

To: Sara Agahi
From: Dan Cloak
Subject: **Draft Revisions to SUSMP and
Response to Comments on the October 16 memorandum**
Date: 2 November 2007

Attached is an edited version of the model SUSMP. This version was created from the version you sent to us, which already included extensive edits by you and by other watershed program staff.

These additional edits represent an effort, within the very limited time and budget allowed, to bring the model SUSMP more closely in line with NPDES permit requirements and with your direction and the direction of the HMP/SUSMP Copermittee Workgroup.

The additional proposed edits are shown in MS Word "track changes" view. To facilitate your review, the additional proposed changes are also summarized below:

- **Definition of "Significant Redevelopment"**. Added a reference to "Step 8," which includes the hydraulic sizing criteria. I suggest it is unnecessary to allow the applicant to ignore the BMP selection criteria when meeting the treatment requirement for previously existing portions of a redevelopment project. Applicants can use high-rate biofilters or media filters to comply with the numeric sizing requirements, or obtain a waiver.
- **Section VI. Stormwater BMP Selection Procedure**. Replaced reference to USEPA's "Preliminary Data Summary" with reference to Table 3 and references in Appendix B.
- **Table 1**. Added rows for "heavy industrial" and "retail gasoline outlet" uses to be consistent with the list in the SUSMP summary and the NPDES permit.
- **Section VI, part c. "Identify Conditions of Concern."** The suggested edit gives municipal staff the option of requiring these analyses and reports. I think it's an unnecessary burden on development to require them as a matter of routine on all sites. However, there may be regulatory history here of which I am unaware.
- **Comment under #4 below that heading**. Note that this is a *de facto* hydrograph modification management standard. It should be considered whether to retain it or delete it in favor of the interim hydrograph modification criterion, which applies only to projects 50 acres or larger.

- **2. Establish Storm Water BMPs.** Made minor text edits for clarity. Added a paragraph which would allow a project proponent to bypass analysis of pollutants of concern and treatment effectiveness if they opt to use LID.
- **Replaced Table 3** with the new version in the October 16 memo, including all the notes to that table. In the new version, replaced the heading “gross pollutants” with “coarse sediment and trash” per the discussion at the 18 October meeting. Added a statement regarding drain inserts stating that they have low effectiveness in removing pollutants that tend to associate with fine particles and have medium effectiveness in removing coarse sediment and trash, but are sometimes used to augment more effective treatment facilities or are used alone when more effective facilities have been deemed infeasible.
- **Low Impact Development and Site Design BMPs.** Edited the text to emphasize bioretention and infiltration. Added references to the Portland *Stormwater Management Manual* and Contra Costa's *Stormwater C.3 Guidebook*.
- **Appendix A.** Edited the list of allowable treatment BMPs, mostly for clarity. Deleted "rock swale" as it is unclear exactly what that is or how it operates, and substituted "bioretention swale" for "vegetated swale." Deleted drainage inserts, oil water separators, catch basin insert, storm drain insert, and catch basin screens. Added trash racks and screens.
- **Appendix B.** Updated some of the hyperlinks and references. Added the Portland and Contra Costa manuals.

Response to Comments

Comments from Jim Nabong, City of San Diego

Comments on Interim Hydromodification Criteria:

1. Will it be possible to have LID design criteria completed by January 24th? *If it is not possible to complete the criteria by that date, we could include a reference to forthcoming LID criteria in the January 24 submittal and complete the criteria as soon as possible after.*
2. Mapping of hardened channels and channels that have highly impervious watersheds may not be needed for the interim (because of >50 acre criteria) but would be important as part of the HMP. *As discussed at the 18 October meeting, we can look at the need for mapping and alternatives to mapping. As noted at the meeting, Contra Costa chose not to invest in mapping. So far, it has not seemed to present a significant additional burden to staff or to applicants to allow the applicant the option of presenting a case that all downstream reaches are hardened, tidal, or aggrading.*
3. How will variation in sensitivity to hydromodification for specific streams be addressed? Will some projects have softer requirements if the receiving stream is geomorphically stable (but not otherwise meeting one of the 3 exemptions)? *As part of our investigation for the final criteria, we will look at*

whether identification of more-or-less geomorphically stable streams is likely to significantly alter requirements for development projects.

4. How effective are requirements that addresses only flow rates and durations but not sediment supply? Will there still be channel instability because of reduced sediment supply from developed lands? *Quite possibly, depending on location. For the final criteria, we will look at whether this can be addressed within the framework imposed by the NPDES permit.*

5. For the LID option, there needs to be options that will work for sites that have limited space or where infiltration is undesirable because of poor soils or other geotechnical concerns. *The Contra Costa HMP includes the option of a flow-through planter which can be used in these situations. We will look at further developing and refining facility designs for use in San Diego as we develop the model SUSMP for submittal to the Regional Board in July 2008.*

