
Los Angeles Regional Water Quality Control Board

TO: Victoria Whitney
Deputy Director
Division of Water Quality
State Water Resources Control Board

FROM: Samuel Unger, P.E. *Samuel Unger*
Executive Officer
California Regional Water Quality Control Board, Los Angeles Region

DATE: September 2, 2015

SUBJECT: **MINOR, NON-SUBSTANTIVE CHANGES TO THE BASIN PLAN
AMENDMENT AND STAFF REPORT SUPPORTING RESOLUTION NO R15-
005 ADOPTED BY THE LOS ANGELES REGIONAL WATER QUALITY
CONTROL BOARD**

On June 10, 2015, the Los Angeles Regional Water Quality Control Board (Los Angeles Water Board) adopted the Resolution No. R15-005 amending the Water Quality Control Plan for the Los Angeles Region (Basin Plan) to establish a Total Maximum Daily Load (TMDL) for Indicator Bacteria in the San Gabriel River, Estuary and Tributaries. The Basin Plan amendment is scheduled for consideration at the October 20, 2015 meeting of the State Water Resources Control Board (State Water Board).

Los Angeles Water Board Resolution No. R15-005 grants the Executive Officer the authority to make minor, non-substantive changes to the language of the adopted Basin Plan amendment if Los Angeles Water Board staff, the State Water Board, or the Office of Administrative Law (OAL) determines that such changes are needed for clarity or consistency. Therefore, I am hereby making the following minor, non-substantive changes to the Basin Plan amendment (BPA) and staff report supporting the BPA adopted by Resolution No. R15-005 to correct the following minor errors:

- On page 7 of the BPA, revise the last sentence in the Load Allocations (LAs) section to be consistent with the staff report, page 56, to include LAs for golf courses. The new addition is shown in underline.

“LAs equal to zero days of allowable exceedances for the single sample and geometric mean targets are assigned to onsite wastewater treatment systems, golf courses, horse and livestock facilities, and irrigated agricultural lands within the watershed.”

It is clear from the inclusion of LAs for golf courses in the staff report that it was the Los Angeles Water Board’s intention to assign LAs to golf courses.

- Correct typographical errors in the staff report, and
- Include appropriate references relied upon in the staff report.

The changes to the BPA adopted by Resolution No. R15-005 are attached to this memorandum, with my corrections shown in underline/strikeout format. The changes to the staff report supporting Resolution No. R15-005 are not attached to this memorandum but are available on the Regional Board website at http://www.waterboards.ca.gov/losangeles/water_issues/programs/tmdl/tmdl_list.shtml. My corrections to the staff report are shown in underline/strikeout format.

Please contact my staff Dr. Kangshi Wang at (213) 576-6780 or e-mail at kwang@waterboards.ca.gov, or Ms. Jenny Newman at (213) 576-6691 or e-mail at jnewman@waterboards.ca.gov, if you have any questions about this matter.

cc: Los Angeles Water Board members
Rik Rasmussen, DWQ, Chief of TMDL Section
Zane Poulson, DWQ, Chief of Inland Planning, Standards & Implementation Unit
David Coupe, OCC, Attorney IV

Attachment A to Resolution No. R15-005

Amendment to the Water Quality Control Plan – Los Angeles Region to incorporate the TMDL for Indicator Bacteria in the San Gabriel River, Estuary and Tributaries

Adopted by the California Regional Water Quality Control Board, Los Angeles Region on June 10, 2015.

Amendments:

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Add:

Chapter 7. Total Maximum Daily Loads (TMDLs)
7-41 San Gabriel River, Estuary and Tributaries Indicator Bacteria TMDL

List of Figures, Tables, and Inserts

Add:

Chapter 7. Total Maximum Daily Loads (TMDLs)
Tables
7-41 San Gabriel River, Estuary and Tributaries Indicator Bacteria TMDL
7-41.1 San Gabriel River, Estuary and Tributaries Indicator Bacteria TMDL: Elements
7-41.2 San Gabriel River, Estuary and Tributaries Indicator Bacteria TMDL: Allowable Exceedance Days
7-41.3 San Gabriel River, Estuary and Tributaries Indicator Bacteria TMDL: Implementation Schedule

Chapter 7. Total Maximum Daily Loads (TMDLs) San Gabriel River, Estuary and Tributaries Indicator Bacteria TMDL

This TMDL was adopted by the Regional Water Quality Control Board on June 10, 2015.

This TMDL was approved by:

The State Water Resources Control Board on **[Insert Date]**.
The Office of Administrative Law on **[Insert Date]**.
The U.S. Environmental Protection Agency on **[Insert Date]**.

This TMDL is effective on **[Insert Date]**.

The following tables include the elements of this TMDL.

Attachment A to Resolution No. R15-005

Table 7-41.1. San Gabriel River, Estuary and Tributaries Indicator Bacteria TMDL: Elements

Element	Key Findings and Regulatory Provisions
<p>Problem Statement</p>	<p>Elevated bacterial indicator densities are causing impairment of the water contact recreation (REC-1) and non-contact recreation (REC-2) beneficial uses in several reaches of the San Gabriel River, San Gabriel River Estuary, and its tributaries. Recreating in waters with elevated bacterial indicator densities has long been associated with adverse human health effects. Specifically, local and national epidemiological studies demonstrate that there is a causal relationship between adverse health effects and recreational water quality, as measured by bacterial indicator densities.</p>
<p>Numeric Target</p> <p>(Interpretation of the numeric water quality objective, used to calculate the waste load and load allocations)</p>	<p>The TMDL has a multi-part numeric target based on the bacteriological water quality objectives for fresh and marine water to protect the REC-1 and REC-2 beneficial uses. These targets are the most appropriate indicators of public health risk in recreational waters.</p> <p>These bacteriological objectives are set forth in Chapter 3 of the Basin Plan. The objectives are based on four bacterial indicators and include both geometric mean limits and single sample limits. The Basin Plan objectives that serve as the numeric targets for this TMDL are:</p> <p>In Marine Waters Designated for Water Contact Recreation (REC-1)</p> <p><u>1. Geometric Mean Limits</u></p> <p>a. Total coliform density shall not exceed 1,000/100 ml. b. Fecal coliform density shall not exceed 200/100 ml. c. <i>Enterococcus</i> density shall not exceed 35/100 ml.</p> <p><u>2. Single Sample Limits</u></p> <p>a. Total coliform density shall not exceed 10,000/100 ml. b. Fecal coliform density shall not exceed 400/100 ml. c. <i>Enterococcus</i> density shall not exceed 104/100 ml. d. Total coliform density shall not exceed 1,000/100 ml, if the ratio of fecal-to-total coliform exceeds 0.1.</p> <p>In Fresh Waters Designated for Water Contact Recreation (REC-1)</p> <p>1. Geometric Mean Limits a. <i>E. coli</i> density shall not exceed 126/100 ml.</p> <p>2. Single Sample Limits a. <i>E. coli</i> density shall not exceed 235/100 ml.</p> <p>The targets apply throughout the year. Determination of attainment of the targets will be at monitoring sites to be specified monitoring plans to be submitted by responsible entities.</p>

