

# Status Update: Regional Hydromodification Management Plan (HMP)

San Diego Copermittees  
Regional Management Committee Presentation

June 17, 2010

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# Regional HMP Implementation Timeline

- *January 24, 2007*: Regional Board adopted permit
- *March 24, 2008*: Copermittees implement Interim Hydromodification Management Criteria for projects that disturb 50 acres or more (8 week extension due to 2007 wildfires)
- *January 24, 2009*: Copermittees submit Draft HMP to RB; updated draft submitted May 1
- *June 29, 2009*: Regional Board provides comments on Draft HMP
- *December 17, 2009*: Copermittees approve Final HMP
- *December 29, 2009*: Copermittees submit Final HMP to Regional Board
- *April 7, 2010*: Regional Board staff publish Tentative Resolution R9-2010-0066 recommending adoption of HMP with some changes
- *June 9, 2010*: Regional Board scheduled to consider HMP (no quorum)
- *July 14, 2010*: Regional Board scheduled special meeting
- *Jan 14, 2011*: Earliest potential implementation of Final HMP Criteria

# Tentative Resolution R9-2010-0066

- Regional Board staff makes 7 recommendations
- Land Development Workgroup concurs with 4
  - Change required facility drawdown time from 72 hours to verify with municipality;
  - Develop a Quality Assurance Project Plan (QAPP) compatible with the Surface Water Ambient Monitoring Program (SWAMP) for HMP monitoring plan;
  - Add commitment to evaluate monitoring data within 5 years of HMP implementation;
  - Each Copermittee shall incorporate approved HMP into our SUSMPs (as required by the Permit).
- Workgroup does not concur with 3
  - Recommendation to remove urban infill exemption (#1)
  - Recommendation to expand monitoring plan (#4, 5)

# Small Urban Infill Project Exemption

- Would apply only if all 5 conditions below are met:
  - Only in watersheds that are significantly urbanized (i.e. existing impervious > 40%)
  - Potential for cumulative added impervious areas in watershed < 3% (as determined by Land Use General Plans)\*
  - Project discharges runoff directly to a hardened conveyance system or rehabilitated drainage system designed to convey ultimate land development conditions
  - Hardened/rehabilitated conveyance extends beyond project's domain of assessment
  - Conveyance system discharges runoff to a channel with a LOW susceptibility to channel erosion (SCCWRP channel susceptibility method)
- \* B&C continuous simulation models show that for watersheds with >40% imp. area, increases < 3% have negligible impact

# Copermittee Recommended Monitoring Plan

- Baseline
  - Cross section monitoring
    - d/s of 5 proposed PDPs in headwaters of watersheds or subbasins
    - d/s 1 small urban infill project (added)
    - 1 watershed location where no existing or planned u/s development (added)
  - Flow-based sediment monitoring at same location as x-section data monitoring (to identify flows at which sediment transport begins in stream: refine critical flow and lower flow threshold used in HM design)
- Post-project
  - Cross section monitoring at baseline stations
  - Flow-based sediment monitoring at baseline stations
  - Monitoring of HM facilities (e.g. bioretention basins, flow through planter boxes, extended detention basins, etc) u/s of stream monitoring stations
    - Data input into continuous simulation models to be compared with inflow/outflow results collected in monitoring for refinement of HMP facility sizing factors.

# Regional Board Staff Recommended Monitoring Plan

- Pre-Project
  - Each PDP subject to HMP shall provide pre-project monitoring
  - In areas of open space (no PDP planned) Copermittees shall monitor at least one location per hydrologic unit annually (8 total)
- Monitoring/BMP Evaluation
  - For each hydrologic unit
    - Copermittees monitor in-stream flow sediment d/s planned or completed PDPs
    - For a minimum of 20% of approved PDPs
    - Until Order R9-2007-0001 is superseded

# June 9 HMP Conference meeting (since Board could not take action)

## ■ Participants

- Copermittees (City of SD, Santee, Oceanside, County) & consultants
- HMP TAC Chair/APWA and 1 TAC member
- USEPA
- Regional Board staff
- Coastkeeper/Coast Law Group
- NRDC
- Sierra Club

# Discussion Items

- Copermittees: infill exemption & monitoring
- USEPA: wants San Diego HMP to reflect where other permits are going (South Orange County, Ventura, etc.)
- Coastkeeper/NRDC:
  - More implementation of LID
  - HMP flow matching to “pre-settlement” hydrology conditions rather than “pre-project”
  - More cumulative impact analysis
  - Removal of all exemptions

# Regional Board comments

- Reiterated that they cannot add requirements at this time without re-opening the permit;
- Goal of monitoring plan to assess effectiveness of program (i.e. changes in streams) rather than how specific BMPs perform;
- Recommends that we perform power analysis to determine appropriate number of monitoring stations;
- Recommends Copermittees develop a fee structure to recoup monitoring fees;
- Board Chair recommends including rainwater harvesting in HMP.

# What is a Power Analysis?

- Can be used to calculate the minimum sample size required to accept the outcome of a statistical test with a particular level of confidence.
- Can also be used to calculate the minimum effect size that is likely to be detected in a study using a given sample size.
- Result
  - Does not give a magic number of the # of sites to monitor
  - Is a graph with sensitivity of monitoring program on y-axis
  - # of samples, years, time on x-axis
  - Will also plot cost on a 2<sup>nd</sup> x-axis

# SCCWRP input

- Eric Stein supports use of a power analysis
  - Uses existing data (x-section data, SCCWRP has provided)
  - Looks at inherent variance in data set
  - Warnings
    - Variance will be huge both in different locations in 1 site and between multiple sites
    - The data are very “noisy” (could monitor 100 sites but still not detect change)
    - Will be very hard to detect change without ~10 years worth of data
  - Recommends taking a long view: not so much about # of sites, but appropriately positioning sites
  - Want to position long-term monitoring sites in key locations

# Next Steps

- Consultant Team conducting power analysis
- HMP TAC meeting 6/21 2:30pm at City Metro Biosolids Center (Jo Ann Weber, Chair of Sci & Mon group to attend)
- Land Development Workgroup Meeting 6/22 1:30pm at County Offices
- Follow up meeting with Regional Board staff 23<sup>rd</sup> or 25<sup>th</sup>
- Regional Board staff requests Copermittees to submit monitoring plan counterproposal by June 25th

# Question for Discussion Today

- Given that Copermitttees already spend \$2.5 million annually on our regional monitoring program,
- How much more are we realistically able to spend on HMP monitoring?
- Aside: Land Development workgroup discussed monitoring costs to be paid with MOU “Default” cost share formula rather than “Special” HMP Plan Development formula