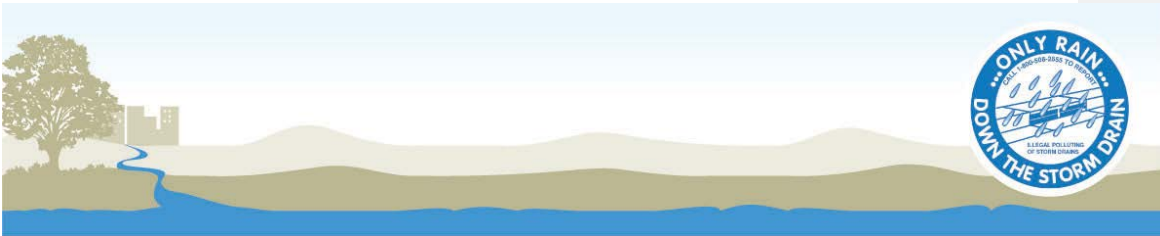
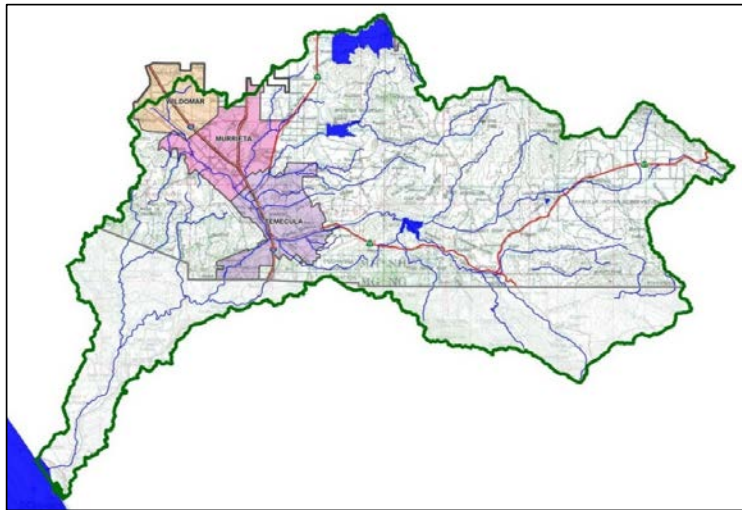


WATER QUALITY MANAGEMENT PLAN FOR THE
SANTA MARGARITA REGION OF RIVERSIDE COUNTY



2018 WATER QUALITY MANAGEMENT PLAN

for the Santa Margarita Region of Riverside County



Note: This Manual does not apply to portions of the Santa Margarita River Watershed within San Diego County. For areas within San Diego County, see the current San Diego County Standard Urban Stormwater Mitigation requirements at: <https://www.sandiegocounty.gov/dpw/watersheds/susmp/susmp.html>

Water Quality Management Plan

Functionally equivalent to the Model BMP Design Manual for the Santa Margarita Region of Riverside County

Errata June 2020
Jurisdictional BMP Design Manuals are effective July 5, 2018.

In compliance with Order No. R9-2013-0001 as amended by Order No. R9-2015-0001 and Order No. R9-2015-0100 (Regional MS4 Permit), this WQMP (model document) has been developed for review by the San Diego Regional Water Quality Control Board (Water Board). This WQMP, along with Exhibit A, C, F, and G comprise the “Model BMP Design Manual” pursuant to Provision F.2.b of the San Diego Regional MS4 Permit.

Copermittees:

County of Riverside
All Project applications:
www.countyofriverside.us/

For WQMP questions in unincorporated
County areas:
www.rcilma.org
(951) 955-3185

**Riverside County Flood Control and
Water Conservation District**
<http://www.rcflood.org/>

Murrieta
<http://www.murrieta.org/>

Temecula
<http://www.cityoftemecula.org/>

Wildomar
<http://www.cityofwildomar.org/>

Note: This Model WQMP incorporates the hydromodification control criteria relevant for land development projects that were developed in the 2014 Hydromodification Management Plan (HMP). The 2014 HMP is a historical document and is no longer needed to support Project-Specific WQMP preparation for land development projects.

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document defines several categories of BMPs. The glossary includes definitions for each category of BMP.

2.1.4. TMDL

A TMDL, or 'Total Maximum Daily Load', is the maximum amount of a Pollutant that can be discharged into a waterbody from all sources (point and non-point) and still maintain Water Quality Standards. Under CWA Section 303(d), TMDLs must be developed for all waterbodies that do not meet Water Quality Standards after application of technology-based controls.

The current 303(d) list of impaired water is included in Section 2.2.4 of this WQMP.