Attachment A to Resolution No. R15-005

Element	Key Findings and Regulatory Provisions
	<p>In this TMDL, implementation of the above bacteria objectives and the associated TMDL numeric targets is achieved using a “reference system/anti-degradation approach” rather than the alternative “natural sources exclusion approach” or strict application of the single sample objectives. As required by the federal Clean Water Act and California Water Code, Basin Plans include beneficial uses of waters, water quality objectives to protect those uses, an anti-degradation policy, collectively referred to as water quality standards, and other plans and policies necessary to implement water quality standards.</p> <p>This TMDL uses a “reference system/anti-degradation approach” to implement the water quality objectives per the implementation provisions in Chapter 3. On the basis of the historical exceedance frequency in Southern California reference waterbodies, a certain number of daily exceedances of the single sample bacteria objectives are permitted.</p> <p>The geometric mean targets may not be exceeded at any time. For the purposes of this TMDL, the geometric means shall be calculated weekly as a rolling geometric mean using 5 or more samples, for six week periods starting all calculation weeks on Sunday.</p> <p>For the single sample targets, the San Gabriel River and its tributaries are assigned an allowable number of exceedance days for two time periods (1) dry-weather, and (2) wet-weather (defined as days with 0.1 inch of rain or greater and the three days following the rain event.) The San Gabriel River Estuary is assigned an allowable number of exceedance days for three time periods (1) summer dry-weather (April 1 to October 31), (2) winter dry-weather (November 1 to March 31), and (3) wet-weather (defined as days with 0.1 inch of rain or greater and the three days following the rain event.)</p>
Source Analysis	<p>The significant contributors of bacteria loading to the San Gabriel River, San Gabriel River Estuary, and its tributaries are dry- and wet-weather discharges from municipal separate storm sewer systems (MS4s). Watershed-wide data show elevated levels of bacteria in the river. Data collected from natural landscapes in the upper watershed indicate that open space loading is not a significant source of bacteria. Data from storm drains and channels draining urban areas show elevated levels of bacteria, indicating that urban areas are a source. Data from throughout the Los Angeles Region further demonstrate that bacteria concentrations are significantly greater in developed areas. Based on this information, runoff from urban areas served by MS4s is a significant source of bacteria.</p> <p>Other point and nonpoint sources were analyzed but there were not sufficient data to quantify their contribution.</p>

Attachment A to Resolution No. R15-005

Element	Key Findings and Regulatory Provisions												
<p>Waste Load Allocations (for point sources)</p>	<p>Waste Load Allocations (WLAs) assigned to municipal separate storm sewer system (MS4) discharges are expressed as the number of daily or weekly sample days that may exceed the single sample limits as identified under “Numeric Target.” No exceedances are allowed for the geometric mean limits.</p> <p>The allowable days of exceedance for the single sample limits differ depending on season, dry weather or wet weather, and locations as described in Table 7-41.2.</p> <p>For the San Gabriel River and its tributaries, allowable exceedance days are set on an annual basis (April 1 to March 31) for two conditions:</p> <ol style="list-style-type: none"> 1. dry-weather 2. wet-weather (defined as days of 0.1 inch of rain or more plus three days following the rain event). <p>For the San Gabriel River Estuary, allowable exceedance days are set on an annual basis for three time periods/conditions. These three periods/conditions are:</p> <ol style="list-style-type: none"> 1. summer dry-weather (April 1 to October 31) 2. winter dry-weather (November 1 to March 31) 3. wet-weather (defined as days of 0.1 inch of rain or more plus three days following the rain event). <p>Certain reaches and tributaries of the San Gabriel River are subject to a High Flow Suspension (HFS) of the recreational beneficial uses as identified in Chapter 2. The HFS applies during specified conditions as defined in Chapter 2. During these conditions, the REC-1 and REC-2 beneficial uses are suspended for the affected reaches and tributaries.</p> <p>For the single sample objectives in the San Gabriel River and its tributaries, the WLAs are listed below.</p> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Allowable Number of Exceedance Days</th> <th style="text-align: center;">Daily Sampling</th> <th style="text-align: center;">Weekly Sampling</th> </tr> </thead> <tbody> <tr> <td>Dry Weather</td> <td style="text-align: center;">5</td> <td style="text-align: center;">1</td> </tr> <tr> <td>Non-HFS Waterbodies Wet Weather</td> <td style="text-align: center;">17</td> <td style="text-align: center;">3</td> </tr> <tr> <td>HFS Waterbodies Wet Weather</td> <td style="text-align: center;">11 (not including HFS days)</td> <td style="text-align: center;">2 (not including HFS days)</td> </tr> </tbody> </table>	Allowable Number of Exceedance Days	Daily Sampling	Weekly Sampling	Dry Weather	5	1	Non-HFS Waterbodies Wet Weather	17	3	HFS Waterbodies Wet Weather	11 (not including HFS days)	2 (not including HFS days)
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Attachment A to Resolution No. R15-005

Element	Key Findings and Regulatory Provisions												
	<p>For the single sample objectives in San Gabriel Estuary, the WLAs are listed below.</p> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th style="padding: 5px;">Allowable Number of Exceedance Days</th> <th style="padding: 5px;">Daily Sampling</th> <th style="padding: 5px;">Weekly Sampling</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">Summer Dry-Weather</td> <td style="text-align: center; padding: 5px;">0</td> <td style="text-align: center; padding: 5px;">0</td> </tr> <tr> <td style="padding: 5px;">Winter Dry-Weather</td> <td style="text-align: center; padding: 5px;">9</td> <td style="text-align: center; padding: 5px;">2</td> </tr> <tr> <td style="padding: 5px;">Wet Weather</td> <td style="text-align: center; padding: 5px;">20</td> <td style="text-align: center; padding: 5px;">3</td> </tr> </tbody> </table> <p>In the instances where more than one single sample objective applies, exceedance of any one of the limits constitutes an exceedance day. The waste load allocation for the geometric mean for the responsible agencies and jurisdictions is zero (0) allowable exceedances.</p> <p>The responsible jurisdictions and responsible agencies include the permittees and co-permittees of the MS4 permits in Los Angeles County, Orange County and San Bernardino County¹, the California Department of Transportation (Caltrans), and any permittees that may be enrolled under a Phase II MS4 permit within the San Gabriel River watershed. The Phase II MS4 permittees include California State Polytechnic University Pomona and Lanterman Development Center. The responsible jurisdictions and responsible agencies within the watershed are jointly responsible for complying with the waste load allocations.</p> <p>Other non-MS4 dischargers, including individual NPDES permits, general NPDES permits, general industrial storm water permits, and general construction storm water permits are not expected to be a significant source of bacteria. Additionally, these discharges are not eligible for the reference system approach set forth in the implementation provisions for the bacteriological objectives in Chapter 3. WLAs for non-MS4 dischargers currently subject to permits with effluent limits for bacteria are equal to the existing effluent limits for bacteria. Non-MS4 dischargers that do not have existing effluent limits for bacteria are not assigned WLAs. Any future point source discharges must be evaluated to determine whether reasonable potential exists for</p>	Allowable Number of Exceedance Days	Daily Sampling	Weekly Sampling	Summer Dry-Weather	0	0	Winter Dry-Weather	9	2	Wet Weather	20	3
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¹ County of Los Angeles, Los Angeles County Flood Control District, the cities of Arcadia, Artesia, Azusa, Baldwin Park, Bellflower, Bradbury, Cerritos, Claremont, Covina, Diamond Bar, Downey, Duarte, El Monte, Glendora, Hawaiian Gardens, Industry, Irwindale, Lakewood, La Mirada, La Habra Heights, La Puente, La Verne, Long Beach, Monrovia, Norwalk, Paramount, Pico Rivera, Pomona, San Dimas, Santa Fe Springs, South El Monte, Walnut, West Covina, Whittier, Orange County, Orange County Flood Control District, Anaheim, Brea, Buena Park, Cypress, Fullerton, Garden Grove, La Habra, La Palma, Los Alamitos, Placentia, Seal Beach, and Yorba Linda, San Bernardino County, San Bernardino County Flood Control District, and Chino Hills.

