

## Santa Ana Regional Water Quality Control Board

October 11, 2013

Mr. Marc Rodabaugh  
San Bernardino County Stormwater Program  
825 East Third Street  
San Bernardino, CA 92415-0835

### COMMENTS ON THE REVISED PHASE 2 WATERSHED ACTION PLAN

Dear Mr. Rodabaugh:

We received the revised Phase 2 Watershed Action Plan (WAP) with your May 8, 2013 letter. The draft Phase 2 WAP was submitted in accordance with Section XI.B. of Order No. R8-2010-0036, NPDES No. CAS618036 (MS4 Permit). The revised Phase 2 WAP provides greater clarity on the planning development process integration with the WAP. However, our review of the revised Phase 2 WAP shows that several of our comments on the draft Phase 2 WAP dated February 4, 2013 have not been adequately addressed. These comments will need to be fully addressed prior to Regional Board consideration for approval. Therefore, please submit a final Phase 2 WAP addressing the issues described below.

1. The Phase 2 WAP needs to facilitate efficient use of the WAP and Geodatabase by the intended audience. Please note that this is the same comment from our February 4, 2013 comment letter. At that time, we suggested that the WAP be divided into management zones or sub-watersheds based on drainage areas. For each management zone or sub-watershed, identify water quality and/or hydromodification issues to be managed so that the Permittees and/or project proponents can selectively review the section(s) of the WAP pertinent to the project area and find the information they need. Since Figure 1 of the Phase 2 WAP already shows a map of the permit area broken down into a number of hydrologic sub-watersheds based on topography and current stream and storm drain systems, the breakdown can be used as a starting point. Pertinent information for each sub-watershed, such as any existing known water quality issues, limitations or priorities, can be included in each section.
2. Related to Comment 2 above, the Geodatabase illustrates a number of useful watershed information such as 303(d) listed water bodies; potential sensitive habitats; groundwater plumes; conservation and debris basins; soil types; lined and unlined channels; risk evaluation of unlined stream segments, etc. However the WAP does not utilize this information to identify opportunities for integrated solutions to water quality and hydromodification issues and to anticipate future constraints. Please note that this is the same comment from our February 4, 2013 comment letter.

We offer the following additional comments as to how the watershed and sub-watershed analysis may be presented for each sub-watershed identified in the Geodatabase. The watershed analysis will facilitate implementation of the Watershed Protection Principles identified in Section 2 of the WAP:

- a) Provide a brief evaluation of the streams within each sub-watershed (natural, channelized, effluent dominated, ephemeral streams, spring fed, etc., hydromodification potential, riparian/wetland area location, floodplain connection, flood control measures/plans, WQOs, beneficial uses, pollutants of concern for 303d listing and TMDLs adopted or in process, current characteristics of the sub-watershed with respect to imperviousness, land use breakdown, (existing, developable), soils and recharge potential, ground water basins, storm water and groundwater connection, if and how storm water is managed as a resource (i.e. regional capture and ground water recharge). If some of these features are not available, please provide a schedule as to when the information will be available.
  - b) As part of management of storm water as a resource within each sub-watershed, identify groundwater plumes that may be prohibitive of large volume infiltration that needs to be considered/investigated/monitored, historic information about impacts on surface and groundwater storage and utilization related to urbanization, recycled water usage and other conservation approaches implemented in the watershed or specific jurisdictions that affect or modify the stream flows.
  - c) Briefly describe current BMPs/strategies implemented, for new development, existing development, re-development plans, if available. The intent is to characterize the BMPs implemented in the watershed.
  - d) Identify areas in each sub-watershed that may provide retrofit or restoration opportunities to restore or maintain watershed processes.
  - e) Describe any monitoring being conducted in the sub-watershed, the purpose of the monitoring, and what the data shows in the context of changes/conditions in the sub-watershed. Identify any new monitoring (i.e. hydromodification monitoring).
3. Section 2, Barriers to Implementation. Please identify or provide a schedule for identifying barriers to LID implementation for each jurisdiction within each sub-watershed.
  4. Section 2 Recommendations. We fully support the recommendations for collaboration with the regional water supply and conservation agencies and maximization of multi-purpose benefits.
  5. Section 5.4.3 of the Plan (page 22) states "with this tool, the project proponent will design their proposed projects to meet Permit requirements...the Approving Agency will then, in turn, review the project more effectively knowing that the project proponent followed the same protocol during the development planning process." Since the revised Phase 2 WAP does not provide any detailed information that is pertinent to any particular sub-watersheds or include any step-by-step instructions on how the WAP should be used, it is not clear how municipal planning staff, project proponents or other interested parties become aware of all the existing water quality issues that are associated with a proposed project. While Planners will be trained on the use of the