The only adopted TMDL within the SMR Region of Riverside County is the Rainbow Creek TMDL for Nitrogen and Phosphorus. Rainbow Creek is a tributary to the Santa Margarita River that is primarily within San Diego County. The area within Riverside County that drains to Rainbow Creek is not urbanized. Should a project be proposed within the Rainbow Creek Watershed, nitrogen and phosphorus would be considered high priority pollutants of concern.

Segments of the Santa Margarita River, ~~and~~ the SMR Estuary, ~~and several tributary streams~~ are on the 303(d) list as impaired due to excess nutrient loading and/or eutrophic conditions. A TMDL alternative program is being developed to address these impaired waters.

This WQMP will be updated as necessary to address the pollutants of concern for the SMR River and Estuary and for any other TMDLs that are developed and adopted in the SMR.

2.1.5. Water Quality Improvement Plan

The Water Quality Improvement Plan (WQIP) for the Santa Margarita River Watershed Management Area prioritizes water quality conditions of concern and describes goals, strategies, and schedules for addressing water quality conditions of concern. As part of this document, the Watershed Management Area Analysis (WMAA) identifies Candidate Projects which may be considered for offsite Alternative Compliance, Potential Critical Coarse Sediment Yield areas (CCSYAs), and receiving water segments exempt from hydromodification requirements. For reference, these areas are also presented in maps in Exhibit G of this WQMP.

The requirements under Provision E.3 of the Regional MS4 Permit must be implemented regardless of the findings of the WQIP and WMAA. However, the prioritization of water quality conditions in the WQIP and the assessment of

hydromodification susceptibility in the WMAA have an influence on determining appropriate BMPs and control strategies for stormwater runoff (e.g., determination of hydromodification exemptions, determination of priority pollutants of concern for BMP selection).

~~*[Interim Note: The hydromodification exemptions proposed in the draft WMAA are not yet effective or available and **cannot be used** unless and until the WMAA is accepted.]*~~

~~*[Exhibit G identifies potential CCSYAs and potential Sediment Source Areas and **may be used** upon the effect date of this WQMP.]*~~

The highest priority water quality conditions (HPWQCs) identified in the WQIP are:

- **Eutrophication** (elevated algal biomass). This applies to dry weather discharges for tributaries to the SMR Estuary, which may include: Upper Murrieta Creek and Tributaries, Warm Springs, Santa Gertrudis, Murrieta Creek and Long Canyon, Temecula Creek and Redhawk Channel, Upper Santa Margarita River, Lower Santa Margarita River, Rainbow Creek and De Luz Creek.
- **Nutrient loading (N and P)** to above referenced receiving waters during dry weather.
- **Nutrient loading (N and P)** to Rainbow Creek during wet weather.

This WQMP requires projects to eliminate non-exempt non-stormwater discharges. This addresses dry weather HPWQCs.

Because of the nutrient impairments and TMDL development process in the SMR River and Estuary, nutrient impairments need to be considered part of determining priority pollutants of concern for projects in any part of the SMR watershed.

2.2. POTENTIAL IMPACTS OF DEVELOPMENT

This section describes the potential impacts that Development Projects can have on streams, rivers and other water bodies.

2.2.1. Imperviousness

[Schueler \(1995\)](#) proposed imperviousness as a "unifying theme" for the efforts of planners, engineers, landscape architects, scientists, and local officials concerned with urban watershed protection. Schueler argued (1) that imperviousness is a useful indicator linking urban land development to the degradation of aquatic

The Regional MS4 Permit specifies Hydromodification Performance Standards, including:

- **Hydrologic Performance Standards** include requirements to controls flow and duration of discharge from PDPs within ranges that that can increase erosion in receiving waters, and
- **Sediment Supply Standards require PDPs to** avoid critical coarse sediment yield areas or implement measures that allow critical coarse sediment to be discharged to receiving waters, such that there is no net impact to the receiving water.

These requirements apply to all PDPs except those exempted from Hydromodification Performance Standards per Section 2.4.1.