Attachment A to Resolution No. R15-005

Element	Key Findings and Regulatory Provisions												
	<p>the discharge to be a source of bacteria that could cause or contribute to an exceedance of the applicable water quality standards. If reasonable potential analysis (RPA) during permitting process does not indicate reasonable potential then effluent limits do not need to be included in the permit.</p>												
<p>Load Allocations (for nonpoint sources)</p>	<p>Load Allocations (LAs) for lands not covered by a MS4 permit, such as U.S. Forest Service lands, California Department of Parks and Recreation Lands, or National Park Service lands are expressed as the number of daily or weekly sample days that may exceed the single sample limits or geometric mean limits as identified under “Numeric Target.” No exceedances are allowed for the geometric mean limits. The allowable days of exceedance for the single sample limits differ depending on season, dry weather or wet weather, and by location as described in Table 7-41.2.</p> <p>For the San Gabriel River and its tributaries, allowable exceedance days are set on an annual basis for two conditions. These two conditions are:</p> <ol style="list-style-type: none"> 1. dry-weather 2. wet-weather (defined as days of 0.1 inch of rain or more plus three days following the rain event). <p>For in the San Gabriel River Estuary, allowable exceedance days are set on an annual basis for three time periods/conditions. These three periods/conditions are:</p> <ol style="list-style-type: none"> 1. summer dry-weather (April 1 to October 31) 2. winter dry-weather (November 1 to March 31) 3. wet weather (defined as days of 0.1 inch of rain or more plus three days following the rain event). <p>For the single sample objectives in the San Gabriel River and its tributaries, the LAs are listed below.</p> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 33%;">Allowable Number of Exceedance Days</th> <th style="width: 33%;">Daily Sampling</th> <th style="width: 33%;">Weekly Sampling</th> </tr> </thead> <tbody> <tr> <td>Dry Weather</td> <td>5</td> <td>1</td> </tr> <tr> <td>Non-HFS Waterbodies Wet Weather</td> <td>17</td> <td>3</td> </tr> <tr> <td>HFS Waterbodies Wet Weather</td> <td>11 (not including HFS days)</td> <td>2 (not including HFS days)</td> </tr> </tbody> </table>	Allowable Number of Exceedance Days	Daily Sampling	Weekly Sampling	Dry Weather	5	1	Non-HFS Waterbodies Wet Weather	17	3	HFS Waterbodies Wet Weather	11 (not including HFS days)	2 (not including HFS days)
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Element	Key Findings and Regulatory Provisions												
	<p>For the single sample objectives in the San Gabriel Estuary, the LAs are listed below.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;">Allowable Number of Exceedance Days</th> <th style="text-align: center;">Daily Sampling</th> <th style="text-align: center;">Weekly Sampling</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Summer Dry-Weather</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> </tr> <tr> <td style="text-align: center;">Winter Dry-Weather</td> <td style="text-align: center;">9</td> <td style="text-align: center;">2</td> </tr> <tr> <td style="text-align: center;">Wet Weather</td> <td style="text-align: center;">20</td> <td style="text-align: center;">3</td> </tr> </tbody> </table> <p>LAs equal to zero days of allowable exceedances for the single sample and geometric mean targets are assigned to onsite wastewater treatment systems, <u>golf courses</u>, horse and livestock facilities, and irrigated agricultural lands within the watershed.</p>	Allowable Number of Exceedance Days	Daily Sampling	Weekly Sampling	Summer Dry-Weather	0	0	Winter Dry-Weather	9	2	Wet Weather	20	3
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Margin of Safety	<p>An implicit margin of safety was assumed by directly applying the water quality standards and implementation procedures as WLAs and LAs. This ensures that there is little uncertainty about whether meeting the TMDLs will result in meeting the water quality standards.</p>												
Seasonal Variations and Critical Conditions	<p>Seasonal variations are addressed by developing separate waste load allocations for two conditions (dry weather and wet weather) in the San Gabriel River and its tributaries, and three time periods/conditions (summer dry-weather, winter dry-weather, and wet weather) in the San Gabriel River Estuary based on public health concerns and observed natural background levels of exceedance of bacterial indicators.</p> <p>The critical condition for bacteria discharges to the San Gabriel River Estuary, the San Gabriel River, and its tributaries is during wet weather when monitoring data indicate a higher probability of exceedance of the single sample bacteria objectives than during dry weather.</p> <p>The critical condition within wet weather more specifically, in order to set the allowable number of exceedances of the single sample limit days, is the 90th percentile storm year in terms of wet days. The 1994 storm year is the reference year for purposes of identifying the wet weather critical condition. The number of wet-weather days in the 1994 reference year was 87 days, and the number of dry-weather days was 278 days (199 summer dry-weather days and 79 winter dry-weather days). Of these 87 days, 30 days fall under the definition of a HFS day.</p>												
Implementation	<p>The regulatory mechanisms used to implement the TMDL will include the Los Angeles County MS4 permit, the City of Long Beach MS4 permit, the Orange County MS4 permit and the San Bernardino County MS4 permit (under the jurisdiction of the Santa Ana Regional Water</p>												

