

Attachment A to Resolution No. R10-XXX

Amendment to the Water Quality Control Plan - Los Angeles Region to incorporate the Los Angeles River Watershed Bacteria TMDL

Proposed for adoption by the California Regional Water Quality Control Board, Los Angeles Region on July, XX, 2010.

Amendments:

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Chapter 7. Total Maximum Daily Loads (TMDLs)
Tables

7-39 Los Angeles River Watershed Bacteria TMDL

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Chapter 7. Total Maximum Daily Loads (TMDLs) Summaries

Add:

7-39 Los Angeles River Watershed Bacteria TMDL

This TMDL was adopted by:

The Regional Water Quality Control Board on [Insert Date].

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].

The following table includes the elements of this TMDL.

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Table 7-39.1. Los Angeles River Watershed Bacteria TMDL: Elements

| Element | Findings and Regulatory Provisions |
|---|---|
| <p>Problem Statement</p> | <p>Elevated bacteria indicator densities are causing impairment of the water contact recreation (REC-1) beneficial use at the 303(d) listed waterbodies within the Los Angeles River Watershed. Recreating in waters with elevated bacteria indicator densities has been associated with adverse health effects. Specifically, local and national epidemiological studies demonstrate a causal relationship between adverse health effects and recreational water quality, as measured by bacteria indicator densities.</p> |
| <p>Numeric Target (Interpretation of the numeric water quality objective, used to calculate allocations)</p> | <p>The TMDL has a multi-part numeric target based on the bacteriological water quality objectives for fresh water to protect the water contact recreation use set forth in Chapter 3. These targets are the most appropriate indicators of public health risk in recreational waters.</p> <p>The numeric targets for this TMDL are:</p> <ol style="list-style-type: none"> 1. Geometric Mean Target <ol style="list-style-type: none"> a. <i>E. coli</i> density shall not exceed 126/100 mL. 2. Single Sample Target <ol style="list-style-type: none"> b. <i>E. coli</i> density shall not exceed 235/100 mL. <p>The Basin Plan objectives and these targets are based on an acceptable health risk for fresh recreational waters of eight illnesses per 1,000 exposed individuals as recommended by the US EPA (USEPA, 1986).</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 at Southern California reference reaches, a certain number of daily exceedances of the single sample bacteria objectives are permitted. The allowable number of exceedance days is set such that (1) bacteriological water quality at any site is at least as good as at the reference site(s) and (2) there is no degradation of existing bacteriological water quality. This approach recognizes that there are natural sources of bacteria that may cause or contribute to exceedances of the single sample objectives and that it is not the intent of the Regional Board to require treatment or diversion of natural coastal creeks or to require treatment of natural sources of bacteria from undeveloped areas.</p> <p>For the single sample target, each river segment and tributary is assigned an allowable number of exceedance days for dry weather and wet</p> |

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| | <p>weather (defined as days with 0.1 inch of rain or greater and the three days following the rain event.)</p> <p>The geometric mean target may not be exceeded at any time.</p> |
| <p>Source Analysis</p> | <p>Bacteria sources in the Los Angeles River Watershed include anthropogenic and non-anthropogenic sources and point and non-point sources. Each of these sources contributes to the elevated levels of bacteria indicator densities in the Los Angeles River Watershed during dry and wet weather. There are currently five major National Pollutant Discharge Elimination System (NPDES) permits or Waste Discharge Requirements (WDRs) for discharges to the Los Angeles River Watershed. Of these, three are Water Reclamation Plants (WRPs), including the Donald C. Tillman WRP, Los Angeles-Glendale WRP, and Burbank WRP.</p> <p>There are three Municipal Separate Storm Sewer System (MS4) NPDES permits in the watershed, including the County of Los Angeles and the Incorporated Cities Therein, except the City of Long Beach; the City of Long Beach; and the California Department of Transportation (Caltrans) (referenced hereafter as the MS4 Permittees), which regulate municipal stormwater and urban runoff discharges.</p> <p>Discharges from storm drains contribute roughly 13% of the flow in the Los Angeles River, while the three WRPs contribute roughly 72% of the flow in the river during dry weather. However, discharges from storm drains contribute almost 90% of the <i>E. coli</i> loading to the river during dry weather. During wet weather, WRP discharges may account for as little as 1% of the total flow in the river. While there are many sources of indicator bacteria to the MS4, discharges from the MS4 are the principal source of bacteria to the Los Angeles River and its tributaries in both dry weather and wet weather.</p> <p>Discharges from general NPDES permits, general industrial stormwater permits, general construction stormwater permits, industrial waste water permits, and WDR permits are not a significant source of bacteria to the river.</p> <p>Non-point sources include wildlife, direct human discharges, septic systems, equestrian activities, and birds. Though sanitary sewer overflows are frequent within the watershed they are estimated to account for only 2% of the total dry-weather load and a small portion of the wet-weather load. Non-point sources may also include in-channel sources such as re-growth or re-suspension from sediments; the relative contribution of such sources is unknown.</p> |