2.4.1. Hydromodification Applicability and Exemptions

PDPs located in specific areas may be exempted from all Hydromodification Performance Standards. These areas include PDPs that discharge stormwater runoff to:

- Existing storm drains that discharge directly to water storage reservoirs, lakes, or enclosed embayments. (this exemption is not dependent on WMAA approval)
- Conveyance channels whose bed and bank are concrete lined all the way from the point of discharge to water storage reservoirs, lakes, enclosed embayments, or the Pacific Ocean. (this exemption is not dependent on WMAA approval)
- Additional areas identified in an approved WMAA. **PLACEHOLDER** *(At the time of preparation of this WQMP, the draft WMAA was still under review by the San Diego Regional Board. Once accepted, this WQMP will be revised to incorporate the relevant information regarding Candidate Projects, the CCSY map(s), and any applicable Hydromodification Exemptions. Interim note: Until the WMA is accepted, the proposed hydromodification exemptions identified in the WMAA are not applicable.) The WQIP and the WMAA were accepted by the Water Board; as of November 27, 2018 the following exemptions are in effect:*
 - o Santa Margarita River

Proprietary flow-through treatment BMPs must meet the acceptance criteria described in Section 2.3.6.

3.6. ADDRESS HYDROMODIFICATION

Section 3.6 identifies the critical questions and steps that the User must fulfill to meet the Hydromodification Performance Standards. The major steps to be fulfilled include:

- Identify if the project is subject to the Hydromodification Performance Standards;
- Understand the Hydromodification Performance Standards; and
- Incorporate Hydrologic Control BMPs and Sediment Supply BMPs, if required.

3.6.1. Projects Subject to Hydromodification Performance Standards

PDPs are subject to hydromodification performance standards unless exempted by the City of Murrieta. Exemptions may be granted under each of the following conditions:

- If the project is not classified as PDP per Section 1.1; OR
- If the PDP discharges to an existing underground storm drain discharging directly to water storage reservoirs, lakes, enclosed embayments, or the Pacific Ocean; OR
- If the PDP discharges to a conveyance channel whose bed and bank are concrete lined all the way from the point of discharge to water storage reservoirs, lakes, enclosed embayments, or the Pacific Ocean; OR
- If the PDP discharges runoff directly to an exempt [stream / river reach](#) ~~or an exempt reservoir~~ as identified in an approved WMAA. [The WQIP and the WMAA were accepted by the Water Board; as of November 27, 2018 the following exemptions are in effect: \(the WMAA is not currently approved so no such exemptions are currently available\).](#)
 - [Santa Margarita River](#)
 - [Upstream Limit: At origin, i.e. confluence with Temecula Creek and Murrieta Creek](#)
 - [Downstream Limit: Outfall to Pacific Ocean](#)

- o [Murrieta Creek](#)

- [Upstream Limit: Washington Avenue](#)
- [Downstream Limit: Confluence with Santa Margarita River](#)

It should be noted that all PDPs are subject to the LID and water quality treatment requirements even if they are not subject to Hydromodification Performance Standards.

In addition, the User should note that properly designed energy dissipation systems are required for all project outfalls to unlined channels.

3.6.2. Hydromodification Performance Standards

PDPs that are subject to Hydromodification requirements must demonstrate compliance with the Hydromodification Performance Standards, consisting of the Hydrologic Performance Standard and the Sediment Supply Performance Standard.

The Hydrologic Performance Standard requires that post-project runoff flow rates do not exceed pre-development, naturally occurring runoff flow rates by more than 10% for the range of flows that result in increased potential for erosion (considered to be 10% of the 2-year runoff event up to the 10-year runoff event unless site-specific analysis is completed). The Sediment Supply Performance Standard consists of maintaining the pre-project Bed Sediment supply (Critical Coarse Sediment) to the channel receiving runoff from the project site (Receiving Channel).

PDPs may also comply with the Hydrologic Performance Standard via Alternative Compliance. Alternative Compliance options are presented in Section 2.7. There are no alternative compliance options for Sediment Supply requirements.

3.6.3. Hydrologic Performance Standard Compliance

The applicant must design and implement onsite LID BMPs, modified LID BMPs, or Hydrologic Control BMPs or participate in Alternative Compliance to meet the Hydrologic Performance Standard.

Hydrologic Control BMPs must be sized to mitigate flow rates and durations from the post-development condition to the Permit standards. Some PDPs may be able to comply with Hydrologic Performance Standard by implementing LID BMPs required for compliance with water quality requirements. As identified in Section 2.5.2, the User is required to use the SMRHM tool (or another acceptable continuous simulation model at the discretion of the City of Murrieta), which is an HSPF model overlaid with an interactive interface, to demonstrate compliance with the

EXHIBIT G:

Santa Margarita Region Hydromodification Maps

~~Hydromodification Exemption Exhibits are not in effect. These are contingent on acceptance of the SMR WMAA.~~

1. Map of Potential Critical Coarse Sediment Yield Areas [and Potential Sediment Source Areas](#)
 2. [Hydromodification Exempt Reaches](#)
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