Geodatabase, project proponents and other users would benefit from additional sub-watershed descriptions and instructions on how to retrieve information such as those identified in Comments 1 and 2 above.

6. Rather than referring to the document, such as the CBRP, the Phase 2 WAP (Section 5.3.3) should include information on relevant commitments or BMPs that must be implemented by the Permittees or required of project proponents that discharge to a sub-watershed with approved TMDLs and those that discharge to 303(d) listed water bodies.
7. The Phase 2 WAP (Section 7.5) does not clearly establish the linkages between the WAP and the Stormwater Quality Standards Task Force (SWQSTF) and the Total Maximum Daily Load (TMDL) Implementation Plans, as required by the MS4 Permit. Please note that this is one of the comments from the Phase 1 WAP Response Matrix dated April 14, 2011.
8. Appendix D of the Phase 2 WAP does not explain why the causes of stream degradation were only evaluated for three sub-watersheds: San Antonio Watershed, Cucamonga Watershed, Live Oak Watershed and not for all the tributary areas within the permit area. Please note that this is the same comment from our February 4, 2103 comment letter.
9. Appendix E of Phase 2 WAP (Section 2.2) indicates that out of the 144 potential retrofit sites initially identified by the desktop survey, 27 sites were approved for further study and 72 sites were rejected. However, the number of sites evaluated in the appendices appears to be more than 27. Please reconcile the difference in the number of approved sites.
10. Information regarding potential retrofit sites, as presented in Appendix E, should be organized in a way that facilitates data retrieval. It would also be helpful if the sites are grouped and presented based on the management zones or sub-watersheds they belong to, rather than just in the order of their site ID.
11. The Hydromodification Management and Monitoring Plan (Appendix H) must be designed not only to implement project level hydromodification controls but also must define stream related management end points to protect, restore and/or manage the streams/floodplain. Please note that this is the same comment from our February 4, 2013 comment letter.
12. The Hydromodification Management and Monitoring Plan (Appendix H) does not include any project prioritization based on drainage feature/susceptibility/risk assessments and opportunities for restoration. Figure 3-3 (page 2-10) of the Plan provides a general flowchart for prioritizing the restoration and rehabilitation projects, but no actual site prioritization was included.
13. Figure 2-1 of the Hydromodification Management and Monitoring Plan (Appendix H - page 2-3, box #5) indicates that HCOC mitigation is not required if a project directly

discharges to a stabilized conveyance that has the capacity to convey a 10-year flow then to an exempt system. This seems to be inconsistent with the HCOC exemption criteria described in Section 7.6 of the Plan (page 25). Please provide the rationale for this approach and also explain why the 10-year flow was selected as a deciding factor for the HCOC requirements. Please note that this is the same comment from our February 4, 2013 comment letter.

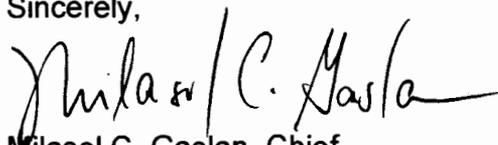
14. Section 3.2 of the The Hydromodification Management and Monitoring Plan (Appendix H) Plan (page 3-2) indicates that the exact locations of the monitoring sites are still being determined and that the Permittees will submit a revised list of monitoring stations to the Regional Board for approval prior to implementation of the Plan. This information was not presented in the revised Phase 2 WAP. Please specify a schedule when the additional information regarding the monitoring stations will be provided. Also, please provide a timetable for implementation of the HmoP.

