

## RESPONSE TO COMMENTS MATRIX – May 2014

### Watershed Action Plan

**This matrix references all the comments received by the Santa Ana Regional Water Quality Control Board on the Draft Watershed Action Plan prepared in December 2013. For each individual comment, the matrix includes a response describing, if necessary, how it will be addressed.**

Item #	Santa Ana Regional Water Quality Control Board	Response from Santa Ana Region Permittees
1	<p>Page 1, General Comments: Our March 26, 2013 comment was not adequately addressed. The WAP contains some information for the permit area in Chapter 4, WAP Components, regarding the current conditions of surface water, groundwater and hydromodification. 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.</p> <p>To facilitate identification and management of potential local, regional water quality and cumulative impacts with development, please sub-divide the permit area into drainage areas or sub-watersheds based on surface drainage. For each drainage area or sub-watershed, identify water quality and/or hydromodification issues to be managed and beneficial uses to be protected 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. This subgrouping will facilitate identification and management of common issues and approach for that drainage area.</p> <p>For example, the permit area can be broken down into a number of hydrologic sub-watersheds based on topography and current stream and storm drain systems. Pertinent information for each sub-watershed, such as any existing water quality issues, limitations or priorities, retrofit and restoration opportunities can be included in each section. Section 2 may be an appropriate location to include a Fact Sheet format for each drainage area or sub-watershed that briefly describes the surface and groundwater setting, the management objectives and contributing jurisdictions within that watershed. Specific details</p>	<p>Section XII.B.3 mentions that the WAP should include Regional BMP approaches, develop recommendations for specific retrofit studies and describe regional efforts that benefit water quality. The Permit does not appear to require identification of opportunities for integrated solutions to water quality and hydromodification issues and to anticipate future constraints.</p> <p>As discussed in the WAP, programs which address ground water recharge, water quality, flood risk and hydromodification typically work independently but achieve similar goals. The WAP has evaluated the MS4 programs and other regional independent efforts to identify all collaboration opportunities through the Geodatabase. The development process allows the WAP and Geodatabase to be utilized during the development of a WQMP and implemented to the MEP. The Geodatabase provides an opportunity for the Permittees to evaluate each program and look for areas of collaboration and integration that could achieve multiple goals and address regional water quality issues.</p> <p>In addition to the existing plans and programs mentioned throughout the WAP, the Permittees will continue to assess water quality priorities and hydromodification risks to public health and safety in order to properly prioritize watershed projects. It is important to continue to discuss how hydromodification should be prioritized into the water quality spectrum. In order to commit resources to a specific study, project or retrofit, it is important that any potential hydromodification project be evaluated based on risk and public need and prioritized through the Permittees flood risk reduction process.</p> <p>The Santa Ana Region of Riverside County has two main subwatershed areas, the San Jacinto River subwatershed (700 mi<sup>2</sup>) and the Santa Ana River subwatershed (420 mi<sup>2</sup>). Each subwatershed has a comprehensive reduction plan; a Nutrient Reduction Plan for the San Jacinto subwatershed and a</p>

## RESPONSE TO COMMENTS MATRIX – May 2014

### Watershed Action Plan

Item #	Santa Ana Regional Water Quality Control Board	Response from Santa Ana Region Permittees
	for each drainage area or sub-watershed may be located in one of the appendices to the WAP. These drainage boundaries may also be well illustrated in the geodatabase.	Bacteria Reduction Plan for the Santa Ana River subwatershed. It is important to concentrate on our water quality priorities and risks to public health and safety. The TMDLs are major water quality priorities.
1a	Page 2: Provide a brief evaluation of the streams within each drainage area or 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.	The Permit XII.B.6 requires that the Geodatabase include only MS4 facilities, MSHCP and streams vulnerable to hydromodification. The streams have been evaluated as part of the Susceptibility Mapping and Report, Appendix A of the WAP and have been incorporated in the Geodatabase. Along with MSHCP and MS4 facilities, FEMA and local floodplains, flood control as-built plans, pollutants of concern for 303d listing and TMDLs, soils and available ground water basins are all located in the Geodatabase.
1b	Page 2: As part of management of storm water as a resource within each drainage area or sub-watershed, identify groundwater plumes that may be prohibitive of large volume infiltration that needs to be considered, investigated, or 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.	Available ground water plumes are located in the Geodatabase to help manage stormwater within Riverside County. The data continues to be collected but some information is more difficult to obtain from agencies outside of the WAP effort. Once additional data is collected it will be displayed in the Geodatabase.
1c	Page 2: 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 drainage area or sub-watershed.	The WAP was written with the intent to provide an understanding of regional water quality efforts and to help assist the development of the Geodatabase. For BMP/strategies for new development, existing development and re-development plans please refer to Chapter 2 of the Water Quality Management Plan Guidance Document.
1d	Page 2: Identify areas in each drainage area or sub-watershed that may provide retrofit or restoration opportunities to restore or	Section 3.6.5 of the WAP provides recommendations for specific retrofit studies. Additionally, we support regional water quality opportunities established with the WQMP process that may have an opportunity to treat

