# ATTACHMENT E

## SPECIFIC PROVISIONS FOR TOTAL MAXIMUM DAILY LOADS APPLICABLE TO ORDER NO. R9-2013-0001, AS AMENDED BY ORDER NOS. R9-2015-0001 AND R9-2015-0100

These provisions implement load allocations (LAs) and wasteload allocations (WLAs) of the Total Maximum Daily Loads (TMDLs) established by the San Diego Water Board or USEPA under Clean Water Act section 303(c), applicable to discharges regulated under this Order. The provisions and schedules for implementation of the TMDLs described below must be incorporated into the Water Quality Improvement Plans, required pursuant to Provision B of this Order, for the specified Watershed Management Areas.

1. Total Maximum Daily Load for Diazinon in Chollas Creek Watershed
2. Total Maximum Daily Loads for Dissolved Copper in Shelter Island Yacht Basin
3. Total Maximum Daily Loads for Total Nitrogen and Total Phosphorus in Rainbow Creek Watershed
4. Total Maximum Daily Loads for Dissolved Copper, Lead, and Zinc in Chollas Creek
5. Total Maximum Daily Loads for Indicator Bacteria, Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in San Diego Bay
6. Revised Total Maximum Daily Loads for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek)
7. Total Maximum Daily Load for Sediment in Los Peñasquitos Lagoon

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## 1. Total Maximum Daily Load for Diazinon in Chollas Creek Watershed

### a. APPLICABILITY

(1) TMDL Basin Plan Amendment: Resolution No. R9-2002-0123

(2) TMDL Adoption and Approval Dates:

| | |
|---|---|
| San Diego Water Board Adoption Date: | August 14, 2002 |
| State Water Board Approval Date: | July 16, 2003 |
| Office of Administrative Law Approval Date: | September 11, 2003 |
| US EPA Approval Date: | November 3, 2003 |

(3) TMDL Effective Date: September 11, 2003

(4) Watershed Management Area: San Diego Bay

(5) Water Body: Chollas Creek

(6) Responsible Copermittees: City of La Mesa, City of Lemon Grove, City of San Diego, County of San Diego, San Diego Unified Port District

### b. FINAL TMDL COMPLIANCE REQUIREMENTS

The final diazinon TMDL compliance requirements for Chollas Creek consist of the following:

(1) Final TMDL Compliance Date

The Responsible Copermittees must be in compliance with the final TMDL compliance requirements as of December 31, 2010.

(2) Final Water Quality Based Effluent Limitations

(a) Final Receiving Water Limitations

Discharges from the MS4s must not cause or contribute to the exceedance of the following receiving water limitations:

**Table 1.1**
*Final Receiving Water Limitations Expressed as Concentrations in Chollas Creek*

| Constituent | Exposure Duration | Receiving Water Limitation | Averaging Period |
|---|---|---|---|
| Diazinon | Acute | 0.08 µg/L | 1 hour |
| | Chronic | 0.05 µg/L | 4 days |

(b) Final Effluent Limitations

Discharges from the MS4s containing concentrations that do not exceed the following effluent limitations will not cause or contribute to exceedances of the receiving water limitations under Specific Provision 1.b.(2)(a):

**Table 1.2**
*Final Effluent Limitations Expressed as Concentrations in MS4 Discharges to Chollas Creek*

| Constituent | Exposure Duration | Effluent Limitation | Averaging Period |
|---|---|---|---|
| Diazinon | Acute | 0.072 µg/L | 1 hour |
| | Chronic | 0.045 µg/L | 4 days |

(c) Best Management Practices

The following BMPs for Chollas Creek must be incorporated into the Water Quality Improvement Plan for the San Diego Bay Watershed Management Area and implemented by the Responsible Copermittees:

(i) The Responsible Copermittees must implement BMPs to achieve the receiving water limitations under Specific Provision 1.b.(2)(a) and/or the effluent limitations under Specific Provision 1.b.(2)(b) for Chollas Creek.

(ii) The Responsible Copermittees must implement the Diazinon Toxicity Control Plan and Diazinon Public Outreach/Education Program as described in the report titled, *Technical Report for Total Maximum Daily Load for Diazinon in Chollas Creek Watershed, San Diego County*, dated August 14, 2002, including subsequent modifications, in order to achieve the receiving water limitations under Specific Provision 1.b.(2)(a) and/or the effluent limitations under Specific Provision 1.b.(2)(b).