When identifying the monitoring station, please specify if it is a BMP monitoring location, a regional location, or a reference site. If monitoring information from other monitoring programs will be used to evaluate the HMoP data, please identify those sites as well. In developing the HMoP design and data assessment methodology, we support the integrated approach that considers existing monitoring programs conducted in each sub-watershed.

15. Hydromodification Management and Monitoring Plan (Appendix H), page 1-2, Section 2, Please update the status of the TGD-WQMP to approved.

A Final Phase 2 WAP addressing the comments above must be submitted to us no later than January 13, 2014. Should you have any questions, please contact me at (951) 782-4419 or at [Milasol.Gaslan@waterboards.ca.gov](mailto:Milasol.Gaslan@waterboards.ca.gov) or Kathleen Fong at (951) 774-0114 or at [Kathleen.Fong@waterboards.ca.gov](mailto:Kathleen.Fong@waterboards.ca.gov).

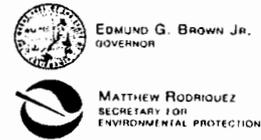
Sincerely,



Milasol C. Gaslan, Chief  
Inland Storm Water Section

Enclosure: Comment Letter for the Draft Phase 2 WAP dated February 4, 2013

cc w/ enclosure: Sri Srirajan, San Bernardino County Flood Control District,  
[ssrirajan@dpw.-sbcounty.gov](mailto:ssrirajan@dpw.-sbcounty.gov)



## Santa Ana Regional Water Quality Control Board

February 4, 2013

Mr. Gerry Newcombe  
San Bernardino County Stormwater Program  
825 East Third Street  
San Bernardino, CA 92415-0835

### COMMENTS ON THE PHASE 2 WATERSHED ACTION PLAN

Dear Mr. Newcombe:

We received the draft Phase 2 Watershed Action Plan (WAP) with your January 4, 2013 letter. The draft Phase 2 WAP was submitted in accordance with Section XI.B. of Order No. R8-2010-0036, NPDES No. CAS618036 (MS4 Permit). We have reviewed the draft Phase 2 WAP and find that additional information is needed prior to Regional Board consideration of approval of the Phase 2 WAP. Please submit a revised Phase 2 WAP addressing the issues described below.

#### Overarching Comments

The Phase 2 WAP is the second and final step of a two-step process towards development of a final WAP. The plan does not describe a coordinated approach to managing water quality, stream protection, storm water management, water conservation and re-use, and flood protection with land use planning and development processes. As described in Findings Section G, item 14 of the MS4 Permit, the purpose of the WAP is to "address cumulative impacts of development on vulnerable streams, preserve or restore to the maximum extent practicable the structure and function of streams in the permitted area, and protect surface water quality and groundwater recharge areas. The Watershed Action Plan should integrate hydromodification and water quality management strategies with land use planning policies, ordinances, and plans within each jurisdiction." The goal was to identify water quality and hydromodification problems in Phase 1 of the WAP and then to develop potential tools/programs in Phase 2 of the WAP that each Permittee can implement to address specific problems within their watersheds. Phases 1 and 2 of the WAPs should serve as a road map that guides and assists each Permittee in developing new and/or revised General Plans that integrate water quality and stream protection with their land use planning. This should be reflected in conditions of approval for new developments and significant redevelopment projects.

The Phase 2 WAP contains technical background and generalized information that does not pertain to any specific watershed and lacks tools and programs for specific watersheds. Also, some of our comments on the Phase 1 WAP that were to be addressed in the Phase 2 WAP have not been addressed. For example, see our objections No. 5 and 8 and our comments No. 2, 9, 10, 11, 12, and 14 on the Phase 1 WAP and your response to those

CAROLE H. BESWICK, CHAIR | KURT V. BERCHTOLD, EXECUTIVE OFFICER

3737 Main St., Suite 500, Riverside, CA 92501 | [www.waterboards.ca.gov/santaana](http://www.waterboards.ca.gov/santaana)

objections and comments. These issues have not been addressed in the Phase 2 WAP. Hence, the Phase 2 WAP does not meet the requirements of Section XI.B. of the MS4 Permit. While we believe that substantive revision of the draft Phase 2 WAP is needed to fulfill the permit requirements, the following comments may be helpful in making the needed revisions.