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| Element | Findings and Regulatory Provisions | | | | | | | | | | | | |
|--|---|-------------------------------------|----------------|-----------------|-------------|---|---|---|----|---|--------------------------------|----|---|
| <p>Waste Load Allocations (for point sources)</p> | <p>Waste load allocations (WLAs) are expressed as allowable exceedance days.</p> <p>The allowable number of exceedance days for dry weather and wet weather is based on the more stringent of two criteria (1) exceedance days in the designated reference system and (2) exceedance days based on historical bacteriological data in the subject reach. This ensures that bacteriological water quality is at least as good as that of a largely undeveloped system and that there is no degradation of existing water quality.</p> <p>For this TMDL, the mainstem of the Los Angeles River was broken down into segments for allocations due to the availability of flow data.</p> <ul style="list-style-type: none"> • Segment A includes Reaches 1 and a portion of Reach 2 • Segment B includes a portion of Reach 2 • Segment C includes Reach 3 and a portion of Reach 4 • Segment D includes a portion of Reach 4 and Reach 5 • Segment E includes Reach 6 <p>For each segment and tributary, allowable exceedance days are set on an annual basis as well as for dry weather and wet weather days.</p> <p>Certain reaches and tributaries of the Los Angeles 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 MS4 dischargers, the dry-weather WLAs and wet-weather WLAs for the single sample targets 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-HFS¹ Waterbodies Wet Weather</td> <td>15</td> <td>2</td> </tr> <tr> <td>HFS Waterbodies Wet Weather</td> <td>10</td> <td>2</td> </tr> </tbody> </table> | Allowable Number of Exceedance Days | Daily Sampling | Weekly Sampling | Dry Weather | 5 | 1 | Non-HFS ¹ Waterbodies Wet Weather | 15 | 2 | HFS Waterbodies Wet Weather | 10 | 2 |
| Allowable Number of Exceedance Days | Daily Sampling | Weekly Sampling | | | | | | | | | | | |
| Dry Weather | 5 | 1 | | | | | | | | | | | |
| Non-HFS ¹ Waterbodies Wet Weather | 15 | 2 | | | | | | | | | | | |
| HFS Waterbodies Wet Weather | 10 | 2 | | | | | | | | | | | |

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¹ HFS stands for high flow suspension as defined in Chapter 2.

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| Element | Findings and Regulatory Provisions | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|----------------------------|--|--|-----|---------------------------|-----|---------------------------|-----|---------------------------|-----|---------------------------|----|-------------------|----|-------------|----|------------|----|------------|---|-------------------------|----|---------------|---|------------|---|--------------|---|-----------|---|--------------|---|--------------|----|
| | <p>The WLAs for the geometric mean target during any time at any river segment and tributary in the Los Angeles River Watershed is zero (0) days of allowable exceedances.</p> <p>In addition, MS4 dischargers are assigned interim WLAs. Interim WLAs are assigned for specific river segments and tributaries and are listed in the table, below.</p> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">River Segment or Tributary</th> <th style="text-align: center;"><i>E. coli</i> Load (10⁹ MPN²/Day)</th> </tr> </thead> <tbody> <tr><td>Los Angeles River Segment³</td><td style="text-align: center;">274</td></tr> <tr><td>Los Angeles River Segment</td><td style="text-align: center;">471</td></tr> <tr><td>Los Angeles River Segment</td><td style="text-align: center;">421</td></tr> <tr><td>Los Angeles River Segment</td><td style="text-align: center;">413</td></tr> <tr><td>Los Angeles River Segment</td><td style="text-align: center;">29</td></tr> <tr><td>Aliso Canyon Wash</td><td style="text-align: center;">21</td></tr> <tr><td>Arroyo Seco</td><td style="text-align: center;">22</td></tr> <tr><td>Bell Creek</td><td style="text-align: center;">13</td></tr> <tr><td>Bull Creek</td><td style="text-align: center;">8</td></tr> <tr><td>Burbank Western Channel</td><td style="text-align: center;">78</td></tr> <tr><td>Compton Creek</td><td style="text-align: center;">6</td></tr> <tr><td>Dry Canyon</td><td style="text-align: center;">6</td></tr> <tr><td>McCoy Canyon</td><td style="text-align: center;">6</td></tr> <tr><td>Rio Hondo</td><td style="text-align: center;">2</td></tr> <tr><td>Tujunga Wash</td><td style="text-align: center;">9</td></tr> <tr><td>Verdugo Wash</td><td style="text-align: center;">46</td></tr> </tbody> </table> <p>General NPDES permits, individual NPDES permits, the Statewide Industrial Storm Water General Permit, the Statewide Construction Activity Storm Water General Permit, and WDR permittees in the Los Angeles River Watershed are assigned WLAs of zero (0) days of allowable exceedances of the single sample target for both dry and wet weather and no exceedances of the geometric mean target.</p> <p>The WLAs for the three WRPs in the watershed, which include D.C. Tillman, Los Angeles-Glendale, and Burbank WRP, are set equal to 2.2 MPN/100 mL of <i>E. coli</i> multiplied by the discharge rate at the time of sampling to ensure zero (0) days of allowable exceedances of the single sample target for both dry and wet weather and no exceedances of the geometric mean target.</p> | River Segment or Tributary | <i>E. coli</i> Load (10 ⁹ MPN ² /Day) | Los Angeles River Segment ³ | 274 | Los Angeles River Segment | 471 | Los Angeles River Segment | 421 | Los Angeles River Segment | 413 | Los Angeles River Segment | 29 | Aliso Canyon Wash | 21 | Arroyo Seco | 22 | Bell Creek | 13 | Bull Creek | 8 | Burbank Western Channel | 78 | Compton Creek | 6 | Dry Canyon | 6 | McCoy Canyon | 6 | Rio Hondo | 2 | Tujunga Wash | 9 | Verdugo Wash | 46 |
| River Segment or Tributary | <i>E. coli</i> Load (10 ⁹ MPN ² /Day) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Los Angeles River Segment ³ | 274 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Los Angeles River Segment | 471 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Los Angeles River Segment | 421 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Los Angeles River Segment | 413 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Los Angeles River Segment | 29 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aliso Canyon Wash | 21 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Arroyo Seco | 22 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bell Creek | 13 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bull Creek | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Burbank Western Channel | 78 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Compton Creek | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dry Canyon | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| McCoy Canyon | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rio Hondo | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tujunga Wash | 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Verdugo Wash | 46 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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² MPN stands for most probable number.

