sizing Calculator, prepared under the direction of the San Diego Regional Copermittees, to assist project applicants and municipal review staff in the analysis and design of storm water management facilities.

The San Diego BMP Sizing Calculator will include a BMP mitigation suite of bioretention basins (including in-series treatment-train facilities consisting of vaults and cisterns), flow-through planter boxes, dry wells, and extended detention facilities.

For LID solutions, sizing factors have been generated for varying lower flow threshold requirements and a series of rainfall gauges describing San Diego's diverse climate areas. Extended detention basin designs will be generated using an automated basin sizing algorithm developed pursuant to guidelines set forth by the San Diego Copermittees.

This presentation will include a BMP Sizing Calculator example of a bioretention basin design as well as one example using the extended detention basin design option. Various receiving channel, rainfall station, and development type conditions will be exhibited in the example presentations.