(iii) The Responsible Copermittees should coordinate any BMPs implemented to address this TMDL with Caltrans as possible.

(3) Final TMDL Compliance Determination

Compliance with the final WQBELs, on or after the final TMDL compliance date, may be demonstrated via one of the following methods:

(a) There is no direct or indirect discharge from the Responsible Copermittee's MS4s to the receiving water; OR

(b) There are no exceedances of the final receiving water limitations under Specific Provision 1.b.(2)(a) in the receiving water at, or downstream of the Responsible Copermittee's MS4 outfalls; OR

(c) There are no exceedances of the final effluent limitations under Specific Provision 1.b.(2)(b) at the Responsible Copermittee's MS4 outfalls; OR

(d) The Responsible Copermittees develop and implement the Water Quality Improvement Plan as follows:

(i) Incorporate the BMPs required under Specific Provision 1.b.(2)(c) as part of the Water Quality Improvement Plan,

(ii) Include an analysis in the Water Quality Improvement Plan, utilizing a watershed model or other watershed analytical tools, to demonstrate that the implementation of the BMPs required under Provision 1.b.(2)(c) achieves compliance with Specific Provisions 1.b.(3)(a), 1.b.(3)(b) and/or 1.b.(3)(c),

(iii) The results of the analysis must be accepted by the San Diego Water Board as part of the Water Quality Improvement Plan,

(iv) The Responsible Copermittees continue to implement the BMPs required under Specific Provision 1.b.(2)(c), AND

(v) The Responsible Copermittees continue to perform the specific monitoring and assessments specified in Specific Provision 1.d, to demonstrate compliance with Specific Provisions 1.b.(3)(a), 1.b.(3)(b) and/or 1.b.(3)(c).

### c. INTERIM TMDL COMPLIANCE REQUIREMENTS

The Responsible Copermittees must be in compliance with the final diazinon TMDL compliance requirements as of December 31, 2010.

### d. SPECIFIC MONITORING AND ASSESSMENT REQUIREMENTS

(1) The Responsible Copermittees must implement the monitoring and assessment requirements issued under Investigation Order No. R9-2004-0277, *California Department of Transportation and San Diego Municipal Separate Storm Sewer System Copermittees Responsible for the Discharge of Diazinon into the Chollas Creek Watershed*. The monitoring reports required under Investigation Order No. R9-2004-0277 must be submitted as part of the Transitional Monitoring and Assessment Program and Water Quality Improvement Plan Annual Reports required under Provision F.3.b of this Order.

(2) The Responsible Copermittees must monitor the effluent of the MS4 outfalls for diazinon within the Chollas Creek watershed, and calculate or estimate the annual diazinon loads, in accordance with the requirements of Provisions D.2, D.4.b.(1), and D.4.b.(2) of this Order. The monitoring and assessment results must be submitted as part of the Transitional Monitoring and Assessment

Program and Water Quality Improvement Plan Annual Reports required under Provision F.3.b of this Order.

(3) For assessing and determining compliance with the concentration-based effluent limitations under Specific Provision 1.b.(2)(b), dry and wet weather discharge concentrations may be calculated based on a flow-weighted average across all major MS4 outfalls along a water body segment or within a jurisdiction if samples are collected within a similar time period.

## 2. Total Maximum Daily Loads for Dissolved Copper in Shelter Island Yacht Basin

### a. APPLICABILITY

(1) TMDL Basin Plan Amendment: Resolution No. R9-2005-0019

(2) TMDL Adoption and Approval Dates:

| | |
|---|---|
| San Diego Water Board Adoption Date: | February 9, 2005 |
| State Water Board Approval Date: | September 22, 2005 |
| Office of Administrative Law Approval Date: | December 2, 2005 |
| US EPA Approval Date: | February 8, 2006 |

(3) TMDL Effective Date: December 2, 2005

(4) Watershed Management Area: San Diego Bay

(5) Water Body: Shelter Island Yacht Basin

(6) Responsible Copermittee: City of San Diego

### b. FINAL TMDL COMPLIANCE REQUIREMENTS

The final dissolved copper TMDL compliance requirements for Shelter Island Yacht Basin consist of the following:

(1) Final TMDL Compliance Date

The Responsible Copermittee must be in compliance with the final TMDL compliance requirements as of December 2, 2005.