³ The segments are defined in the waste load allocation and load allocation sections.

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| <p>Load Allocations (for non-point sources)</p> | <p>Load allocations (LAs) are expressed as the number of daily or weekly sample days that may exceed the single sample target identified under “Numeric Target.”</p> <p>Lands not covered by a MS4 permit, such as the US Forest Service lands, California Department of Parks and Recreation lands, or National Park Service lands are assigned LAs. The dry-weather LAs and wet-weather LAs for the single sample target are listed in the table, below.</p> <table border="1" data-bbox="570 569 1398 877"> <thead> <tr> <th data-bbox="576 577 894 667">Allowable Number of Exceedance Days</th> <th data-bbox="894 577 1122 667">Daily Sampling</th> <th data-bbox="1122 577 1391 667">Weekly Sampling</th> </tr> </thead> <tbody> <tr> <td data-bbox="576 667 894 726">Dry Weather</td> <td data-bbox="894 667 1122 726">5</td> <td data-bbox="1122 667 1391 726">1</td> </tr> <tr> <td data-bbox="576 726 894 800">Non-HFS⁴ Waterbodies Wet Weather</td> <td data-bbox="894 726 1122 800">15</td> <td data-bbox="1122 726 1391 800">2</td> </tr> <tr> <td data-bbox="576 800 894 873">HFS Waterbodies Wet Weather</td> <td data-bbox="894 800 1122 873">10</td> <td data-bbox="1122 800 1391 873">2</td> </tr> </tbody> </table> <p>Onsite Waste Treatment Systems are assigned LAs of zero (0) days of allowable exceedances for both dry and wet weather for the single sample target and geometric mean target.</p> <p>In addition, sewer collection systems are assigned LAs of zero (0) days of allowable exceedances for both dry and wet weather for the single sample target and the geometric mean target.</p> <p>The LAs for the geometric mean target for any responsible party during any time at any river segment and tributary in the Los Angeles River Watershed is zero (0) days of allowable exceedances.</p> | Allowable Number of Exceedance Days | Daily Sampling | Weekly Sampling | Dry Weather | 5 | 1 | Non-HFS ⁴ Waterbodies Wet Weather | 15 | 2 | HFS Waterbodies Wet Weather | 10 | 2 |
| Allowable Number of Exceedance Days | Daily Sampling | Weekly Sampling | | | | | | | | | | | |
| Dry Weather | 5 | 1 | | | | | | | | | | | |
| Non-HFS ⁴ Waterbodies Wet Weather | 15 | 2 | | | | | | | | | | | |
| HFS Waterbodies Wet Weather | 10 | 2 | | | | | | | | | | | |
| <p>Implementation</p> | <p>The regulatory mechanisms used to implement the TMDL will include general NPDES permits, individual NPDES permits, MS4 Permits covering jurisdictions within the Los Angeles River Watershed, the Statewide Industrial Storm Water General Permit, the Statewide Construction Activity Storm Water General Permit, the Statewide Stormwater Permit for Caltrans Activities, and the authority contained in Sections 13263 and 13267 of the Cal. Water Code. For each discharger assigned a WLA, the appropriate Regional Board Order shall be reopened or amended when the order is reissued, in accordance with applicable laws, to incorporate the applicable WLA as a permit requirement. LAs will be implemented through California’s 2004 Nonpoint Source Pollution Control Program.</p> | | | | | | | | | | | | |

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⁴ HFS stands for high flow suspension as defined in Chapter 2.