Attachment A to Resolution No. R15-005

Element	Key Findings and Regulatory Provisions
	<p>Board), the Caltrans Storm Water permit, the statewide Phase II MS4 permit and any regional Phase II MS4 permits, minor and major NPDES permits, general NPDES permits, general industrial storm water permits, general construction storm water permits, and the authority contained in Sections 13263, 13267, 13269, and 13383 of the California Water Code, and other appropriate regulatory mechanisms. NPDES permits for each discharge assigned a WLA shall be reopened or amended at re-issuance, in accordance with applicable laws, to incorporate effluent limitations consistent with the assumptions and requirements of the WLAs herein.</p> <p>WLAs shall be incorporated into MS4 permits as water quality-based effluent limitations (WQBELs). MS4 Permittees may be deemed in compliance with WQBELs if they demonstrate that: (1) there are no violations of the WQBEL at the Permittee’s applicable MS4 outfall(s); (2) there are no exceedances of the receiving water limitations in the receiving water at, or downstream of, the Permittee’s outfalls; or (3) there is no direct or indirect discharge from the Permittee’s MS4 to the receiving water during the time period subject to the WQBEL. If permittees provide a quantitative demonstration as part of a watershed management program that control measures and best management practices (BMPs) will achieve WQBELs consistent with the schedule in Table 7-41.3, then compliance with WQBELs may be demonstrated by implementation of those control measures and BMPs, subject to Executive Officer approval.</p> <p>Responsible agencies must provide an Implementation Plan to the Regional Water Board outlining how each intends to individually or cooperatively achieve the WLAs. The report shall include implementation methods, an implementation schedule, proposed milestones, and proposed outfall monitoring to determine compliance. A Watershed Management Program (WMP) or Enhanced Watershed Management Program (EWMP) developed by the responsible agency(ies) in accordance with their MS4 permit(s), which has been approved by the Regional Water Board, satisfy the requirements for an Implementation Plan, where the WMP or EWMP addresses the applicable waterbody-pollutant combinations of this TMDL consistent with the implementation schedule set forth in Table 7-41.3. The responsible agency(ies) shall modify their WMP/EWMP no later than the next Adaptive Management Process cycle after provisions consistent with the assumptions and requirements of the TMDL WLAs are incorporated into the applicable MS4 permits.</p> <p>LAs for nonpoint sources will be implemented through the Conditional Waiver for Irrigated Lands (Order No. R4-2010-0186 or other successor order), Waste Discharge Requirements, Waivers of Waste Discharge Requirements, Memoranda of Understanding or other appropriate mechanisms consistent with the State’s Nonpoint Source Implementation and Enforcement Policy.</p>

Attachment A to Resolution No. R15-005

Element	Key Findings and Regulatory Provisions
	<p>This TMDL will be implemented in two phases over a twenty-year period (see Table 7-41.3). By ten years from effective date of TMDL, compliance with the allowable number of dry-weather exceedance days must be achieved. By twenty years from effective date of TMDL, compliance with the allowable number of wet-weather exceedance days and the geometric mean targets must be achieved.</p>
Monitoring	<p>MS4 Permittees</p> <p>Responsible jurisdictions and agencies for the MS4 WLAs are responsible for developing and implementing a comprehensive in-stream monitoring plan. The monitoring plan should include all applicable bacteria water quality objectives and the sampling frequency must be adequate to assess compliance with the geometric mean objectives. The Integrated Monitoring Program (IMP) or Coordinated Integrated Monitoring Program (CIMP) approved by the Executive Officer may partially or fully be deemed equivalent to a compliance monitoring plan at the Regional Water Board’s discretion. Responsible jurisdictions and agencies may build upon existing monitoring programs, IMPs, or CIMPs in the San Gabriel River watershed when developing the bacteria water quality monitoring plan. At a minimum, at least one sampling station shall be located in each impaired reach.</p> <p>Responsible jurisdictions and agencies shall conduct three wet-weather sampling events and quarterly dry-weather sampling, at a minimum, for at least one sampling site in each impaired reach prior to the dry-weather compliance deadline. After the dry-weather compliance deadline has passed, the responsible agencies shall conduct at least weekly sampling to support calculation of the geometric mean and assessment of compliance with allowable exceedance days.</p> <p>Responsible jurisdictions and agencies for the MS4 WLAs shall also submit an outfall monitoring plan. The outfall monitoring plan shall propose an adequate number of representative outfalls to be sampled, a sampling frequency, and protocol for enhanced outfall monitoring as a result of an in-stream exceedance. Responsible jurisdictions and agencies may use existing outfall monitoring stations in their IMPs or CIMPs to satisfy the monitoring requirements for the MS4 permits and the TMDL.</p> <p>Responsible jurisdictions and agencies must assess compliance at in-stream monitoring sites. If the number of exceedance days is greater than the allowable number of exceedance days the water body segment shall be considered not attaining the TMDL. Responsible jurisdictions or agencies shall not be deemed non-attaining if the outfall monitoring described in the paragraph above demonstrates that bacterial sources originating within the jurisdiction of the responsible agency have not caused or contributed to the exceedance.</p>

Attachment A to Resolution No. R15-005

Element	Key Findings and Regulatory Provisions
	<p>Non-MS4 Permittees</p> <p>NPDES Permittees other than MS4 dischargers shall conduct monitoring as part of their permit requirements for all applicable bacteria water quality objectives to ensure that they are attaining WLAs and that water quality objectives are being met.</p> <p>Nonpoint Sources</p> <p>The Conditional Waiver for Irrigated Lands or other regulatory mechanism shall require bacteria monitoring for discharges from irrigated agricultural lands. Monitoring shall be implemented as part of WDR and waiver requirements, and through implementation of the Nonpoint Source Implementation and Enforcement Policy, for other nonpoint sources.</p>

Attachment A to Resolution No. R15-005

Table 7-41.2 San Gabriel River, Estuary and Tributaries Indicator Bacteria TMDL: Allowable Exceedance Days^{1,2,3}.

Time Period/Condition	San Gabriel River and its Tributaries	San Gabriel River Estuary
Dry Weather	Five (5) exceedance days (daily sampling) or one (1) exceedance day (weekly sampling) of single sample objectives Zero (0) exceedances of geometric mean objectives	Not Applicable
Non-HFS Waterbodies ⁴ Wet Weather	17 exceedance days (daily sampling) or three (3) exceedance days (weekly sampling) of single sample objectives Zero (0) exceedances of geometric mean objectives	20 exceedance days (daily sampling) or three (3) exceedance days (weekly sampling) of single sample objectives Zero (0) exceedances of geometric mean objectives
HFS Waterbodies ⁵ Wet Weather (not including HFS days)	11 exceedance days (daily sampling) or two (2) exceedance days (weekly sampling) of single sample objectives Zero (0) exceedances of geometric mean objectives	Not Applicable
Summer Dry Weather (April 1 – October 31)	Not Applicable	Zero (0) exceedance days of single sample objectives Zero (0) exceedances of geometric mean objectives
Winter Dry Weather (November 1 – March 31)	Not Applicable	Nine (9) exceedance days (daily sampling) or two (2) exceedance days (weekly sampling) of single sample objectives Zero (0) exceedances of geometric mean objectives

¹ Allowable exceedance days calculated by the following equation: Allowable Exceedance Days = WQO Exceedance Probability in Reference System(s) x Number of Days during 1994.

² Where the fractional remainder for the calculated allowable exceedance days exceeds 1/10th then the number of days are rounded up (e.g., 4.12 is rounded up to 5). In instances where the tenth decimal place for the allowable exceedance days (or weeks or months) is lower than 1/10th then the number of days are rounded down (e.g., 4.02 is rounded down to 4).

³ The calculated number of exceedance days assumes that daily sampling is conducted. To determine the number of allowable exceedances for less frequent sampling, a ratio is used.

⁴ Non-HFS waterbodies include Puente Creek, Walnut Creek Wash, and San Gabriel River Estuary.

⁵ HFS waterbodies include Big Dalton Wash, Coyote Creek, Coyote Creek North Fork, San Gabriel River Reaches 1, 2, and 3, and San Jose Creek Reaches 1 and 2.

