

**Santa Margarita River Watershed Management Area
2019-2020 Water Quality Improvement Plan
Annual Report
January 2021**

**APPENDIX 3
Water Quality Improvement Plan Numeric Goals**

APPENDIX 3 WATER QUALITY IMPROVEMENT PLAN NUMERIC GOALS

The numeric goals for the Santa Margarita River (SMR) Watershed Management Area (WMA) are designed to address the eutrophication highest priority water quality condition (HPWQC), which includes two components: eutrophication impacts (elevated algal biomass) and nutrient loading to waterbodies with an adopted Total Maximum Daily Load (TMDL) or listed as impaired. The nutrient loading component includes dry weather nutrient loading from both the Middle and Lower SMR Subwatersheds to address the TMDL alternative for the SMR Estuary, and dry and wet weather nutrient loading to Rainbow Creek to address the Rainbow Creek Nutrient TMDL.

In the Middle SMR Subwatershed, goals that address both eutrophication in Warm Springs and Redhawk Channel and nutrient loading to the SMR Estuary have been identified. Goals were also developed for the Lower SMR Subwatershed to address eutrophic conditions in the SMR Estuary. The County of San Diego also developed goals to address nutrient loading in the Rainbow Creek subarea.

The interim and final numeric goals for the SMR WMA and the pathways that may be used to demonstrate compliance are provided in **Table A3-1** through **Table A3-3**. These tables show the goals outlined in the Water Quality Improvement Plan (WQIP), and incorporate changes proposed in previous WQIP annual reports that have been accepted per Permit Provision F.2.c.(1)(c). Since each compliance pathway provides an independent option to demonstrate progress and ultimately compliance, any one of the compliance pathways may be used for assessment purposes. These tables, along with additional details regarding these pathways, can be found in Section 4 of the WQIP. Some updates to these tables have been proposed in the WQIP Update (**Attachment 5B to Appendix 5**) and are not reflected herein. Updates will be applied to this appendix for future annual reports after they have been accepted.

Table A3-1. Pathways to Achieve Interim and Final Numeric Goals – Eutrophication Impacts and Nutrient Loading, Middle Santa Margarita River Subwatershed Agencies

Pathway	Interim Goal (2023)	Interim Goal (2028)	Interim Goal (2033)	Interim Goal (2038) ⁶	Metric
1 ¹ OR	10% reduction in dry weather ² loadings in receiving waters: TN 993 lb/yr TP 99 lb/yr	30% reduction in dry weather loadings in receiving waters: TN 2,980 lb/yr TP 300 lb/yr	50% reduction in dry weather loadings in receiving waters: TN 4,970 lb/yr TP 495 lb/yr	76% reduction in dry weather loadings in receiving waters: TN 7,550 lb/yr TP 752 lb/yr	Assessment of loadings in the Santa Margarita River (receiving water) at the base of the Middle SMR Subwatershed
2 OR	Numeric interim and final goals to be determined based on outcome of TMDL Alternative for the Santa Margarita River Estuary				Assessment of receiving water conditions in the Santa Margarita River Estuary
3 OR	10% reduction in non-stormwater flows within agency control ³	30% reduction in non-stormwater flows within agency control ³	50% reduction in non-stormwater flows within agency control ³	100% reduction in non-stormwater flows within agency control ³	Assessment of load reductions from implementation actions (based on outfall monitoring or other assessment metrics)
4 ^{4,5} OR	10% reduction in dry weather loadings from Copermittees. As a Total: TN 993 lb/yr TP 99 lb/yr OR by jurisdiction: City of Wildomar: TN 79, TP 8 City of Murrieta: TN 224, TP 22 City of Temecula: TN 395, TP 39 Riverside County: TN 286, TP 28	30% reduction in dry weather loadings from Copermittees: As a Total: TN 2,980 lb/yr TP 300 lb/yr OR by jurisdiction: City of Wildomar: TN 237, TP 24 City of Murrieta: TN 673, TP 67 City of Temecula: TN 1,186, TP 118 Riverside County: TN 858, TP 85	50% reduction in dry weather loadings from Copermittees: As a Total: TN 4,970 lb/yr TP 495 lb/yr OR by jurisdiction: City of Wildomar: TN 396, TP 39 City of Murrieta: TN 1,122, TP 112 City of Temecula: TN 1,977, TP 197 Riverside County: TN 1,430, TP 142	76% reduction in dry weather loadings from Copermittees: As a Total: TN 7,550 lb/yr TP 752 lb/yr OR by jurisdiction: City of Wildomar: TN 601, TP 60 City of Murrieta: TN 1,705, TP 170 City of Temecula: TN 3,005, TP 300 Riverside County: TN 2,174, TP 217	Assessment of load reductions from implementation actions (based on outfall monitoring or other assessment metrics)
5 OR	Assess progress toward achieving final goal (using other pathways).			Where final goals have not been met, demonstrate that exceedances of targets are due to source(s) of nutrients outside of the control of the Copermittees and the City of Menifee.	Source investigations
6	The Copermittees and the City of Menifee develop and implement the jurisdictional strategies as described in the accepted Water Quality Improvement Plan.	The Copermittees and the City of Menifee assess progress towards goals, implement the JRMP or enhanced JRMP strategies as triggered using an iterative approach as described in the accepted Water Quality Improvement Plan.	The Copermittees and the City of Menifee assess progress towards goals, implement the JRMP, enhanced JRMP strategies, or optional jurisdictional strategies, as triggered using an iterative approach as described in the accepted Water Quality Improvement Plan.	The Copermittees and the City of Menifee assess progress towards goals, implement the JRMP, enhanced JRMP strategies, optional jurisdictional strategies, or optional WMA strategies, as triggered through an iterative approach as described in the accepted Water Quality Improvement Plan.	Implementation of JRMP, enhanced JRMP strategies, optional jurisdictional strategies, or optional WMA strategies, as triggered through an iterative, adaptive management approach.