1. The Phase 2 WAP needs to include a clear, up-front description of the various intended users of the document; clear instructions as to how Permittees are to use the WAP; guidelines on how non-Permittees are expected to use it.
2. The Phase 2 WAP needs to be streamlined in order to promote its efficient use by the intended audience. The first three sections of Appendix A contain technical background information that is not pertinent to any particular watershed within the permitted area. Unless the information is relevant to the implementation of the WAP, the information need not be included. It would also be helpful if the Phase 2 WAP were divided into management zones based on drainage areas that have similar water quality and/or hydromodification issues. This would allow identification of common program objectives and management tools for each management zone. For example, certain cities within the Cucamonga and San Antonio watersheds have to comply with the approved Comprehensive Bacteria Reduction Plan (CBRP) that has specific programs that must be implemented to address the bacterial problems in those areas. The Phase 2 WAP should provide this information and make the Permittees aware of all the approved plans that are applicable to their area and how these plans would impact developments in those areas. The Phase 2 WAP should be organized in a way that it has all the needed information. Even those who are not familiar with the storm water program should be able to find pertinent information for any watershed or jurisdiction.
3. The Phase 2 WAP fails to specify procedures and a schedule to integrate the use of the Watershed Geodatabase to facilitate implementation of the MSWMP, WQMP, and TMDLs, as required by Section XI.B.3.b.i. of the MS4 Permit. Although section 1.0 (page 3) of the document titled "Watershed Action Plan report on Phase 2 Activities" includes some general information of the Geodatabase and the benefits it will bring by linking all the information together, it does not provide any specific details regarding the procedures or schedule as to how the use of the Geodatabase would facilitate integration of various elements of the MS4 program.
4. Phase 1 WAP, Appendix D evaluated the causes of stream degradation in tributary areas within San Antonio, Cucamonga and Live Oak watersheds. Not all tributary areas have been evaluated during Phase 1. Please provide information on any other watersheds that were not included in the Phase 1 WAP.
5. The HMP and HMoP submitted as part of Phase 2 WAP must be designed not only to implement project level hydromodification controls but also must define stream related management end points to protect, restore and/or manage the floodplain.
6. Both sections 3.3.i and 4.1 (2<sup>nd</sup> paragraph) of Appendix A refer to a draft Technical Guidance Document for Water Quality Management Plan (WQMP) that has been

submitted to the Regional Board in January 2013 for approval. As of the date of this letter, Regional Board staff has not received the aforementioned draft Technical Guidance Document for WQMP.

7. Several places in Appendix A mention the hydromodification exemption criteria and areas. However, no additional information regarding the basis for these exemption criteria and/or maps delineating the proposed exemption areas were provided with the Plan. Please note that the justification for the large river exemption was to be included in Phase 2 WAP (see the enclosed response matrix for more details). Also note that the Hydrologic Conditions of Concern (HCOC) exemption was not part of our approval for the Phase 1 WAP. It is also our understanding that the hydromodification layer(s) has been temporarily taken out of the Geodatabase for updates, including the addition of the Big Bear watershed. Therefore, please include the basis for these exemptions as well as a hard copy of the maps delineating the proposed hydromodification exemption in the revised Phase 2 WAP. If additional HCOC exemption areas have been proposed by an individual city, for example the City of Ontario, that information should also be included in the revised Phase 2 WAP.
8. The Phase 2 WAP does not provide any retrofit or regional treatment recommendations based on the evaluation conducted during the Phase 1 WAP, as required in Section XI.B.3.b.vii. of the MS4 Permit. Both sections 3.3.iv and 4.3 of Appendix A discuss about the potential restoration and rehabilitation opportunities and projects. However, these issues are being discussed in general term and no specific information regarding the potential retrofit and restoration opportunities that exist in each sub-watershed is given in the Phase 2 WAP. Also, despite the fact that the executive summary of the Phase 2 WAP states "WAP Phase II includes development of Hydromodification Management and Monitoring Plans...and proposing regional treatment control Best Management Practices (BMP).", most of the information included in the Phase 2 WAP are paraphrased from the MS4 Permit and no actual recommendations or proposed treatment control BMPs are provided in the Plan.
9. The Geodatabase identifies a number of useful watershed information such as: 303(d) listed water bodies; water bodies that are not listed; potentially sensitive areas; groundwater plumes; conservation and debris basins; soil types; lined and unlined channels; risk evaluation of unlined stream segments; etc. However, the WAP does not utilize this information to identify opportunities for integrated solutions to water quality and hydromodification issues and to anticipate future constraints.
10. The Node 4 in Figure 4-1 of Appendix A, as well as the 4<sup>th</sup> bulleted point on page 4-2, shows that if a priority development project discharges storm water directly to a stabilized conveyance (engineered but unlined) system that extends to an HCOC exempt system, the project will be exempt from the HCOC requirements as long as the project proponent can demonstrate that the stabilized conveyance has a 10-year flow capacity. However, since the project discharges stormwater runoff directly to an unlined channel, it should still be subject to the HCOC requirements even though the channel continues to an exempt system. Also, the revised Phase 2 WAP should provide a