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| | <p>This TMDL will be implemented through the mechanisms above in accordance with the implementation schedule. The implementation schedule is detailed in Table 7-39.3.</p> <p>MS4 Permittees may achieve the WLAs by employing any viable and legal implementation strategy. A recommended implementation approach is called the “MS4 Load Reduction Strategy” (LRS) and requires coordinated effort by all MS4 Permittees within a segment or tributary.</p> <p>Individual MS4 Permittees or subgroups of MS4 Permittees may choose to develop and implement alternative implementation strategies for dry weather implementation, then the group-based WLAs may be distributed based on proportional drainage area, upon approval of the Executive Officer. The implementation approaches herein can still be followed based on the proportional WLAs. For MS4 Permittees that choose to <i>not</i> follow a MS4 Load Reduction Strategy, the compliance schedule to attain final WLAs is shorter because only one implementation phase is allowed.</p> <p>Responsible parties must provide an Implementation Plan to the Regional Board outlining how each intends to cooperatively achieve compliance with the wet-weather WLAs. The report shall include implementation methods, an implementation schedule, and proposed milestones. The plan shall include a technically defensible quantitative linkage to the final wet-weather WLAs. The linkage should include target reductions in stormwater runoff and/or <i>E. coli</i>. The plan shall include quantitative estimates of the water quality benefits provided by the proposed structural and non-structural BMPs.</p> <p>Twenty-five years after the effective date of the TMDL, final WLAs and LAs shall be achieved at all segments and tributaries for dry and wet weather.</p> |
| Margin of Safety | <p>An explicit margin of safety is included in the allocations. Cumulatively, the dry-weather and wet-weather WLAs and LAs allow exceedances of the single sample target no more than 5% of the time on an annual basis. The <i>Water Quality Control Policy for Developing California’s Clean Water Act Section 303(d) List</i> concludes that there are water quality impairments using a binomial distribution method, which lists waterbodies as impaired when the exceedances are between approximately 8 and 10 percent.</p> <p>An implicit margin of safety is incorporated in the interim allocations</p> |

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| | <p>through the use of a conservative assumption of no (0) bacterial decay in discharges from storm drains to the receiving water when determining the assimilative capacity of the river segments and tributaries.</p> |
| <p>Seasonal Variations and Critical Conditions</p> | <p>Seasonal variations are addressed by developing separate allocations for dry weather and wet weather based on observed natural background levels of exceedance of bacteria indicators.</p> <p>Historic monitoring data for the Los Angeles River Watershed indicate that the critical condition for bacteria loading is during wet weather due to greater exceedance probabilities of the single sample bacteria objective than during dry weather. The 90th percentile ‘storm year’⁵ in terms of wet days⁶ is used as the reference year. Selecting the 90th percentile year is a conservative approach that will accommodate a ‘worst-case’ scenario resulting in fewer exceedance days than the maximum allowed in drier years. Conversely, in the 10% of wetter years, there may be more than the allowable number of exceedance days.</p> |
| <p>Compliance Monitoring</p> | <p>Monitoring shall be conducted by the responsible MS4 Permittees. Monitoring entails compliance monitoring to assess attainment of WLAs and monitoring in support of Load Reduction Strategies and wet-weather implementation plans.</p> <p>An ambient water quality monitoring program shall be conducted by responsible parties as set forth in a Bacteria Coordinated Monitoring Plan (CMP), which shall be submitted for EO approval per the TMDL implementation schedule. The CMP shall detail: the number and location of sites, including at least one monitoring station per river segment, reach and tributary addressed under this TMDL; measurements and sample collection methods; and monitoring frequencies.</p> <p>Segments, reaches and tributaries addressed under this TMDL shall be monitored at least monthly until the subject segment, reach or tributary is at the end of its first implementation phase, to determine compliance with the interim WLA. Segments, reaches and tributaries addressed under this TMDL shall be monitored at least weekly to determine compliance with the in-stream targets after the first implementation phase.</p> <p>Monitoring for dischargers other than MS4 permittees to determine</p> |

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⁵ For purposes of this TMDL, a ‘storm year’ means November 1 to October 31. The 90th percentile storm year was 1993 with 75 wet days at the LAX meteorological station.

⁶ A wet day is defined as a day with rainfall of 0.1 inch or more plus the 3 days following the rain event.

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| | compliance with WLAs and LAs shall be established through monitoring and reporting programs conducted as part of the discharger's permit/waste discharge/waiver requirements.\ |

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7-39.5. Los Angeles River Bacteria TMDL: Responsible Parties for Waste Load Allocations

