

San Diego Regional Hydromodification Management Plan (HMP)

San Diego Copermittees Regional Management Committee
Presentation
San Diego Region Water Quality Control Board Presentation

December 17, 2009

Sara Agahi, PE, CFM
Chair, Copermittee Land Development Workgroup



Agenda for HMP Presentations

- Overview of Regional Planning Effort (Agahi)
- Overview of the Plan (Mosolgo)
- Domain of Assessment, Screening Tools (Stein)
- Flow Threshold Determination (Collison)
- Questions

Regional Planning Effort

- Municipal Permit
 - Hydromodification Management Plan (HMP) Requirements
 - Regional HMP Implementation Timeline
- Development of San Diego Regional HMP
 - Copermittee Land Development Workgroup
 - Contract with Brown and Caldwell team
 - Regional Technical Advisory Committee
 - SCCWRP Regional Hydromodification Management Study
 - Coordination with San Diego Regional Board staff
 - Project Clean Water website
- Next Steps...

Municipal Permit*: Hydromodification Management Plan Requirements

Copermittees must develop plan requiring Priority Development Projects to implement hydrologic control measures so that post project runoff flow rates and durations do not exceed pre-project flow rates and durations where they would result in an increased potential for erosion of channel beds and banks, sediment pollution generation, or other impacts to beneficial uses and stream habitat.

*Order No. R9-2007-0001

Municipal Permit: Regional HMP Implementation Timeline

- January 24, 2007: Regional Board (RB) 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
- October 21, 2009: Distributed draft Final HMP to Copermittees, TAC, RB
- November 9, 2009: Received 139 comments by 12 entities (RB, NRDC, 5 cities, County, 3 engineering firms, 1 developer)
- November 25, 2009: Distributed Comment Response Document responding to all comments
- December 17, 2009: Copermittees consider approval of Final HMP
- December 29, 2009: Final HMP due to Regional Board

Development of San Diego Regional HMP

- Copermittee Land Development Workgroup
 - Representatives from all 21 Copermittees
 - Reviewed and commented on all iterations of the HMP
 - Met 12 times
- \$1 million contract with Brown and Caldwell team for plan development
 - Philip Williams and Associates – geomorphic assessment, flow threshold and sediment transport modeling
 - Dan Cloak Engineering – development of Model SUSMP, LID approach to mitigating hydromodification impacts
- Technical Advisory Committee
 - development community (Building Industry Association)
 - consulting engineering community (APWA, North County Engineers)
 - technical resource agencies (USGS, USACE, DWR)
 - academia (Dr. Howard Chang)
 - environmental organizations (San Diego CoastKeeper/NRDC)
 - met 10 times

Development of San Diego Regional HMP

- SCCWRP Regional Hydromodification Management Study
 - Originally funded by Prop 50 grant; suspended in 2008 for 1 year
 - San Diego County supported tasks for Copermittee effort
 - Analysis and categorization of streams from geomorphic context
 - Screening tools to identify channel susceptibility to hydromodification impacts (i.e., which streams are at the greatest risk of effects of hydromodification?)
 - Protocols for evaluation of hydromodification impacts downstream of PDPs: quantification of domain of assessment
- Coordination with Regional Board Staff
 - 4 formal presentations with consultant team
 - 9 additional meetings with consultant team
- Project Clean Water website: www.projectcleanwater.org

SUSMP and Hydromodification Workgroup - Microsoft Internet Explorer

Address: http://www.projectcleanwater.org/hmi/hmg_susmp.html

project clean water

Standard Urban Stormwater Management Plan (SUSMP) and Hydromodification Workgroup

HYDROMODIFICATION

- San Diego Draft Hydromodification Management Plan (HMP) (updated May 2009)
- Appendix A - San Diego HMP Technical Advisory Committee
- Appendix B - Rainfall Station Selection Criteria
- Appendix C - Summary of HMP Modeling Reports in Southern California
- Appendix D - Summary of Evaporation and Evapotranspiration Data for the San Diego Region
- Appendix E - Minimum Criteria for Evaluation of Storm Water Controls to Meet IHC
- Appendix F - Flow Threshold Analysis for San Diego HMP
- Appendix G - Lower Flow Threshold Alternatives

- Rainfall Data: Fallbrook (.whm) - Fallbrook (.csv) (updated June 2009), Lower Otay (updated April 2009), Morera Dam, Lindbergh Field, Powers, San Diego (February 2009), Bonita, Coronado (December 2008), Barroco, Escondido, Lake Wildford, Santee, San Vicente, Ramona, Bonita, Kearny Mesa (November 2008) (.whm rainfall station file, use .csv files for the HEC-HMS program) (DISCLAIMERS: 1. For all projects, the project proponent should contact the governing jurisdiction's project manager to verify that the proper rainfall gauge has been selected. 2. Information contained in the attached data set is preliminary and subject to change in the future.)