## RESPONSE TO COMMENTS MATRIX – May 2014

### Watershed Action Plan

Item #	Santa Ana Regional Water Quality Control Board	Response from Santa Ana Region Permittees
	maintain watershed processes.	existing development.
1e	<p>Page 2: Describe any monitoring being conducted in the drainage area or sub-watershed, the purpose of the monitoring, and what the data shows in the context of changes/conditions in the drainage area or sub-watershed. Identify any new monitoring (i.e. hydromodification monitoring).</p> <p>Also, please consider adding a discussion to Section 1.3, Planning Development Process Overview, in a flow chart format, that would clearly relate the general idea of the watershed conditions to the land use approval process.</p>	Section 3.3 of the WAP describes the Consolidated Management Plan and Section 3.6.2 of the WAP describes the Hydromodification Management Plan-Evaluation Program. Data obtained from these monitoring plans are/will be included as part of the Annual Report submittal.
2	<p>Page 3: Item 2, the response matrix stated that information on potential causes of stream degradation will be incorporated upon completion and approval of the Hydromodification Management Plan (HMP). Since the HMP will be submitted in January 2014, we would prefer that the revised WAP responding to our comments include hydromodification monitoring and management for an integrated watershed approach. We intend to provide comments on the HMP such that response to our comments on the HMP can be included in the revised WAP. Should the analysis required to address our comment on the HMP require additional time, please provide specific tasks and associated schedule in the revised WAP.</p>	The Causes of Degradation and Aggradation Technical Memo is included as Appendix G of the WAP. Specific comments on the Technical Memo are addressed in the HMP Response Matrix.
3	<p>Page 3: Item 5: The response matrix stated that no specific measures in the IRWMP and Chino Basin Master Plan are being implemented as part of the land approval process and land use permits, or other elements of the Permittee's stormwater program. The response matrix further stated that the Permittees will evaluate identification and implementation of IRWMP as part of the land approval process, land use permits and other elements of the Permittee's stormwater program. One of the purposes of the WAP is to integrate the groundwater recharge and supply management with storm water management and land use approval. Water supply availability is a potential constraint to land development.</p>	<p>Per Section XII.B.1, the purpose of the WAP is to provide a watershed management approach that may facilitate integration of planning and project approval processes with water quality and quantity control measures.</p> <p>The WAP has been developed to meet the purpose mentioned above and to help address potential local and regional water quality impacts associated with development, and to be a resource tool in the development process. The Permittee staff may use the WAP and the associated Geodatabase to better understand the development project site and potential constraints from a water quality perspective, as well as the potential water quality issues a project may contribute.</p>

