

## **Hydromodification Management Plan Progress Report**

### **Introduction**

Order R9-2007-0001, adopted January 24, 2007, states that Copermittees shall, "within 18 months of adoption of the Order: Submit progress report on completion of requirements of the HMP." The Copermittees previously submitted a workplan and schedule to the San Diego Regional Water Quality Control Board in July 2007. A meeting between the Regional Board and the Copermittees was held February 21, 2008, and another has been scheduled for July 23, 2008 to discuss our approach and progress in our efforts. At the July meeting, the Copermittees will provide a summary of the Hydromodification Management Plan development as well the updated workplan and schedule.

### **Background**

The San Diego Region Copermittee members convened a formal Hydromodification Management Plan (HMP) workgroup in December 2006. Since that time, the HMP workgroup has met regularly. The County of San Diego, which is the Principal Copermittee, serves as the workgroup chair.

On behalf of the Copermittee workgroup, the County procured consultant support for development of the HMP. The HMP workgroup agreed upon a cost share formula and mechanism to produce the HMP. In an effort to educate the workgroup on successful HMP implementation and HMP methodologies throughout the State, the workgroup has also discussed HMP plan development with Santa Clara and Contra Costa Counties.

Additionally, the workgroup convened a Technical Advisory Committee (TAC) to assist in developing an appropriate methodology for the San Diego region, which is coordinated by the City of San Marcos. The TAC includes representatives from Copermittees, other municipalities in Southern California as well as the academic, local engineering community, environmental stakeholder groups, the building industry, and local, state, and federal technical resource agencies. The workgroup is also coordinating with and participating in the Southern California Coastal Water Research Project (SCCWRP) regional hydromodification management study. The Copermittees believe that coordination with the SCCWRP project will leverage our financial and technical investment to expand the scope and benefit the outcome of our study.

The consultant has assisted the Copermittees in identifying an Interim Hydromodification Criteria for projects disturbing 50 acres or more. Currently, the consultant is working with the Copermittees and TAC to prepare the final Hydromodification Management Plan (HMP) and to design/create tools or products to assist developers/engineers to meet the HMP requirements for project sites.

### **SCCWRP Regional Hydromodification Management Study**

The Southern California Coastal Water Research Project (SCCWRP) received \$1 million of Proposition 50 funding to perform a regional hydromodification management study. The goals of the SCCWRP project are to answer the following questions for Southern California:

1. Which streams in southern California are at the greatest risk of effects of hydromodification?
2. What are the anticipated effects in terms of increased erosion, sedimentation, or habitat loss associated with increases in impervious cover?
3. What are some potential management measures that could be implemented to offset hydromodification effects?

The major tasks that SCCWRP will be performing under this grant include:

1. Develop protocols for mapping and stream classification;
2. Develop protocols for monitoring and assessment;
3. Develop and calibrate predictive models; and
4. Develop management tools.

The products that will be developed as part of this grant include:

1. Screening tool to evaluate whether or not a project is likely to be of concern for hydromodification;
2. Methodology to evaluate the expected magnitude or intensity of the effects (which would include models, decision trees, nomographs, or plots);
3. Mitigation tools to guide recommended mitigation and management measures (including fact sheets, design criteria, sizing standards).

SCCWRP will also be utilizing consultant assistance and has formed a Technical Advisory Committee (TAC). It is worthwhile to note that SCCWRP has budgeted funds to bring national and state HMP experts to participate in their TAC meetings.

### **Copermittee Coordination with SCCWRP**

SCCWRP has invited the Coopermittees to coordinate in its development of a regional hydromodification management study and tools. The Coopermittees and SCCWRP will closely coordinate efforts in various ways, including the TAC, field work, and creation of protocols, models, and tool.

## **Workplan and Schedule**

<b>Tasks</b>	<b>Tentative Order</b>	<b>SCCWRP Project</b>
Adoption by Regional Board	January 24, 2007	-----
Advertise Request for Proposal for Consultant	early Spring 2007	
Consultant Contract awarded	Summer 2007	February 2007
Convene Technical Advisory Committee	Summer 2007	March 2007
Literature Review Update	Fall 2007	Unknown
Protocols for channel mapping and classification	Summer 2008	Summer 2007
Protocol for channel standard	Summer 2008	-----
Interim HMP	March 24, 2008*	-----
Submit Progress Report to Regional Board	July 24, 2008	-----
Protocols for regional monitoring/assessment	Winter 2008	Winter 2008
Screening Tools	Fall 2008	Fall 2008
Submit Draft HMP to Regional Board	January 24, 2009	-----
Dynamic Simulation Tools	Summer 2009	Summer 2009
Management Tools	Fall 2009	Fall 2009
Outreach	90 days after Regional Board approval	Winter 2010

\* Originally scheduled for implementation on January 24, 2008. The deadline was extended by two months due to October 2007 firestorm in San Diego region.

### **1. Completion of the literature review**

Literature review has focused on HMP developments in other regions of the State, specifically Contra Costa and Santa Clara Counties, within the past two years. Additional literature review has been conducted regarding channel classification standards and continuous simulation parameter data specific to Southern California.

### **2. Development of Protocol to identify an appropriate channel standard and limiting range of flow rates**

The protocol is currently in development by the Copermittees' consultant and Technical Advisory Committee in coordination with SCCWRP. Determination of the channel standard and limiting range of flow rates involves sediment transport analyses based on continuous flow simulations. The consultant

team has identified representative sites and receiving streams and is currently processing synthetic watershed results to determine upper and lower flow range limits for geomorphically significant flows.

### **3. Development of guidance materials & other required information**

The Tentative Order requires guidance materials in permit provision J.2.a.(2)(a).

The Copermittees and consultant will produce user-friendly tools and guidance materials for use by developers, engineers, municipal staff and other land-use planners to effectively mitigate hydromodification impacts. The Copermittees will coordinate with the SCCWRP project to the greatest extent possible.

Development of the flow duration modeling tools will include the following:

1. Development of comprehensive continuous rainfall data set;
2. Determination of design criteria and validation of watershed input parameters used in continuous simulation models;
3. Continuous simulation modeling for a variety of flow control devices, including Low-Impact Development integrated management practices;
4. Development of design tools to assist in the development and assessment of flow control devices for mitigation of hydromodification effects.

### **Summary**

This memo is the fulfillment of the Copermittees' progress report requirement to the Regional Board. The development of the HMP will be an unfolding process and we expect the workplan to expand and change with input from the involved parties. The Copermittees look forward to continue coordinating with SCCWRP and leveraging its technical expertise and resources.