Attachment A to Resolution No. R15-005

Table 7-41.3 San Gabriel River, Estuary and Tributaries Indicator Bacteria TMDL: Implementation Schedule

Deadline	Task
Effective date of the TMDL	WLAs assigned to non-MS4 point sources must be attained.
1 year after the effective date of the TMDL	Responsible jurisdictions and agencies for the MS4 WLAs must submit a comprehensive monitoring plan, including in-stream and outfall monitoring, for the San Gabriel River Watershed for approval by the Executive Officer. Once the coordinated monitoring plan is approved by the Executive Officer, monitoring shall commence within 6 months.
4 years after the effective date of the TMDL	The Regional Water Board will reconsider and may revise the TMDL based upon data and information submitted under the MS4 permits on progress towards achieving WLAs, or other monitoring data, reference system studies, or new information. The reconsideration will include an evaluation of the need for interim WLAs that would be applicable to MS4 discharges, regardless of whether an MS4 permittee is implementing the TMDL through a WMP/EWMP or through the baseline provisions of the MS4 permit.
10 years after effective date of this TMDL	<p>For San Gabriel River Estuary: Achieve compliance with the applicable LAs and MS4 WLAs, expressed in terms of allowable exceedance days of the single sample objectives for summer dry weather (April 1 to October 31) and winter dry weather (November 1 to March 31).</p> <p>For San Gabriel River and its Tributaries: Achieve compliance with the applicable LAs and MS4 WLAs, expressed in terms of allowable exceedance days of the single sample objectives and for dry weather.</p>
20 years after the effective date of this TMDL	Achieve compliance with the allowable exceedance days during wet weather as set forth in Table 7-41.2 and geometric mean targets for all seasonal periods specified as identified under “Numeric Target.”

Attachment A to Resolution No. R15-005

Amendment to the Water Quality Control Plan – Los Angeles Region to incorporate the TMDL for Indicator Bacteria in the San Gabriel River, Estuary and Tributaries

Adopted by the California Regional Water Quality Control Board, Los Angeles Region on June 10, 2015.

Amendments:

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Add:

Chapter 7. Total Maximum Daily Loads (TMDLs)
7-41 San Gabriel River, Estuary and Tributaries Indicator Bacteria TMDL

List of Figures, Tables, and Inserts

Add:

Chapter 7. Total Maximum Daily Loads (TMDLs)
Tables
7-41 San Gabriel River, Estuary and Tributaries Indicator Bacteria TMDL
7-41.1 San Gabriel River, Estuary and Tributaries Indicator Bacteria TMDL: Elements
7-41.2 San Gabriel River, Estuary and Tributaries Indicator Bacteria TMDL: Allowable Exceedance Days
7-41.3 San Gabriel River, Estuary and Tributaries Indicator Bacteria TMDL: Implementation Schedule

Chapter 7. Total Maximum Daily Loads (TMDLs) San Gabriel River, Estuary and Tributaries Indicator Bacteria TMDL

This TMDL was adopted by the Regional Water Quality Control Board on June 10, 2015.

This TMDL was approved by:

The State Water Resources Control Board on **[Insert Date]**.
The Office of Administrative Law on **[Insert Date]**.
The U.S. Environmental Protection Agency on **[Insert Date]**.

This TMDL is effective on **[Insert Date]**.

The following tables include the elements of this TMDL.

Attachment A to Resolution No. R15-005

Table 7-41.1. San Gabriel River, Estuary and Tributaries Indicator Bacteria TMDL: Elements

Element	Key Findings and Regulatory Provisions
<p>Problem Statement</p>	<p>Elevated bacterial indicator densities are causing impairment of the water contact recreation (REC-1) and non-contact recreation (REC-2) beneficial uses in several reaches of the San Gabriel River, San Gabriel River Estuary, and its tributaries. Recreating in waters with elevated bacterial indicator densities has long been associated with adverse human health effects. Specifically, local and national epidemiological studies demonstrate that there is a causal relationship between adverse health effects and recreational water quality, as measured by bacterial indicator densities.</p>
<p>Numeric Target</p> <p>(Interpretation of the numeric water quality objective, used to calculate the waste load and load allocations)</p>	<p>The TMDL has a multi-part numeric target based on the bacteriological water quality objectives for fresh and marine water to protect the REC-1 and REC-2 beneficial uses. These targets are the most appropriate indicators of public health risk in recreational waters.</p> <p>These bacteriological objectives are set forth in Chapter 3 of the Basin Plan. The objectives are based on four bacterial indicators and include both geometric mean limits and single sample limits. The Basin Plan objectives that serve as the numeric targets for this TMDL are:</p> <p>In Marine Waters Designated for Water Contact Recreation (REC-1)</p> <p><u>1. Geometric Mean Limits</u></p> <p>a. Total coliform density shall not exceed 1,000/100 ml. b. Fecal coliform density shall not exceed 200/100 ml. c. <i>Enterococcus</i> density shall not exceed 35/100 ml.</p> <p><u>2. Single Sample Limits</u></p> <p>a. Total coliform density shall not exceed 10,000/100 ml. b. Fecal coliform density shall not exceed 400/100 ml. c. <i>Enterococcus</i> density shall not exceed 104/100 ml. d. Total coliform density shall not exceed 1,000/100 ml, if the ratio of fecal-to-total coliform exceeds 0.1.</p> <p>In Fresh Waters Designated for Water Contact Recreation (REC-1)</p> <p>1. Geometric Mean Limits a. <i>E. coli</i> density shall not exceed 126/100 ml.</p> <p>2. Single Sample Limits a. <i>E. coli</i> density shall not exceed 235/100 ml.</p> <p>The targets apply throughout the year. Determination of attainment of the targets will be at monitoring sites to be specified monitoring plans to be submitted by responsible entities.</p>

Attachment A to Resolution No. R15-005

Element	Key Findings and Regulatory Provisions
	<p>In this TMDL, implementation of the above bacteria objectives and the associated TMDL numeric targets is achieved using a “reference system/anti-degradation approach” rather than the alternative “natural sources exclusion approach” or strict application of the single sample objectives. As required by the federal Clean Water Act and California Water Code, Basin Plans include beneficial uses of waters, water quality objectives to protect those uses, an anti-degradation policy, collectively referred to as water quality standards, and other plans and policies necessary to implement water quality standards.</p> <p>This TMDL uses a “reference system/anti-degradation approach” to implement the water quality objectives per the implementation provisions in Chapter 3. On the basis of the historical exceedance frequency in Southern California reference waterbodies, a certain number of daily exceedances of the single sample bacteria objectives are permitted.</p> <p>The geometric mean targets may not be exceeded at any time. For the purposes of this TMDL, the geometric means shall be calculated weekly as a rolling geometric mean using 5 or more samples, for six week periods starting all calculation weeks on Sunday.</p> <p>For the single sample targets, the San Gabriel River and its tributaries are assigned an allowable number of exceedance days for two time periods (1) dry-weather, and (2) wet-weather (defined as days with 0.1 inch of rain or greater and the three days following the rain event.) The San Gabriel River Estuary is assigned an allowable number of exceedance days for three time periods (1) summer dry-weather (April 1 to October 31), (2) winter dry-weather (November 1 to March 31), and (3) wet-weather (defined as days with 0.1 inch of rain or greater and the three days following the rain event.)</p>
Source Analysis	<p>The significant contributors of bacteria loading to the San Gabriel River, San Gabriel River Estuary, and its tributaries are dry- and wet-weather discharges from municipal separate storm sewer systems (MS4s). Watershed-wide data show elevated levels of bacteria in the river. Data collected from natural landscapes in the upper watershed indicate that open space loading is not a significant source of bacteria. Data from storm drains and channels draining urban areas show elevated levels of bacteria, indicating that urban areas are a source. Data from throughout the Los Angeles Region further demonstrate that bacteria concentrations are significantly greater in developed areas. Based on this information, runoff from urban areas served by MS4s is a significant source of bacteria.</p> <p>Other point and nonpoint sources were analyzed but there were not sufficient data to quantify their contribution.</p>