## RESPONSE TO COMMENTS MATRIX – May 2014

### Watershed Action Plan

Item #	Santa Ana Regional Water Quality Control Board	Response from Santa Ana Region Permittees
	<p>Please design this nexus evaluation on a drainage area or sub-watershed scale rather than per jurisdiction.</p> <p>The response matrix and the revised WAP did not respond to the comment regarding linkage of the Chino Basin Master Plan with water quality benefit and land use approval process, land use permits, or other elements of the Permittees' storm water program.</p>	<p>Where available, the Geodatabase provides Water District boundaries to help the Permittees determine water supply availability.</p> <p>The Chino Basin Plan, OWOW, MSCHP, etc. are independent regional efforts that are managed by other organizations and are not a part of the MS4 program. Outside of the NPDES permit, the Permittees continue to foster relationships with stakeholders and utilize property and existing facilities to meet water conservation goals.</p>
4	<p>Page 3:</p> <p>New comment: Section 2.3, page 2-2: While it is useful to briefly provide land use information inclusive of the 3 counties within the SAR watershed, the watershed resources and characteristics description in this WAP should focus on land use, population, and resource information applicable to the Riverside County portion of the SAR.</p>	<p>Section 2.3 has been revised to include land use, population and resource information applicable to the Riverside County portion of the SAR.</p>
5	<p>Page 3:</p> <p>New comment: Section 3.1.4, page 3-2, Integrated Regional Water Management – One Water, One Watershed: This section identifies “interruptions in hydrology and groundwater recharge caused by population growth and development” as one of four major threats to water supplies. This section of the WAP should outline or develop the linkage with the land use planning and development process to provide current activities and any other possible solutions or implementation plan to manage these impacts to groundwater basins and water supply from urbanization.</p>	<p>Section 3.1.4 Integrated Regional Water Management Planning One Water One Watershed provides a description of the existing regional water quality efforts. The purpose of One Water One Watershed is not to provide linkage with the land use planning or development process to provide current activities or to implement a plan to manage impacts on water basins and water supply from urbanization. The OWOW plan reflects a collaborative planning process that addresses all aspects of water resources in a region or watershed. It includes the planning of future water demands and supplies over a 20-year time horizon within the watershed as a hydrologic and interconnected system.</p> <p>Section XII.B.2 states that the objective of the WAP is to address watershed scale quality impacts - cumulative impacts of development on vulnerable streams, preservation of beneficial uses of streams in the Permit Area and protection of water resources, including ground water recharge area - not to link with the land use planning and development process to provide current activities and any other possible solutions or implementation plan to manage these impacts to ground water basins and water supply from urbanization.</p>
6	<p>Page 4:</p> <p>Item 6: Our comment regarding groundwater protection procedures in the new Section 3.1.7 was not adequately addressed. The addition of SAWPA's website for beneficial use information and well TDS concentration contributes to the</p>	<p>Per Section XII.B.1, the purpose of the WAP is to provide a watershed management approach that may facilitate integration of planning and project approval processes with water quality and quantity control measures.</p> <p>As discussed in the WAP, programs which address ground water recharge,</p>

## RESPONSE TO COMMENTS MATRIX – May 2014

### Watershed Action Plan

Item #	Santa Ana Regional Water Quality Control Board	Response from Santa Ana Region Permittees
	<p>integration of watershed information. However, without clear and specific management action or strategy linked to land use development and approval, it is not clear how a plan checker's access to groundwater information and groundwater quality objectives will protect groundwater.</p> <p>The WAP must include identification of applicable specific measures that plan checkers can use as conditions of development project approval. The geodatabase must show the drainage areas that these conditions of approval apply. The information for each drainage area or sub-watershed as described in Comment 1 above must include measures specified in the TDSMP, if any, or other ground water protection management plans to protect groundwater basins that may be impacted by land use decisions of contributing jurisdictions.</p> <p>If specific measures or management action specified in the TDSMP or other ground water protection plans have a nexus to other elements of the contributing jurisdictions' storm water program, the WAP must identify the specific action or measure, the drainage area and the storm water program element affected.</p>	<p>water quality, flood risk and hydromodification typically work independently but achieve similar goals. The WAP has evaluated the MS4 programs and other regional independent efforts to identify all collaboration opportunities through the Geodatabase. The development process allows the WAP and Geodatabase to be utilized during the development of a WQMP and implemented to the MEP. The Geodatabase provides an opportunity for the Permittees to evaluate each program and look for areas of collaboration and integration that could achieve multiple goals and address regional water quality issues.</p> <p>In addition to the existing plans and programs mentioned throughout the WAP, the Permittees will continue to assess water quality priorities and hydromodification risks to public health and safety in order to properly prioritize watershed projects. It is important to continue to discuss how hydromodification should be prioritized into the water quality spectrum. In order to commit resources to a specific study, project or retrofit, it is important that any potential hydromodification project be evaluated based on risk and public need and prioritized through the Permittees flood risk reduction process.</p> <p>Where available, the Geodatabase provides Water District boundaries to help the Permittees coordinate with the appropriate water agencies.</p>
7	<p>Page 4: Item 7 Section 3.1.8: The added text describing the linkage could be made more clear with a flow chart showing where in the land use approval process project proponents are typically informed of permit requirements and where planners verify that the requirement(s) for a project outside and within the MSHCP area.</p>	<p>As mentioned in the WAP, any individual, business or public agency wishing to construct a project within the Criteria Area covered by the MSHCP must obtain approval from the Regional Conservation Authority and a permit for the project from the local agency responsible. Projects outside of the MSHCP area, if applicable, are required to obtain a permit from local agencies applicable to the project and may be subject to CEQA requirements.</p>
8	<p>Page 4: Item 8, Section 3.2: Please clarify how a land use process or other storm water element would vary depending on the master drainage plan, water agency or encroachment permit.</p>	<p>Please note that we have deleted this section. However, a brief description is included for your information.</p> <p>A master drainage plan addresses the current and future drainage needs of a given community. The boundary of the plan usually follows regional watershed limits. The proposed facilities in an MDP may include channels, storm drains, levees, basins, dams, wetlands or any other conveyance capable of economically relieving flooding problems within the plan area. The plan includes an estimate of facility capacity, sizes and costs.</p>