| Responsible Entity | Los Angeles River Segment | | | | | Los Angeles River Tributary | | | | | | | | | | |
|----------------------------------|---------------------------|---|---|---|---|-----------------------------|-------------|------------|------------|-------------------------|---------------|------------------|--------------------|-----------|--------------|--------------|
| | A | B | C | D | E | Aliso Canyon Wash | Arroyo Seco | Bell Creek | Bull Creek | Burbank Western Channel | Compton Creek | Dry Canyon Creek | McCoy Canyon Creek | Rio Hondo | Tujunga Wash | Verdugo Wash |
| Alhambra | | √ | | | | | | | | | | | | √ | | |
| Arcadia | | | | | | | | | | | | | | √ | | |
| Bell | | √ | | | | | | | | | | | | √ | | |
| Bell | | √ | | | | | | | | | | | | √ | | |
| Bradbury | | | | | | | | | | | | | | √ | | |
| Burbank | | √ | √ | | | | | | | √ | | | | | | |
| Bureau of Land Management | | | | | √ | | | | | | | | | | | |
| Calabasas | | | | | √ | | | | | | | √ | √ | | | |
| CA Dept. of Parks and Recreation | | | | √ | √ | | | | | | | | | | | |
| Caltrans | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| Carson | √ | | | | | | | | | | √ | | | | | |
| Commerce | | √ | | | | | | | | | | | | √ | | |
| Compton | √ | √ | | | | | | | | | √ | | | | | |
| Cudahy | | √ | | | | | | | | | | | | | | |
| Downey | | √ | | | | | | | | | | | | √ | | |
| Duarte | | | | | | | | | | | | | | √ | | |
| El Monte | | | | | | | | | | | | | | √ | | |
| Glendale | | √ | √ | | | | √ | | | √ | | | | | √ | √ |
| Hidden Hills | | | | | | | | √ | | | | | √ | | | |
| Huntington Park | | √ | | | | | | | | | √ | | | | | |

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| Responsible Entity | Los Angeles River Segment | | | | | Los Angeles River Tributary | | | | | | | | | | |
|-------------------------|---------------------------|---|---|---|---|-----------------------------|-------------|------------|------------|-------------------------|---------------|------------------|--------------------|-----------|--------------|--------------|
| | A | B | C | D | E | Aliso Canyon Wash | Arroyo Seco | Bell Creek | Bull Creek | Burbank Western Channel | Compton Creek | Dry Canyon Creek | McCoy Canyon Creek | Rio Hondo | Tujunga Wash | Verdugo Wash |
| Inglewood | | | | | | | | | | | √ | | | | | |
| Irwindale | | | | | | | | | | | | | | √ | | |
| La Cañada Flintridge | | | √ | | | | √ | | | | | | | | | √ |
| Lakewood | √ | | | | | | | | | | | | | | | |
| Long Beach | √ | | | | | | | | | | √ | | | | | |
| Los Angeles | | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | | √ | √ |
| Los Angeles County | √ | √ | √ | | √ | √ | √ | √ | √ | | √ | √ | √ | √ | √ | √ |
| LA County Flood Control | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| Lynwood | √ | √ | | | | | | | | | √ | | | | | |
| Maywood | | √ | | | | | | | | | | | | | | |
| Monrovia | | | | | | | | | | | | | | √ | | |
| Montebello | | √ | | | | | | | | | | | | √ | | |
| Monterey Park | | √ | | | | | | | | | | | | √ | | |
| National Park Service | | | | √ | √ | | | | | | | | | | | |
| Paramount | √ | √ | | | | | | | | | | | | | | |
| Pasadena | | √ | √ | | | | √ | | | | | | | √ | | √ |
| Pico Rivera | | | | | | | | | | | | | | √ | | |
| Rosemead | | | | | | | | | | | | | | √ | | |
| San Fernando | | | | | | | | | | | | | | | √ | |

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Attachment A to Resolution No. R10-XXX

| Responsible Entity | Los Angeles River Segment | | | | | Los Angeles River Tributary | | | | | | | | | | |
|-----------------------|---------------------------|---|---|---|---|-----------------------------|-------------|------------|------------|-------------------------|---------------|------------------|--------------------|-----------|--------------|--------------|
| | A | B | C | D | E | Aliso Canyon Wash | Arroyo Seco | Bell Creek | Bull Creek | Burbank Western Channel | Compton Creek | Dry Canyon Creek | McCoy Canyon Creek | Rio Hondo | Tujunga Wash | Verdugo Wash |
| San Gabriel | | | | | | | | | | | | | | √ | | |
| San Marino | | | | | | | | | | | | | | √ | | |
| Santa Clarita | | | | | | | | | √ | | | | | | | |
| Sierra Madre | | | | | | | | | | | | | | √ | | |
| Signal Hill | √ | | | | | | | | | | | | | | | |
| South El Monte | | | | | | | | | | | | | | √ | | |
| South Gate | | √ | | | | | | | | | √ | | | √ | | |
| South Pasadena | | √ | | | | | √ | | | | | | | √ | | |
| State Land Commission | | | | | √ | | | | | | | | | | | |
| Temple City | | | | | | | | | | | | | | √ | | |
| U.S. Forest Service | | | | | | | √ | | √ | | | | | √ | √ | √ |
| Vernon | | √ | | | | | | | | | √ | | | | | |

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Attachment A to Resolution No. R10-XXX