- San Diego County Rain Fall Station Map (November 2008)

- Hydromodification Management Plan Progress Report (July 2008)

- Answers for Common Interim Hydromodification Management Criteria Questions (.pdf, May 2008)

- Using Continuous Simulation to Size Storm Water Control Facilities (.pdf, May 2008)

- Rain Gauge and Rainfall Data Selection - technical memo (April, 2008)

- Rain Stream Gauge Acquisition Table (Excel)

- Development of Interim Hydrograph Modification Criteria for the San Diego County HMP presentation on February 21, 2008 RWQCC

- Click here for the Interim Hydromodification Criteria document (November 2007)

- A Hydromodification and SUSMP Public Workshop was held on November 19, 2007.

- Presentations from the workshop included:

- Development of Interim Hydrograph Modification Criteria for the San Diego County HMP
- Interim Hydromodification Criteria document (November 2007)
- Presentation: Development of Interim Hydrograph Modification Criteria for the San Diego County HMP (November 2007)

STANDARD URBAN STORMWATER MANAGEMENT PLAN (SUSMP)

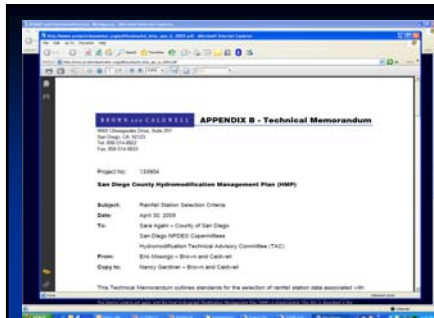
- Final Countermodel Model SUSMP - Standard Urban Stormwater Mitigation Plan (January 2, 2009)
- Low Impact Development to meet stormwater NPDES treatment and hydrograph modification management requirements presentation February 22, 2009
- Click here for the Revised Model Standard Urban Storm Water Mitigation Plan document - No Redline (February 2008).
- Plans for Standard Urban Stormwater Management Plan Revisions
- Standard Urban Stormwater Management Plan and Interim Hydromodification Management Criteria
- Revised Model Standard Urban Storm Water Mitigation Plan document (February 2008)
- SUSMP Template Update Memo (December 2007)
- Presentation: Plans for Standard Urban Stormwater Management Plan Revisions (November 2007)
- Presentation: Standard Urban Stormwater Management Plan and Interim Hydromodification Management Criteria (November 2007)

GEOMORPHIC ASSESSMENT

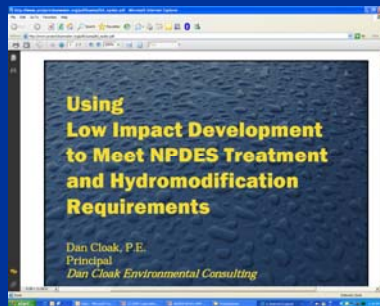
- Geomorphic Assessment of HMP Flow Control Thresholds presentation (.pdf, May 2008)
- Geomorphic analysis for interim Hydrograph Modification Plan (HMP) (.pdf, May 2008)

Regional Water Quality Control Board Order R9-2007-0001 Provision D.1.g (6) (Board Order) requires the County of San Diego and its NPDES Co-permittees to identify Interim Hydromodification Criteria (IHC) within 365 days of Order adoption (i.e., by January 24, 2008). The interim criteria will apply until the final hydrograph modification management plan is implemented. The IHC is described in the

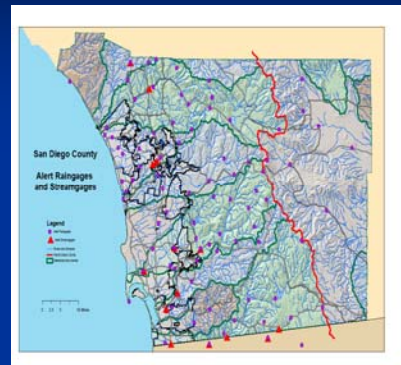
start | Internet



Technical Memoranda



Rain gage data for continuous simulation modeling



Presentations from regional trainings and key meetings

Next Steps

- **Regional Board Review:** includes a 45-day public comment period; must bring Plan to Board for approval.
- **Within 6 months of Regional Board approval of HMP:** Copermitttees must incorporate final hydromod criteria into local SUSMPs and implement for all PDPs.

Improvements	24
• Low Impact Development Requirements	25
• Basin Requirements for Stormwater Treatment Facilities	26
• Flow Control (Hydromodification Management)	26
Criteria for Mitigation Devices	27
• Model LID Features and Practices are Not Mitigation Devices	28
Environmental and Economic Benefit Perspective	28
CHAPTER 3. PREPARING YOUR PROJECT SUBMITTAL	31
• Example Project Submittal CHECKLIST	32
• Contents of EXHIBIT	32
• Step by Step	33
Step 1: Assemble Needed Information	33
Step 2: Identify Constraints & Opportunities	34
Step 3: Prepare and Document Final LID Design	35
Step 4: Identify Source Control BMPs	36
• Identify Polluted Sources	36
• Map Locations on Submittal Drawings	37
• Prepare a Table and Narrative	37
• Identify Department Source Control BMPs	37
Step 5: Document Facility Maintenance	38
Step 6: Complete Final Project Submittal	38
• Coordinate with City, Architectural, and Landscaping Plans	39
• Coordinate with NPDES specialist	39
• Certification	40
• Example Project Submittal Outline and Contents	41
• Example Project Submittal	42
CHAPTER 4. LOW IMPACT DEVELOPMENT DESIGN GUIDE	43