## RESPONSE TO COMMENTS MATRIX – May 2014

### Watershed Action Plan

Item #	Santa Ana Regional Water Quality Control Board	Response from Santa Ana Region Permittees
		If a Master Drainage Plan facility is built, developers tend to construct near that area because the site is protected from flooding. This would require the developer to obtain an agreement or encroachment permit and all applicable regulatory permits to convey stormwater to an existing flood control facility. It is important to note that the Permittees support updates and modifications of the master plans to incorporate integrated uses and solutions.
9	Page 4: Item 10, Section 3.3: In addition to evaluating hydromodification as it relates to flood risk, an evaluation of hydromodification as it relates to the possibility that in-stream habitat will be destroyed due to flow modification with increased urbanization should be included.	The permit mentions that the objective of the WAP is to address watershed scale water quality impacts of urbanization in the Permit Area associated with urban TMDL WLAs, stream system vulnerability to hydromodification from urban runoff, cumulative impacts of development on vulnerable streams, preservation of beneficial uses of streams in the Permit Area and protection of water resources, including ground water recharge area. The Permit does not appear to require an evaluation of in-stream habitat. The Permittees have many programs to evaluate in-stream habitat. Habitat and conservation areas are regularly monitored. Any risks to these areas would be brought to the appropriate entities attention.
10	Page 4: Item 11, Section 4.2.1.1: It is not clear if the measures identified in this section are unique to MSAR jurisdictions. The section does not identify any linkage between specific measures in the CBRP, if any, that apply to the development or redevelopment land use approval process. Beyond water conservation programs, please indicate the likelihood of your evaluation on the need to update irrigation overflow ordinances to address bacterial indicators. The geodatabase should also be updated to show areas where specific BMPs will be implemented as part of the CBRP, as requested in the March 26, 2013 comment letter.	The text in this section has been modified to highlight that the measures described in this section are unique to the MSAR watershed. A discussion regarding the role of the land development and/or redevelopment approval process in CBRP implementation has also been added. Where source assessment efforts fail to find controllable sources of bacteria, Permittees will propose structural retrofit BMP projects. The location of these potential retrofit BMP projects are not available at this time because the selection of retrofit BMP, as well as location, is dependent on the results of source assessment efforts currently underway. Once identified, the locations will be added to Geodatabase.  The Water Quality Management Plan also identifies priority pollutants and proposes BMPs to address them.
11	Page 5: Item 12, Section 4.2.1: Please remove reference to "...Regional Board and..." "The Regional Board and the Office of Administrative Law did not both approve the amendment on September 1 <sup>st</sup> . Only the Office of Administrative Law alone approved the amendment on that date.	The sentence has been revised to say the following:  "The Amendment was adopted by the Regional Board in August 2005, and approved by the State Water Resources Control Board, Office of Administrative Law on September 1, 2006."
12	Page 5: Item 20, Section 5.1.3.1: Please provide a brief discussion how	Controlled Release Points are described in Attachment F: Hydromodification Management Plan.