7-39.4. Los Angeles River Bacteria TMDL: Implementation Schedule

| Implementation Action | Responsible Parties | Deadline |
|--|---|--|
| SEGMENT B (upper and middle Reach 2 – Figueroa Street to Rosecrans Avenue) | | |
| First phase – Segment B | | |
| Submit a Load Reduction Strategy (LRS) for Segment B (<i>or submit an alternative compliance plan</i>) | MS4 and Caltrans NPDES Permittees discharging to Segment B | 2.5 years after effective date of the TMDL |
| Approve LRS (or alternative compliance plan) | Regional Board, Executive Officer | 6 months after submittal of LRS |
| Complete implementation of LRS | MS4 and Caltrans NPDES Permittees discharging to Segment B, if using LRS | 7 years after effective date of the TMDL |
| Achieve interim WLA and demonstrate compliance with LRS | MS4 and Caltrans NPDES Permittees discharging to Segment B, if using LRS | 10 years after effective date of the TMDL |
| <i>Achieve final WLA or demonstrate that non-compliance is due to upstream contributions</i> | <i>MS4 and Caltrans NPDES Permittees discharging to Segment B, if using alternative compliance plan</i> | <i>10 years after effective date of the TMDL</i> |
| Second phase, if necessary – Segment B (LRS only) | | |
| Submit a new LRS | MS4 and Caltrans NPDES Permittees discharging to Segment B | 11 years after effective date of the TMDL |
| Approve LRS | Regional Board, Executive Officer | 6 months after submittal of a second LRS |
| Complete implementation of LRS | MS4 and Caltrans NPDES Permittees discharging to Segment B, if using LRS | 14.5 years after effective date of the TMDL |
| Demonstrate compliance with LRS | MS4 and Caltrans NPDES Permittees discharging to Segment B, if using LRS | 16.5 years after effective date of the TMDL |
| Achieve final WLAs in Segment B or demonstrate that non-compliance is only due to upstream contributions | MS4 and Caltrans NPDES Permittees discharging to Segment B, if using LRS | 16.5 years after effective date of the TMDL |
| SEGMENT B TRIBUTARIES (Rio Hondo and Arroyo Seco) | | |
| First phase – Segment B Tributaries (Rio Hondo and Arroyo Seco) | | |
| Submit a Load Reduction Strategy (LRS) for Segment B tributaries (<i>or submit an alternative compliance plan</i>) | MS4 and Caltrans NPDES Permittees discharging to Segment B tributaries | 4 years after effective date of the TMDL |
| Approve LRS (or alternative compliance plan) | Regional Board, Executive Officer | 6 months after submittal of LRS |
| Complete implementation of LRS | MS4 and Caltrans NPDES Permittees discharging to Segment B tributaries, if using LRS | 8.5 years after effective date of the TMDL |

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| Implementation Action | Responsible Parties | Deadline |
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| Achieve interim WLA and demonstrate compliance with LRS | MS4 and Caltrans NPDES Permittees discharging to Segment B tributaries, if using LRS | 11.5 years after effective date of the TMDL |
| <i>Achieve final WLA or demonstrate that non-compliance is only due to upstream contributions</i> | <i>MS4 and Caltrans NPDES Permittees discharging to Segment B tributaries, if using alternative compliance plan</i> | <i>11.5 years after effective date of the TMDL</i> |
| Second phase, if necessary – SEGMENT B TRIBUTARIES (Rio Hondo and Arroyo Seco) (LRS only) | | |
| Submit a new LRS | MS4 and Caltrans NPDES Permittees discharging to Segment B tributaries | 12.5 years after effective date of the TMDL |
| Approve LRS | Regional Board, Executive Officer | 6 months after submittal of a second LRS |
| Complete implementation of LRS | MS4 and Caltrans NPDES Permittees discharging to Segment B tributaries, if using LRS | 16 years after effective date of the TMDL |
| Demonstrate compliance with LRS | MS4 and Caltrans NPDES Permittees discharging to Segment B tributaries, if using LRS | 18 years after effective date of the TMDL |
| Achieve final WLAs Segment B tributaries or demonstrate that non-compliance is due to upstream contributions | MS4 and Caltrans NPDES Permittees discharging to Segment B tributaries, if using LRS | 18 years after effective date of the TMDL |
| SEGMENT A (lower Reach 2 and Reach 1 – Rosecrans Avenue to Willow Street) | | |
| First phase – Segment A | | |
| Submit a Load Reduction Strategy (LRS) for Segment A (or submit an alternative compliance plan) | MS4 and Caltrans NPDES Permittees discharging to Segment A | 4.5 years after effective date of the TMDL |
| Approve LRS (or alternative compliance plan) | Regional Board, Executive Officer | 6 months after submittal of LRS |
| Complete implementation of LRS | MS4 and Caltrans NPDES Permittees discharging to Segment A, if using LRS | 9 years after effective date of the TMDL |
| Achieve interim WLA and demonstrate compliance with LRS | MS4 and Caltrans NPDES Permittees discharging to Segment A, if using LRS | 12 years after effective date of the TMDL |
| <i>Achieve final WLA or demonstrate that non-compliance is due to upstream contributions</i> | <i>MS4 and Caltrans NPDES Permittees discharging to Segment A, if using alternative compliance plan</i> | <i>12 years after effective date of the TMDL</i> |
| Second phase, if necessary – Segment A (LRS only) | | |
| Submit a new LRS | MS4 and Caltrans NPDES Permittees discharging to Segment A | 13 years after effective date of the TMDL |
| Approve LRS | Regional Board, Executive Officer | 6 months after submittal of a second LRS |