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Element	Key Findings and Regulatory Provisions												
<p>Waste Load Allocations (for point sources)</p>	<p>Waste Load Allocations (WLAs) assigned to municipal separate storm sewer system (MS4) discharges are expressed as the number of daily or weekly sample days that may exceed the single sample limits as identified under “Numeric Target.” No exceedances are allowed for the geometric mean limits.</p> <p>The allowable days of exceedance for the single sample limits differ depending on season, dry weather or wet weather, and locations as described in Table 7-41.2.</p> <p>For the San Gabriel River and its tributaries, allowable exceedance days are set on an annual basis (April 1 to March 31) for two conditions:</p> <ol style="list-style-type: none"> 1. dry-weather 2. wet-weather (defined as days of 0.1 inch of rain or more plus three days following the rain event). <p>For the San Gabriel River Estuary, allowable exceedance days are set on an annual basis for three time periods/conditions. These three periods/conditions are:</p> <ol style="list-style-type: none"> 1. summer dry-weather (April 1 to October 31) 2. winter dry-weather (November 1 to March 31) 3. wet-weather (defined as days of 0.1 inch of rain or more plus three days following the rain event). <p>Certain reaches and tributaries of the San Gabriel River are subject to a High Flow Suspension (HFS) of the recreational beneficial uses as identified in Chapter 2. The HFS applies during specified conditions as defined in Chapter 2. During these conditions, the REC-1 and REC-2 beneficial uses are suspended for the affected reaches and tributaries.</p> <p>For the single sample objectives in the San Gabriel River and its tributaries, the WLAs are listed below.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="text-align: center;">Allowable Number of Exceedance Days</th> <th style="text-align: center;">Daily Sampling</th> <th style="text-align: center;">Weekly Sampling</th> </tr> </thead> <tbody> <tr> <td>Dry Weather</td> <td style="text-align: center;">5</td> <td style="text-align: center;">1</td> </tr> <tr> <td>Non-HFS Waterbodies Wet Weather</td> <td style="text-align: center;">17</td> <td style="text-align: center;">3</td> </tr> <tr> <td>HFS Waterbodies Wet Weather</td> <td style="text-align: center;">11 (not including HFS days)</td> <td style="text-align: center;">2 (not including HFS days)</td> </tr> </tbody> </table>	Allowable Number of Exceedance Days	Daily Sampling	Weekly Sampling	Dry Weather	5	1	Non-HFS Waterbodies Wet Weather	17	3	HFS Waterbodies Wet Weather	11 (not including HFS days)	2 (not including HFS days)
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Dry Weather	5	1											
Non-HFS Waterbodies Wet Weather	17	3											
HFS Waterbodies Wet Weather	11 (not including HFS days)	2 (not including HFS days)											

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Element	Key Findings and Regulatory Provisions												
<p>For the single sample objectives in San Gabriel Estuary, the WLAs are listed below.</p> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Allowable Number of Exceedance Days</th> <th style="text-align: center;">Daily Sampling</th> <th style="text-align: center;">Weekly Sampling</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Summer Dry-Weather</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> </tr> <tr> <td style="text-align: center;">Winter Dry-Weather</td> <td style="text-align: center;">9</td> <td style="text-align: center;">2</td> </tr> <tr> <td style="text-align: center;">Wet Weather</td> <td style="text-align: center;">20</td> <td style="text-align: center;">3</td> </tr> </tbody> </table> <p>In the instances where more than one single sample objective applies, exceedance of any one of the limits constitutes an exceedance day. The waste load allocation for the geometric mean for the responsible agencies and jurisdictions is zero (0) allowable exceedances.</p> <p>The responsible jurisdictions and responsible agencies include the permittees and co-permittees of the MS4 permits in Los Angeles County, Orange County and San Bernardino County¹, the California Department of Transportation (Caltrans), and any permittees that may be enrolled under a Phase II MS4 permit within the San Gabriel River watershed. The Phase II MS4 permittees include California State Polytechnic University Pomona and Lanterman Development Center. The responsible jurisdictions and responsible agencies within the watershed are jointly responsible for complying with the waste load allocations.</p> <p>Other non-MS4 dischargers, including individual NPDES permits, general NPDES permits, general industrial storm water permits, and general construction storm water permits are not expected to be a significant source of bacteria. Additionally, these discharges are not eligible for the reference system approach set forth in the implementation provisions for the bacteriological objectives in Chapter 3. WLAs for non-MS4 dischargers currently subject to permits with effluent limits for bacteria are equal to the existing effluent limits for bacteria. Non-MS4 dischargers that do not have existing effluent limits for bacteria are not assigned WLAs. Any future point source discharges must be evaluated to determine whether reasonable potential exists for</p>	Allowable Number of Exceedance Days	Daily Sampling	Weekly Sampling	Summer Dry-Weather	0	0	Winter Dry-Weather	9	2	Wet Weather	20	3	
Allowable Number of Exceedance Days	Daily Sampling	Weekly Sampling											
Summer Dry-Weather	0	0											
Winter Dry-Weather	9	2											
Wet Weather	20	3											

¹ County of Los Angeles, Los Angeles County Flood Control District, the cities of Arcadia, Artesia, Azusa, Baldwin Park, Bellflower, Bradbury, Cerritos, Claremont, Covina, Diamond Bar, Downey, Duarte, El Monte, Glendora, Hawaiian Gardens, Industry, Irwindale, Lakewood, La Mirada, La Habra Heights, La Puente, La Verne, Long Beach, Monrovia, Norwalk, Paramount, Pico Rivera, Pomona, San Dimas, Santa Fe Springs, South El Monte, Walnut, West Covina, Whittier, Orange County, Orange County Flood Control District, Anaheim, Brea, Buena Park, Cypress, Fullerton, Garden Grove, La Habra, La Palma, Los Alamitos, Placentia, Seal Beach, and Yorba Linda, San Bernardino County, San Bernardino County Flood Control District, and Chino Hills.