(2) Final Water Quality Based Effluent Water Limitations

(a) Final Receiving Water Limitations

Discharges from the MS4s must not cause or contribute to the exceedance of the following receiving water limitations:

**Table 2.1**
*Final Receiving Water Limitations Expressed as Concentrations in Shelter Island Yacht Basin*

| Constituent | Exposure Duration | Receiving Water Limitation | Averaging Period |
|---|---|---|---|
| Dissolved Copper | Acute | 4.8 µg/L x WER* | 1 hour |
| | Chronic | 3.1 µg/L x WER* | 4 days |

Notes:
* The Water Effect Ratio (WER) is assumed to be 1.0 unless there is a site-specific and chemical-specific WER provided in the Basin Plan.

(b) Final Effluent Limitations

Discharges from the MS4s containing pollutant loads that do not exceed the following effluent limitations will not cause or contribute to exceedances of the receiving water limitations under Specific Provision 2.b.(2)(a):

**Table 2.2**
*Final Effluent Limitations as Expressed as Annual Loads in MS4 Discharges to Shelter Island Yacht Basin*

| Constituent | Effluent Limitation |
|---|---|
| Dissolved Copper | 30 kg/yr* |

* If the water quality objectives for dissolved copper in Shelter Island Yacht Basin are changed in the future, then the margin of safety (MOS), TMDL and allocations will be recalculated using the *Method for Recalculation of the Total Maximum Daily Load for Dissolved Copper in the Shelter Island Yacht Basin, San Diego Bay* in the Basin Plan (p. 7-14).

(c) Best Management Practices

The Responsible Copermittee must implement BMPs to achieve the receiving water limitations under Specific Provision 2.b.(2)(a) and/or the effluent limitations under Specific Provision 2.b.(2)(b) for Shelter Island Yacht Basin. The BMPs must be incorporated into the Water Quality Improvement Plan for the San Diego Bay Watershed Management Area.

(3) Final TMDL Compliance Determination

Compliance with the final WQBELs, on or after the final TMDL compliance date, may be demonstrated via one of the following methods:

(a) There is no direct or indirect discharge from the Responsible Copermittee's MS4s to the receiving water; OR

(b) There are no exceedances of the final receiving water limitations under Specific Provision 2.b.(2)(a) in the receiving water at, or downstream of the Responsible Copermittee's MS4 outfalls; OR

(c) There are no exceedances of the final effluent limitations under Specific Provision 2.b.(2)(b) at the Responsible Copermittee's MS4 outfalls; OR

(d) The Responsible Copermittee develops and implements the Water Quality Improvement Plan as follows:

(i) Incorporate the BMPs required under Specific Provision 2.b.(2)(c) as part of the Water Quality Improvement Plan,

(ii) Include an analysis in the Water Quality Improvement Plan, utilizing a watershed model or other watershed analytical tools, to demonstrate that the implementation of the BMPs required under Provision 2.b.(2)(c) achieves compliance with Specific Provisions 2.b.(3)(a), 2.b.(3)(b) and/or 2.b.(3)(c),

(iii) The results of the analysis must be accepted by the San Diego Water Board as part of the Water Quality Improvement Plan,

(iv) The Responsible Copermittees continue to implement the BMPs required under Specific Provision 2.b.(2)(c), AND

(v) The Responsible Copermittees continue to perform the specific monitoring and assessments specified in Specific Provision 2.d, to demonstrate compliance with Specific Provisions 2.b.(3)(a), 2.b.(3)(b) and/or 2.b.(3)(c).

### c. INTERIM TMDL COMPLIANCE REQUIREMENTS

The Responsible Copermittees must be in compliance with the final dissolved copper TMDL compliance requirements as of December 2, 2005.

### d. SPECIFIC MONITORING AND ASSESSMENT REQUIREMENTS

The Responsible Copermittee must monitor the effluent of its MS4 outfalls for dissolved copper, and calculate or estimate the monthly and annual dissolved copper loads, in accordance with the requirements of Provisions D.2, D.4.b.(1), and D.4.(b)(2)of this Order. The monitoring and assessment results must be submitted as part of the Transitional Monitoring and Assessment Program and Water Quality Improvement Plan Annual Reports required under Provision F.3.b of this Order.