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| Implementation Action | Responsible Parties | Deadline |
|---|---|--|
| Complete implementation of LRS | MS4 and Caltrans NPDES Permittees discharging to Segment A, if using LRS | 17.5 years after effective date of the TMDL |
| Demonstrate compliance with LRS | MS4 and Caltrans NPDES Permittees discharging to Segment A, if using LRS | 19.5 years after effective date of the TMDL |
| Achieve final WLAs in Segment A or demonstrate that non-compliance is due to upstream contributions | MS4 and Caltrans NPDES Permittees discharging to Segment A, if using LRS | 19.5 years after effective date of the TMDL |
| SEGMENT A TRIBUTARY (Compton Creek) | | |
| First phase – Segment A Tributary | | |
| Submit a Load Reduction Strategy (LRS) for Segment A tributary (or submit an alternative compliance plan) | MS4 and Caltrans NPDES Permittees discharging to Segment A tributary | 6 years after effective date of the TMDL |
| Approve LRS (or alternative compliance plan) | Regional Board, Executive Officer | 6 months after submittal of LRS |
| Complete implementation of LRS | MS4 and Caltrans NPDES Permittees discharging to Segment A tributary if using LRS | 10.5 years after effective date of the TMDL |
| Achieve interim WLA and demonstrate compliance with LRS | MS4 and Caltrans NPDES Permittees discharging to Segment A tributary if using LRS | 13.5 years after effective date of the TMDL |
| <i>Achieve final WLA or demonstrate that non-compliance is due to upstream contributions</i> | <i>MS4 and Caltrans NPDES Permittees discharging to Segment A tributary, if using alternative compliance plan</i> | <i>13.5 years after effective date of the TMDL</i> |
| Second phase, if necessary – Segment A tributary (LRS only) | | |
| Submit a new LRS | MS4 and Caltrans NPDES Permittees discharging to Segment A tributary | 14.5 years after effective date of the TMDL |
| Approve LRS | Regional Board, Executive Officer | 6 months after submittal of a second LRS |
| Complete implementation of LRS | MS4 and Caltrans NPDES Permittees discharging to Segment A tributary, if using LRS | 18 years after effective date of the TMDL |
| Demonstrate compliance with LRS | MS4 and Caltrans NPDES Permittees discharging to Segment A tributary, if using LRS | 20 years after effective date of the TMDL |
| Achieve final WLAs in Segment A tributary or demonstrate that non-compliance is due to upstream contributions | MS4 and Caltrans NPDES Permittees discharging to Segment A tributary, if using LRS | 20 years after effective date of the TMDL |
| SEGMENT E (Reach 6 – LA River headwaters [confluence with Bell Creek and Calabasas Creek] to Balboa Boulevard) | | |

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| Implementation Action | Responsible Parties | Deadline |
|---|---|--|
| First phase – Segment E | | |
| Submit a Load Reduction Strategy (LRS) for Segment E (<i>or submit an alternative compliance plan</i>) | MS4 and Caltrans NPDES Permittees discharging to Segment E | 5.5 years after effective date of the TMDL |
| Approve LRS (or alternative compliance plan) | Regional Board, Executive Officer | 6 months after submittal of LRS |
| Complete implementation of LRS | MS4 and Caltrans NPDES Permittees discharging to Segment E, if using LRS | 10 years after effective date of the TMDL |
| Achieve interim WLA and demonstrate compliance with LRS | MS4 and Caltrans NPDES Permittees discharging to Segment E, if using LRS | 13 years after effective date of the TMDL |
| <i>Achieve final WLA or demonstrate that non-compliance is due to upstream contributions</i> | <i>MS4 and Caltrans NPDES Permittees discharging to Segment E, if using alternative compliance plan</i> | <i>13 years after effective date of the TMDL</i> |
| Second phase, if necessary –Segment E, (LRS only) | | |
| Submit a new LRS | MS4 and Caltrans NPDES Permittees discharging to Segment E | 14 years after effective date of the TMDL |
| Approve LRS | Regional Board, Executive Officer | 6 months after submittal of a second LRS |
| Complete implementation of LRS | MS4 and Caltrans NPDES Permittees discharging to Segment E, if using LRS | 17.5 years after effective date of the TMDL |
| Demonstrate compliance with LRS | MS4 and Caltrans NPDES Permittees discharging to Segment E, if using LRS | 19.5 years after effective date of the TMDL |
| Achieve final WLAs in Segment E or demonstrate that non-compliance is due to upstream contributions | MS4 and Caltrans NPDES Permittees discharging to Segment E, if using LRS | 19.5 years after effective date of the TMDL |
| SEGMENT E TRIBUTARIES (Dry Canyon Creek, McCoy Creek, Bell Creek, and Aliso Canyon Wash) | | |
| First phase – Segment E Tributaries | | |
| Submit a Load Reduction Strategy (LRS) for Segment E tributaries (or submit an alternative compliance plan) | MS4 and Caltrans NPDES Permittees discharging to Segment E tributaries | 9.5 years after effective date of the TMDL |
| Approve LRS (or alternative compliance plan) | Regional Board, Executive Officer | 6 months after submittal of LRS |
| Complete implementation of LRS | MS4 and Caltrans NPDES Permittees discharging to Segment E tributaries if using LRS | 14 years after effective date of the TMDL |
| Achieve interim WLA and demonstrate compliance with LRS | MS4 and Caltrans NPDES Permittees discharging to Segment E tributaries, if using LRS | 17 years after effective date of the TMDL |