## RESPONSE TO COMMENTS MATRIX – May 2014

### Watershed Action Plan

Item #	Santa Ana Regional Water Quality Control Board	Response from Santa Ana Region Permittees
	controlled release points (CRPs) are a critical issue regarding hydromodification. We recognize that CRPs are critical for flood control, but for hydromodification, controlled release typically results in a longer duration of flow, and thus there would still be an HCOC for a downstream unlined channel. Please include in the discussion how this may not be a concern for certain drainage areas.	
13	<p>Page 5: Item 21: Appendix A, Page 7 and WAP Section 4.3.1, Channel Assessment and Classification: Please state where information to support the HCOC applicability map or for restoration prioritization and retrofit opportunities will be presented. The response matrix stated that cross sectional analysis and channel stability risk assessment were not performed as part of the susceptibility analysis.</p> <p>At a minimum, geomorphic assessments of stream segments designated as EPHM and EEM must be conducted to support the conclusion that they are not susceptible to hydromodification. The WAP should state that stream designated under the potentially susceptible category will be subject to hydromodification controls.</p>	<p>The HCOC applicability map is located in Attachment A of the WAP. It has also been incorporated into the Geodatabase. The permit does not require an HCOC map for restoration prioritization and retrofit opportunities. Section XII.B.3 mentions that the WAP should develop recommendations for specific retrofitting that incorporates opportunities for addressing TMDL implementation plans, hydromodification from urban runoff and LID implementation. Section 3.6.5 of the WAP provides recommendations for specific retrofit studies.</p> <p>As described in Section 3.6.4 of the WAP, a desktop study was conducted categorizing each individual stream channel segment into one of the above groups. The desktop study included an examination of as-built plans and aerial photography. The segments that were in question based on limited desktop information were field verified to confirm the classification identified. Field verification included visiting an accessible location along the segment of stream channel. Photographs and notes were taken in regards to the stream channel segment condition and armoring. Any stream channel facilities that could not be accessed and/or were still in question were discussed and verified with the Permittees with jurisdictional responsibility for the facility.</p>
14	<p>Page 5: Item 22: The channels in question, such as the channel upstream of Prado Basin in Temescal Wash should not be considered engineered. As indicated in our March 26, 2013 comment, Regional Board's field visit of the area indicated susceptibility to hydromodification.</p> <p>We agree that the HMP is the appropriate location for discussion on the request for hydromodification exemption at the 10 year inundation level. We recommend that the discussion include an impact analysis that identifies a) the drainage area that will be required to demonstrate that post-development equals pre-</p>	<p>Based on ongoing discussions with Milasol and the Regional Board staff, the language describing the inundation zone within Prado Basin has been removed as inundation zones and boundaries of geomorphically significant flows are two separate concepts. The analysis rather focuses on the susceptibility of channels and the specific conditions that support the applicability of the large river exemption.</p> <p>The reported erosion is a localized scour hole right at the toe of a grade control structure/bridge (Rincon Street). The Permittees constantly monitor the structural stability of all bridge abutments and perform any necessary repairs as part of regular maintenance. Such localized scour holes are not to be</p>

## RESPONSE TO COMMENTS MATRIX – May 2014

### Watershed Action Plan

Item #	Santa Ana Regional Water Quality Control Board	Response from Santa Ana Region Permittees
	development hydrology at the 10 year and 2 year inundation levels, b) the length of stream between the 10 year inundation and 2 year inundation levels and, c) the frequency that the length of stream between the 10 and 2 year inundation levels are submerged.	addressed by the SAR HMP, as they are caused an abrupt change in flow direction rather than the additional runoff generated by development projects.
15	Page 6: Item 24: The new entry indicates hydromodification is evaluated with regard to flood risk. Please update your approach to include evaluation to also include maintenance of habitat as well, not just flood risk.	Before an in-stream project is built, impacts are evaluated and mitigation is typically provided through a number of the regulatory programs. The Permittees have programs outside of the NPDES program to observe the dynamics of streams and rivers, evaluate flood risk and manage habitat and conservation areas which we believe are all related to hydromodification. Habitat and conservation areas are regularly monitored. Any risks to these areas would be brought to the appropriate Permittees attention. The Permittees would then evaluate the risk and prioritize a solution appropriately.
16	Page 6: Item 25: The response matrix stated that the WAP does not require specific analysis of susceptible streams, protected waterways and high pollutant concentrations as it is beyond the scope and intent of the WAP. Section B.2 of the MS4 Permit states in part that “The objective of the Watershed Action Plan is to address watershed scale water quality impacts of urbanization in the Permit Area associated with Urban TMDL WLAs, stream system vulnerability to Hydromodification from Urban Runoff, cumulative impacts of development on vulnerable streams, preservation of Beneficial Uses of streams in the Permit Area, and protection of water resources, including groundwater recharge areas.” It is unclear how this objective may be achieved without analysis of the issues within each watershed. Please also see our comment 1 above	The water quality impacts of urbanization in the Permit Area associated with urban TMDL WLAs and stream system vulnerability to hydromodification from urban runoff are addressed in the CNRP, CBRP, HMP and the Causes of Degradation and Aggradation Technical Memo. A watershed assessment was done as part of the CNRP that recognized the issue of Lake Elsinore not attaining its water quality standards due to excessive nitrogen and phosphorus, and Canyon Lake for nutrients. A watershed assessment was also completed as part of the CBRP that recognized the issue in Santa Ana River, Reach 3 not attaining its water quality standards due to excessive bacteria. The watershed boundaries have been defined in the Santa Ana Region of Riverside County as the CNRP and CBRP boundaries. The CNRP has a drainage area of 700 square miles and the CBRP 420 square miles which is 95% of the Santa Ana Region of Riverside County. The CBRP, which has the smaller watershed between the two plans, has a smaller watershed than 5 of the 7 Watershed Management Areas in the Los Angeles Region and 5 of the 9 Watershed Management Areas in the San Diego Region.