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Element	Key Findings and Regulatory Provisions												
	<p>the discharge to be a source of bacteria that could cause or contribute to an exceedance of the applicable water quality standards. If reasonable potential analysis (RPA) during permitting process does not indicate reasonable potential then effluent limits do not need to be included in the permit.</p>												
<p>Load Allocations (for nonpoint sources)</p>	<p>Load Allocations (LAs) for lands not covered by a MS4 permit, such as U.S. Forest Service lands, California Department of Parks and Recreation Lands, or National Park Service lands are expressed as the number of daily or weekly sample days that may exceed the single sample limits or geometric mean limits as identified under “Numeric Target.” No exceedances are allowed for the geometric mean limits. The allowable days of exceedance for the single sample limits differ depending on season, dry weather or wet weather, and by location as described in Table 7-41.2.</p> <p>For the San Gabriel River and its tributaries, allowable exceedance days are set on an annual basis for two conditions. These two conditions are:</p> <ol style="list-style-type: none"> 1. dry-weather 2. wet-weather (defined as days of 0.1 inch of rain or more plus three days following the rain event). <p>For in the San Gabriel River Estuary, allowable exceedance days are set on an annual basis for three time periods/conditions. These three periods/conditions are:</p> <ol style="list-style-type: none"> 1. summer dry-weather (April 1 to October 31) 2. winter dry-weather (November 1 to March 31) 3. wet weather (defined as days of 0.1 inch of rain or more plus three days following the rain event). <p>For the single sample objectives in the San Gabriel River and its tributaries, the LAs are listed below.</p> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 35%;">Allowable Number of Exceedance Days</th> <th style="width: 30%;">Daily Sampling</th> <th style="width: 35%;">Weekly Sampling</th> </tr> </thead> <tbody> <tr> <td>Dry Weather</td> <td>5</td> <td>1</td> </tr> <tr> <td>Non-HFS Waterbodies Wet Weather</td> <td>17</td> <td>3</td> </tr> <tr> <td>HFS Waterbodies Wet Weather</td> <td>11 (not including HFS days)</td> <td>2 (not including HFS days)</td> </tr> </tbody> </table>	Allowable Number of Exceedance Days	Daily Sampling	Weekly Sampling	Dry Weather	5	1	Non-HFS Waterbodies Wet Weather	17	3	HFS Waterbodies Wet Weather	11 (not including HFS days)	2 (not including HFS days)
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HFS Waterbodies Wet Weather	11 (not including HFS days)	2 (not including HFS days)											

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Element	Key Findings and Regulatory Provisions												
	<p>For the single sample objectives in the San Gabriel Estuary, the LAs are listed below.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;">Allowable Number of Exceedance Days</th> <th style="text-align: center;">Daily Sampling</th> <th style="text-align: center;">Weekly Sampling</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Summer Dry-Weather</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> </tr> <tr> <td style="text-align: center;">Winter Dry-Weather</td> <td style="text-align: center;">9</td> <td style="text-align: center;">2</td> </tr> <tr> <td style="text-align: center;">Wet Weather</td> <td style="text-align: center;">20</td> <td style="text-align: center;">3</td> </tr> </tbody> </table> <p>LAs equal to zero days of allowable exceedances for the single sample and geometric mean targets are assigned to onsite wastewater treatment systems, golf courses, horse and livestock facilities, and irrigated agricultural lands within the watershed.</p>	Allowable Number of Exceedance Days	Daily Sampling	Weekly Sampling	Summer Dry-Weather	0	0	Winter Dry-Weather	9	2	Wet Weather	20	3
Allowable Number of Exceedance Days	Daily Sampling	Weekly Sampling											
Summer Dry-Weather	0	0											
Winter Dry-Weather	9	2											
Wet Weather	20	3											
Margin of Safety	<p>An implicit margin of safety was assumed by directly applying the water quality standards and implementation procedures as WLAs and LAs. This ensures that there is little uncertainty about whether meeting the TMDLs will result in meeting the water quality standards.</p>												
Seasonal Variations and Critical Conditions	<p>Seasonal variations are addressed by developing separate waste load allocations for two conditions (dry weather and wet weather) in the San Gabriel River and its tributaries, and three time periods/conditions (summer dry-weather, winter dry-weather, and wet weather) in the San Gabriel River Estuary based on public health concerns and observed natural background levels of exceedance of bacterial indicators.</p> <p>The critical condition for bacteria discharges to the San Gabriel River Estuary, the San Gabriel River, and its tributaries is during wet weather when monitoring data indicate a higher probability of exceedance of the single sample bacteria objectives than during dry weather.</p> <p>The critical condition within wet weather more specifically, in order to set the allowable number of exceedances of the single sample limit days, is the 90th percentile storm year in terms of wet days. The 1994 storm year is the reference year for purposes of identifying the wet weather critical condition. The number of wet-weather days in the 1994 reference year was 87 days, and the number of dry-weather days was 278 days (199 summer dry-weather days and 79 winter dry-weather days). Of these 87 days, 30 days fall under the definition of a HFS day.</p>												
Implementation	<p>The regulatory mechanisms used to implement the TMDL will include the Los Angeles County MS4 permit, the City of Long Beach MS4 permit, the Orange County MS4 permit and the San Bernardino County MS4 permit (under the jurisdiction of the Santa Ana Regional Water</p>												

Attachment A to Resolution No. R15-005

Element	Key Findings and Regulatory Provisions
	<p>Board), the Caltrans Storm Water permit, the statewide Phase II MS4 permit and any regional Phase II MS4 permits, minor and major NPDES permits, general NPDES permits, general industrial storm water permits, general construction storm water permits, and the authority contained in Sections 13263, 13267, 13269, and 13383 of the California Water Code, and other appropriate regulatory mechanisms. NPDES permits for each discharge assigned a WLA shall be reopened or amended at re-issuance, in accordance with applicable laws, to incorporate effluent limitations consistent with the assumptions and requirements of the WLAs herein.</p> <p>WLAs shall be incorporated into MS4 permits as water quality-based effluent limitations (WQBELs). MS4 Permittees may be deemed in compliance with WQBELs if they demonstrate that: (1) there are no violations of the WQBEL at the Permittee’s applicable MS4 outfall(s); (2) there are no exceedances of the receiving water limitations in the receiving water at, or downstream of, the Permittee’s outfalls; or (3) there is no direct or indirect discharge from the Permittee’s MS4 to the receiving water during the time period subject to the WQBEL. If permittees provide a quantitative demonstration as part of a watershed management program that control measures and best management practices (BMPs) will achieve WQBELs consistent with the schedule in Table 7-41.3, then compliance with WQBELs may be demonstrated by implementation of those control measures and BMPs, subject to Executive Officer approval.</p> <p>Responsible agencies must provide an Implementation Plan to the Regional Water Board outlining how each intends to individually or cooperatively achieve the WLAs. The report shall include implementation methods, an implementation schedule, proposed milestones, and proposed outfall monitoring to determine compliance. A Watershed Management Program (WMP) or Enhanced Watershed Management Program (EWMP) developed by the responsible agency(ies) in accordance with their MS4 permit(s), which has been approved by the Regional Water Board, satisfy the requirements for an Implementation Plan, where the WMP or EWMP addresses the applicable waterbody-pollutant combinations of this TMDL consistent with the implementation schedule set forth in Table 7-41.3. The responsible agency(ies) shall modify their WMP/EWMP no later than the next Adaptive Management Process cycle after provisions consistent with the assumptions and requirements of the TMDL WLAs are incorporated into the applicable MS4 permits.</p> <p>LAs for nonpoint sources will be implemented through the Conditional Waiver for Irrigated Lands (Order No. R4-2010-0186 or other successor order), Waste Discharge Requirements, Waivers of Waste Discharge Requirements, Memoranda of Understanding or other appropriate mechanisms consistent with the State’s Nonpoint Source Implementation and Enforcement Policy.</p>