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| Implementation Action | Responsible Parties | Deadline |
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| <i>Achieve final WLA or demonstrate that non-compliance is due to upstream contributions</i> | <i>MS4 and Caltrans NPDES Permittees discharging to Segment E tributaries, if using alternative compliance plan</i> | <i>17 years after effective date of the TMDL</i> |
| Second phase, if necessary – Segment E tributaries (LRS only) | | |
| Submit a new LRS | MS4 and Caltrans NPDES Permittees discharging to Segment E tributaries | 18 years after effective date of the TMDL |
| Approve LRS | Regional Board, Executive Officer | 6 months after submittal of a second LRS |
| Complete implementation of LRS | MS4 and Caltrans NPDES Permittees discharging to Segment E tributaries, if using LRS | 21.5 years after effective date of the TMDL |
| Demonstrate compliance with LRS | MS4 and Caltrans NPDES Permittees discharging to Segment E tributaries, if using LRS | 23.5 years after effective date of the TMDL |
| Achieve final WLAs in Segment E tributaries or demonstrate that non-compliance is due to upstream contributions | MS4 and Caltrans NPDES Permittees discharging to Segment E tributaries, if using LRS | 23.5 years after effective date of the TMDL |
| Segment C (lower Reach 4 and Reach 3 – Tujunga Avenue to Figueroa Street) Segment C Tributaries (Tujunga Wash, Burbank Western Channel, and Verdugo Wash) Segment D (Reach 5 and upper Reach 4 – Balboa Boulevard to Tujunga Avenue) Segment D Tributaries (Bull Creek) | | |
| First phase – Segment C, Segment C Tributaries, Segment D, Segment D tributaries | | |
| Submit a Load Reduction Strategies (LRS) for Segment C, Segment C tributaries, Segment D, Segment D tributaries <i>(or submit an alternative compliance plan)</i> | MS4 and Caltrans NPDES Permittees discharging to Segment C, Segment C tributaries, Segment D, Segment D tributaries | 11 years after effective date of the TMDL |
| Approve LRS (or alternative compliance plan) | Regional Board, Executive Officer | 6 months after submittal of LRS |
| Complete implementation of LRS | MS4 and Caltrans NPDES Permittees discharging to Segment C, Segment C tributaries, Segment D, Segment D tributaries, if using LRS | 15.5 years after effective date of the TMDL |
| Achieve interim WLA and demonstrate compliance with LRS | MS4 and Caltrans NPDES Permittees discharging to Segment C, Segment C tributaries, Segment D, Segment D tributaries, if using LRS | 18.5 years after effective date of the TMDL |
| <i>Achieve final WLA or demonstrate that non-compliance is due to upstream contributions</i> | <i>MS4 and Caltrans NPDES Permittees discharging to Segment C, Segment C tributaries, Segment D, Segment D tributaries, if using alternative compliance plan</i> | <i>18.5 years after effective date of the TMDL</i> |

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| Implementation Action | Responsible Parties | Deadline |
|--|---|---|
| Second phase, if necessary - Segment C, Segment C Tributaries, Segment D, Segment D Tributaries (LRS only) | | |
| Submit a new LRS | MS4 and Caltrans NPDES Permittees discharging to Segment C, Segment C tributaries, Segment D, Segment D tributaries | 19.5 years after effective date of the TMDL |
| Approve LRS | Regional Board, Executive Officer | 6 months after submittal of a second LRS |
| Complete implementation of LRS | MS4 and Caltrans NPDES Permittees discharging to Segment C, Segment C tributaries, Segment D, Segment D tributaries if using LRS | 23 years after effective date of the TMDL |
| Demonstrate compliance with LRS | MS4 and Caltrans NPDES Permittees discharging to Segment C, Segment C tributaries, Segment D, Segment D tributaries, if using LRS | 25 years after effective date of the TMDL |
| Achieve final WLAs in Segment C, Segment C tributaries, Segment D, Segment D tributaries or demonstrate that non-compliance is due to upstream contributions | MS4 and Caltrans NPDES Permittees discharging to Segment C, Segment C tributaries, Segment D, Segment D tributaries if using LRS | 25 years after effective date of the TMDL |
| | | |
| All Los Angeles River Segments and Tributaries | | |
| Submit implementation plan for wet weather with interim milestones | All responsible parties | Within 10 years of the effective date of the TMDL |
| Achieve final dry-weather WLAs and LAs | All responsible parties | 25 years after effective date of the TMDL |
| Achieve final wet-weather WLAs and LAs | All responsible parties | 25 years after effective date of the TMDL |

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