1. Load reductions at the base of the Middle SMR Subwatershed will be measured against the baseline loads for Riverside County. Source: Tetra Tech. SMR Estuary MS4 Nutrient Loads for WY 2008. Memorandum to Jo Ann Weber, Kyle Cook, Kyle Gallup, and Stuart McKibbin, January 6, 2017. Baseline loads are 60,796 lb/yr for Total Nitrogen and 6,004 lb/yr for Total Phosphorus.

2. Dry weather conditions are defined as those that occur on non-storm days, with storm days being defined as all days with measured precipitation greater than 0.1 inch and the 72 hours following the measured precipitation, and include both summer and winter dry periods.

3. Within agency control means, consistent with the scope of the Permit, that conditions are within the regulatory authority of the Copermittee or the City of Menifee and can feasibly be addressed or treated at the point of entry, within, or at the outlets from the MS4. This requires the availability of feasible options for treating the condition. Flows/conditions determined to be uncontrollable would not be included in the calculations related to this goal.

4. Load reductions for the Riverside County Copermittees will be measured based on the baseline loads presented in the Tetra Tech memorandum: 9,933 lb/yr for Total Nitrogen and 990 lb/yr for Total Phosphorus. Jurisdictional load reductions for the jurisdictions provided in the Tetra Tech memo are shown in the table.

5. As described in Section 1, Menifee is participating in the development and implementation of this WQIP as required by the Regional Water Board Designation Letter dated October 26, 2015. Based on Menifee's land area in the Santa Margarita watershed, for the purpose of WQIP development and implementation, Menifee is determined by the San Diego Water Board to be a less than significant contributor of nitrogen, phosphorus and other pollutants within the Santa Margarita River Watershed Management Area. There are currently no numeric nutrient load goals for Menifee since no nutrient load values for the small portion of Menifee within the Santa Margarita watershed were included in the Tetra Tech study or any other currently published study, and any nutrient loading from within the City of Menifee to the Santa Margarita River Watershed is considered to be less than significant. Until the Santa Margarita Estuary TMDL stakeholders and the San Diego Water Board determine the final load allocation regarding Menifee, if such an allocation is needed, Menifee will implement appropriate LIP strategies to address the HPWQC in the WMA and meet the WQIP goals and schedules. Furthermore, while Menifee has limited MS4 conveyance structures in the SMR WMA, there are currently no MS4 outfalls located within the portion of Menifee in the Santa Margarita watershed. Therefore, achievement of goals will be demonstrated through pathways other than pathway 4.

6. The final goals and schedules are preliminary and will be updated through the adaptive management process when the TMDL Alternative becomes effective.