Attachment A to Resolution No. R15-005

Element	Key Findings and Regulatory Provisions
	<p>This TMDL will be implemented in two phases over a twenty-year period (see Table 7-41.3). By ten years from effective date of TMDL, compliance with the allowable number of dry-weather exceedance days must be achieved. By twenty years from effective date of TMDL, compliance with the allowable number of wet-weather exceedance days and the geometric mean targets must be achieved.</p>
Monitoring	<p>MS4 Permittees</p> <p>Responsible jurisdictions and agencies for the MS4 WLAs are responsible for developing and implementing a comprehensive in-stream monitoring plan. The monitoring plan should include all applicable bacteria water quality objectives and the sampling frequency must be adequate to assess compliance with the geometric mean objectives. The Integrated Monitoring Program (IMP) or Coordinated Integrated Monitoring Program (CIMP) approved by the Executive Officer may partially or fully be deemed equivalent to a compliance monitoring plan at the Regional Water Board’s discretion. Responsible jurisdictions and agencies may build upon existing monitoring programs, IMPs, or CIMPs in the San Gabriel River watershed when developing the bacteria water quality monitoring plan. At a minimum, at least one sampling station shall be located in each impaired reach.</p> <p>Responsible jurisdictions and agencies shall conduct three wet-weather sampling events and quarterly dry-weather sampling, at a minimum, for at least one sampling site in each impaired reach prior to the dry-weather compliance deadline. After the dry-weather compliance deadline has passed, the responsible agencies shall conduct at least weekly sampling to support calculation of the geometric mean and assessment of compliance with allowable exceedance days.</p> <p>Responsible jurisdictions and agencies for the MS4 WLAs shall also submit an outfall monitoring plan. The outfall monitoring plan shall propose an adequate number of representative outfalls to be sampled, a sampling frequency, and protocol for enhanced outfall monitoring as a result of an in-stream exceedance. Responsible jurisdictions and agencies may use existing outfall monitoring stations in their IMPs or CIMPs to satisfy the monitoring requirements for the MS4 permits and the TMDL.</p> <p>Responsible jurisdictions and agencies must assess compliance at in-stream monitoring sites. If the number of exceedance days is greater than the allowable number of exceedance days the water body segment shall be considered not attaining the TMDL. Responsible jurisdictions or agencies shall not be deemed non-attaining if the outfall monitoring described in the paragraph above demonstrates that bacterial sources originating within the jurisdiction of the responsible agency have not caused or contributed to the exceedance.</p>

Attachment A to Resolution No. R15-005

Element	Key Findings and Regulatory Provisions
	<p>Non-MS4 Permittees</p> <p>NPDES Permittees other than MS4 dischargers shall conduct monitoring as part of their permit requirements for all applicable bacteria water quality objectives to ensure that they are attaining WLAs and that water quality objectives are being met.</p> <p>Nonpoint Sources</p> <p>The Conditional Waiver for Irrigated Lands or other regulatory mechanism shall require bacteria monitoring for discharges from irrigated agricultural lands. Monitoring shall be implemented as part of WDR and waiver requirements, and through implementation of the Nonpoint Source Implementation and Enforcement Policy, for other nonpoint sources.</p>

Attachment A to Resolution No. R15-005

Table 7-41.2 San Gabriel River, Estuary and Tributaries Indicator Bacteria TMDL: Allowable Exceedance Days^{1,2,3}.

Time Period/Condition	San Gabriel River and its Tributaries	San Gabriel River Estuary
Dry Weather	Five (5) exceedance days (daily sampling) or one (1) exceedance day (weekly sampling) of single sample objectives Zero (0) exceedances of geometric mean objectives	Not Applicable
Non-HFS Waterbodies ⁴ Wet Weather	17 exceedance days (daily sampling) or three (3) exceedance days (weekly sampling) of single sample objectives Zero (0) exceedances of geometric mean objectives	20 exceedance days (daily sampling) or three (3) exceedance days (weekly sampling) of single sample objectives Zero (0) exceedances of geometric mean objectives
HFS Waterbodies ⁵ Wet Weather (not including HFS days)	11 exceedance days (daily sampling) or two (2) exceedance days (weekly sampling) of single sample objectives Zero (0) exceedances of geometric mean objectives	Not Applicable
Summer Dry Weather (April 1 – October 31)	Not Applicable	Zero (0) exceedance days of single sample objectives Zero (0) exceedances of geometric mean objectives
Winter Dry Weather (November 1 – March 31)	Not Applicable	Nine (9) exceedance days (daily sampling) or two (2) exceedance days (weekly sampling) of single sample objectives Zero (0) exceedances of geometric mean objectives

¹ Allowable exceedance days calculated by the following equation: Allowable Exceedance Days = WQO Exceedance Probability in Reference System(s) x Number of Days during 1994.

² Where the fractional remainder for the calculated allowable exceedance days exceeds 1/10th then the number of days are rounded up (e.g., 4.12 is rounded up to 5). In instances where the tenth decimal place for the allowable exceedance days (or weeks or months) is lower than 1/10th then the number of days are rounded down (e.g., 4.02 is rounded down to 4).

³ The calculated number of exceedance days assumes that daily sampling is conducted. To determine the number of allowable exceedances for less frequent sampling, a ratio is used.

⁴ Non-HFS waterbodies include Puente Creek, Walnut Creek Wash, and San Gabriel River Estuary.

⁵ HFS waterbodies include Big Dalton Wash, Coyote Creek, Coyote Creek North Fork, San Gabriel River Reaches 1, 2, and 3, and San Jose Creek Reaches 1 and 2.

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Table 7-41.3 San Gabriel River, Estuary and Tributaries Indicator Bacteria TMDL: Implementation Schedule

Deadline	Task
Effective date of the TMDL	WLAs assigned to non-MS4 point sources must be attained.
1 year after the effective date of the TMDL	Responsible jurisdictions and agencies for the MS4 WLAs must submit a comprehensive monitoring plan, including in-stream and outfall monitoring, for the San Gabriel River Watershed for approval by the Executive Officer. Once the coordinated monitoring plan is approved by the Executive Officer, monitoring shall commence within 6 months.
4 years after the effective date of the TMDL	The Regional Water Board will reconsider and may revise the TMDL based upon data and information submitted under the MS4 permits on progress towards achieving WLAs, or other monitoring data, reference system studies, or new information. The reconsideration will include an evaluation of the need for interim WLAs that would be applicable to MS4 discharges, regardless of whether an MS4 permittee is implementing the TMDL through a WMP/EWMP or through the baseline provisions of the MS4 permit.
10 years after effective date of this TMDL	<p>For San Gabriel River Estuary: Achieve compliance with the applicable LAs and MS4 WLAs, expressed in terms of allowable exceedance days of the single sample objectives for summer dry weather (April 1 to October 31) and winter dry weather (November 1 to March 31).</p> <p>For San Gabriel River and its Tributaries: Achieve compliance with the applicable LAs and MS4 WLAs, expressed in terms of allowable exceedance days of the single sample objectives and for dry weather.</p>
20 years after the effective date of this TMDL	Achieve compliance with the allowable exceedance days during wet weather as set forth in Table 7-41.2 and geometric mean targets for all seasonal periods specified as identified under “Numeric Target.”