Comments on SUSMP Table 3

1. Pollutant Categories - Heavy metals, organic compounds, oxygen demanding, and pesticides can also be dissolved pollutants. The City of San Diego has TMDLs for dissolved zinc, lead and copper. The City of San Diego also has TMDLs for pesticides. Diazinon is being removed as a source, but other O-Ps are legal and dissolve in water. *The table in the notes to Table 3 characterizes metals (including zinc, lead, and copper) and pesticides as associated with fine particles. Although these pollutants typically exhibit a fraction that can be characterized as "dissolved" (depending on the separation method used), they tend to associate with small particles during treatment and especially during filtration through porous media. Therefore Table 3 characterizes the media filters as having a relatively "high" capability for removing these pollutants, which is consistent with experience. In the markup of the SUSMP, the headings in Table 3 have been revised to make it more clear that the categorization of pollutants refers to their fate during treatment, not their occurrence in runoff or in ambient waters.*

2. Pollutant Removal Efficiency - What are the published sources? Were real world maintenance conditions considered in this ranking (ie. lower ranking if a BMP has a high maintenance requirement and performs poorly if not optimally maintained)? *As noted, the efficiencies identified are relative and are based on best professional judgment including consideration of published test data, professional experience, and understanding of physical processes within the treatment facilities. Consideration of maintenance requirements was included, and is one of several reasons high-rate biofilters and high-rate media filters are not rated as highly as bioretention facilities.*

3. BMP Selection Process - Two of the options are ranked "medium", and one "high", for dissolved pollutants. Is it therefore not a true statement that the "need to remove nutrients does not provide a clear basis for selecting"? If you add metals and/or pesticides to the list of dissolved pollutants, then does BMP selection become more important? *As noted, the rankings are relative. None of the treatment processes are very effective at removing nutrients from runoff. However, infiltrating a portion of the total runoff volume to groundwater does reduce nutrient loads. If reduction of the total volume of*

runoff via infiltration is not feasible, then there is little basis for selecting one or another type of facility based on ability to remove nutrients.

4. Other BMP Selection Criteria - What are some recommendations for including these criteria in such a way that it will be clear to the reviewer and applicant as to what is required? *Achieving that clarity will be a principal objective of the Model SUSMP due in July 2008.*

5. Table 3 - Which of these categories includes drainage inserts? Our permit requires us to inspect drainage inserts more frequently for maintenance. They are also ranked "low" for most pollutants in the current SUSMP. Are these being eliminated as an option, or do they fall under "trash racks"? *It is recommended that drainage inserts be removed from the list of acceptable BMPs. This would be consistent with the permit requirement to "remove obsolete or ineffective BMPs" from the SUSMP BMP requirements.*

6. Table 3 - Porous paving should be included as a BMP. *In Table 3, pervious pavements are included in the description of "infiltration BMPs."*

Comments from Jaime Campos, City of El Cajon

1. Pertaining to Table 3; will the table include storm drain inlet filters? And if so, will they be included under the definition of Media Filters? I realize that storm drain inlet filters are not considered to be very effective, but on the past, we have had a large number of proponents use them in conjunction with other post-construction BMPs (in a treatment train). *It is recommended that drainage inserts be removed from the list of acceptable BMPs. This would be consistent with the permit requirement to "remove obsolete or ineffective BMPs" from the SUSMP BMP requirements.*

2. As mentioned in the Memo "Revision to SUSMP Table 3 (Draft)"; developing and incorporating a design process as well as detailed design criteria (i.e. sizing criteria, details, specifications, etc.) for bioretention and infiltration BMPs in the Model SUSMP will be beneficial in helping to develop some regional standardization for these types of BMPs. Standardizing will be very difficult to achieved if left to individual, or a group, of Copermittees to pursue on their own. *We agree this should be a major objective of the revisions to the model SUSMP due in July 2008.*

3. In regards to the revision of Table 3 and updating the SUSMP that needs to take place by January 24, 2008; it will be very helpful to us and our Legal Counsel to have all updates and changes red-lined within the final draft document that will be completed and distributed to Copermittees by November 1st. Most of the changes will probably be related to the new or updated tables that will be incorporated to the 2002 Model SUSMP document. *The changes are incorporated in the attached revised model SUSMP.*

Comments from Helen Perry, City of Santee

1. The constituents of total dissolved solids, an impairment which we have to address in our SUSMP reviews should also be included in Table 3. According to the basin plan definition, these may include bicarbonates, carbonates, chlorides, sulfates, phosphates, nitrates, magnesium, sodium

iron, manganese. Obviously not all of these would only come from sediment. *The list of "pollutants of concern" in the existing SUSMP was used to prepare the revised Table 3. The suitability of this list can be reviewed in connection with development of the model SUSMP due in July 2008.*

2. There needs to be more consistency between the pollutants listed in Tables 1 and 3 and our impairments, so that design engineers can more readily identify the primary pollutants for a project. For example, the association between TDS (a San Diego River impairment) and sediment, would not be obvious. *Consideration of TDS is unlikely to affect the selection of treatment facilities significantly, because (1) treatment, except disposal to infiltration, is generally ineffective in removing TDS, and (2) source controls, including control of excess irrigation water, are likely to be more effective than treatment in reducing TDS loading.*