rationale for choosing the 10-year flow as the deciding factor for the HCOC requirements.

11. The priority development or re-development project HCOC requirements decision matrix, Figure 4-2 on page 4-6, only addresses medium developments that are defined as developments on 1 to 100 acres. Please explain why only medium developments are considered.
12. Section 5, Hydromodification Monitoring Plan, starting on page 5-1, provides an outline of the monitoring approach with details to be provided at a later date. Please include a comprehensive list of indicators to be monitored including geomorphic, biologic and hydrologic indicators (flow, velocity, duration, sediment flow) for each monitoring location. Please provide related information for each monitoring location including watershed information related to the tributary area such as soil type, land use, imperviousness, rain gauge locations, stream flow monitoring location, etc. Please provide a detailed description of the monitoring sites including latitude and longitude. Identify if it is a BMP monitoring location, a regional location, or a reference site. If monitoring information from other monitoring programs will be used to evaluate the HMoP data as indicated in the document, please identify those sites as well.
13. If the causes of stream degradation in a watershed is attributable to watershed features such as a dam or basins as described in Phase 1, Phase 2 WAP must evaluate various alternatives to address the causes. The monitoring design must assess the effectiveness of the selected alternative. Also, the HMoP monitoring must be designed to determine if the 2-year frequency storm in the watershed provides the desired protection to all vulnerable streams in the permit area or if there are geomorphic differences or other factors that might indicate the need for a different approach.
14. Section 5.1.i of Appendix A (page 5-1) mentions the term "IBI". However, the plan does not indicate how it will be used, what the IBI stands for or if it is included in the Acronyms list in Appendix A.
15. On page 5-6 of Appendix A, please replace reference to Orange County Unified Program Effectiveness Assessment with the Program Effectiveness Assessment and Reporting as required in Section VII of the MS4 permit.
16. Please review the enclosed Watershed Action Plan Response Matrix that you provided to us during our Phase 1 review and comments and make sure that the revised Phase 2 WAP addresses all the issues that you deferred to Phase 2.

A revised Phase 2 WAP addressing the comments above must be submitted to us no later than May 6, 2013. If you have any questions, please contact Milasol Gaslan at [mgaslan@waterboards.ca.gov](mailto:mgaslan@waterboards.ca.gov) or at (951) 782-4419, or Kathleen Fong at [kyfong@waterboards.ca.gov](mailto:kyfong@waterboards.ca.gov) or at (951) 774-0114.

Sincerely,



Michael J. Adackapara  
Division Chief

Enclosure: San Bernardino WAP RB Comment Response Matrix dated April 14, 2011

cc w/o enclosure: Marc Rodabaugh, Stormwater Program Manager, San Bernardino County Flood Control District, [marc.rodabaugh@dpw.sbcounty.gov](mailto:marc.rodabaugh@dpw.sbcounty.gov)

Gia Kim, San Bernardino County Flood Control District,  
[gkim@dpw.sbcounty.gov](mailto:gkim@dpw.sbcounty.gov)