Table A3-2. Pathways to Achieve Interim and Final Numeric Goals – Eutrophication Impacts and Nutrient Loading, Lower Santa Margarita River Subwatershed – County of San Diego

Goal ¹	Baseline	FY 2018-2023	1 st Permit Term (FY 2023)	2 nd Permit Term (FY 2028)	3 rd Permit Term (FY 2033)	4 th Permit Term (FY 2038)
Effectively eliminate anthropogenic dry weather discharges from MS4 outfalls to the receiving water OR	To be established during 2019-2020 using dry weather ² flow measurements ³	Complete turf replacement in Rainbow Park.	Reduce the baseline aggregate flow volume by 25%.	Reduce the baseline aggregate flow volume by 50%.	Reduce the baseline aggregate flow volume by 75%.	Reduce the baseline aggregate flow volume by 100%.
Comply with the TMDL Alternative	Demonstrate that the Santa Margarita River Estuary targets have been attained. Primary and secondary numeric targets for algal biomass are proposed. If monitoring data confirm that the SMR Estuary is meeting the primary target of algal biomass of 57 g d-wt/m ² , this result indicates that the beneficial uses are protected. If monitoring data confirm that the SMR Estuary is meeting an algal biomass between 57 and 70 g d-wt/m ² , the Sediment Quality Objective (SQO) tool for benthic community structure will be used to assess whether beneficial uses are protected. The watershed load reduction goal to meet the numeric targets is 76%. OR					
	Demonstrate that the discharger is attaining the nutrient load reduction goal of 76%. OR					
	Demonstrate that the discharger is attaining the load allocations defined in the TMDL Alternative for the SMR Estuary. OR					
	Demonstrate that exceedances of the targets are due to non-controllable sources. OR					
	Demonstrate that management actions to attain allocations are being implemented through mechanisms defined in each applicable Order. ⁴					

1. These goals are placeholders and may be updated on the basis of the final implementation requirements for the Santa Margarita River Estuary TMDL Alternative.

2. Dry weather conditions are defined as those that occur on non-storm days, with storm days being defined as all days with measured precipitation greater than 0.1 inch and the 72 hours following the measured precipitation, and include both summer and winter dry periods.

3. The WQIP originally proposed setting the baseline during 2016-2017. Because the WQIP was not accepted until late 2018, the County of San Diego now plans to establish the baseline in 2019-2020 based on data collected under the accepted WQIP.

4. Mechanisms for implementing management actions include, but are not limited to, Phase I MS4 Water Quality Improvement Plans, Agricultural Discharger Water Quality Restoration Program Plans, Phase II MS4 permit program elements, and Caltrans compliance units, cooperative implementation grants and cooperative implementation agreements.

Table A3-3. Pathways to Achieve Final Numeric Goals – Nutrients in Rainbow Creek – County of San Diego

Compliance Pathway		Numeric Goal (December 31, 2021)
Implement Accepted Water Quality Improvement Plan OR		Implementation of a Water Quality Improvement Plan that incorporates the required BMPs includes an analysis utilizing a watershed model or other watershed analytical tool to demonstrate that the implementation of the required BMPs achieves compliance; the results of the analysis are accepted by the Regional Water Board as part of the Water Quality Improvement Plan; the responsible Copermitees continue to implement the required BMPs and the responsible Copermitees continue to perform the specific monitoring and assessments to demonstrate compliance.
Receiving Water Meet Receiving Water Limitations OR	Nitrate (as N) Total Nitrogen Total Phosphorus	10 mg/L 1.0 mg/L 0.1 mg/L
MS4 Discharges Meet Final Effluent Limitations expressed as concentrations in the storm drain discharge OR	Nitrate (as N) Total Nitrogen Total Phosphorus	10 mg/L 2.0 mg/L 0.1 mg/L
No Direct or Indirect Storm Drain Discharges to Receiving Water OR	Discharges	A 100% reduction in anthropogenic discharges from storm drain outfalls to Rainbow Creek.
Final Effluent Limitations Expressed as Annual Allowable Loads ¹	Total Nitrogen	Commercial Nurseries Parks Residential Areas Urban Areas 116 kg per year (kg/yr) 3 kg/yr 149 kg/yr 27 kg/yr
	Total Phosphorus	Commercial Nurseries Parks Residential Areas Urban Areas 3 kg/yr 0.10 kg/yr 12 kg/yr 6 kg/yr

1. Changes to the land-use based final effluent limitations were proposed in the 2018-2019 WQIP Annual Report. However, those changes have since been reversed after discussions with the San Diego Water Board. They are instead proposed to be incorporated into the final effluent limitations presented in Compliance Pathway 1; see the WQIP Update (**Appendix 5, Attachment 5B**) for details.