## 3. Total Maximum Daily Loads for Total Nitrogen and Total Phosphorus in Rainbow Creek Watershed

### a. APPLICABILITY

(1) TMDL Basin Plan Amendment: Resolution No. R9-2005-0036

(2) TMDL Adoption and Approval Dates:

| | |
|---|---|
| San Diego Water Board Adoption Date: | February 9, 2005 |
| State Water Board Approval Date: | November 16, 2005 |
| Office of Administrative Law Approval Date: | February 1, 2006 |
| US EPA Approval Date: | March 22, 2006 |

(3) TMDL Effective Date: February 1, 2006

(4) Watershed Management Area: Santa Margarita River

(5) Water Body: Rainbow Creek

(6) Responsible Copermittee: County of San Diego

### b. FINAL TMDL COMPLIANCE REQUIREMENTS

The final total nitrogen and total phosphorus TMDL compliance requirements for Rainbow Creek consist of the following

(1) Final TMDL Compliance Date

The Responsible Copermittee must comply with final TMDL compliance requirements by December 31, 2021.

(2) Final Water Quality Based Effluent Water Limitations

(a) Final Receiving Water Limitations

Discharges from the MS4s must not cause or contribute to the exceedance of the following receiving water limitations by the compliance date under Specific Provision 3.b.(1):

**Table 3.1**
*Final Receiving Water Limitations Expressed as Concentrations in Rainbow Creek*

| Constituent | Receiving Water Limitation |
|---|---|
| Nitrate (as N) | 10 mg/L |
| Total Nitrogen | 1 mg/L |
| Total Phosphorus | 0.1 mg/L |

(b) Final Effluent Limitations

(i) Discharges from the MS4s containing concentrations that do not exceed the following effluent limitations by the compliance date under Specific Provision 3.b.(1) will not cause or contribute to exceedances of the receiving water limitations under Specific Provision 3.b.(2)(a):

**Table 3.2**
*Final Effluent Limitations Expressed as Concentrations in MS4 Discharges to Rainbow Creek*

| Constituent | Effluent Limitation |
|---|---|
| Nitrate (as N) | 10 mg/L |
| Total Nitrogen | 1 mg/L |
| Total Phosphorus | 0.1 mg/L |

(ii) Annual pollutant loads from given land uses discharging to and from the MS4s that do not exceed the following annual loads by the compliance date under Specific Provision 3.b.(1) will not cause or contribute to exceedances of the receiving water limitations under Specific Provision 3.b.(2)(a):

**Table 3.3**
*Final Effluent Limitations Expressed as Annual Loads in MS4 Discharges to Rainbow Creek*

| Land Use | Total N | Total P |
|---|---|---|
| Commercial nurseries | 116 kg/yr | 3 kg/yr |
| Park | 3 kg/yr | 0.1 kg/yr |
| Residential areas | 149 kg/yr | 12 kg/yr |
| Urban areas | 27 kg/yr | 6 kg/yr |

(c) Best Management Practices

(i) The Responsible Copermittee must implement BMPs to achieve the receiving water limitations under Specific Provision 3.b.(2)(a) and/or the effluent limitations under Specific Provision 3.b.(2)(b) for Rainbow Creek.

(ii) The Responsible Copermittee should coordinate any BMPs implemented to address this TMDL with Caltrans and other sources as possible.

(3) Final TMDL Compliance Determination

Compliance with the final WQBELs, on or after the final TMDL compliance date, may be demonstrated via one of the following methods:

(a) There is no direct or indirect discharge from the Responsible Copermittee's MS4s to the receiving water; OR

(b) There are no exceedances of the final receiving water limitations under Specific Provision 3.b.(2)(a) in the receiving water at, or downstream of the Responsible Copermittee's MS4 outfalls; OR

(c) There are no exceedances of the final effluent limitations under Specific Provision 3.b.(2)(b)(i) at the Responsible Copermittee's MS4 outfalls; OR

(d) The annual pollutant loads from given land uses discharging to and from the MS4s do not exceed the final effluent limitations under Specific Provision 3.b.(2)(b)(ii); OR

(e) The Responsible Copermittee develops and implements the Water Quality Improvement Plan as follows:

(i) Incorporate the BMPs required under Specific Provision 3.b.(2)(c) as part of the Water Quality Improvement Plan,

(ii) Include an analysis in the Water Quality Improvement Plan, utilizing a watershed model or other watershed analytical tools, to demonstrate that the implementation of the BMPs required under Specific Provision 3.b.(2)(c) achieves compliance with Specific Provisions 3.b.(3)(a), 3.b.(3)(b), 3.b.(3)(c) and/or 3.b.(3)(d),

(iii) The results of the analysis must be accepted by the San Diego Water Board as part of the Water Quality Improvement Plan,

(iv) The Responsible Copermittees continue to implement the BMPs required under Specific Provision 3.b.(2)(c), AND

(v) The Responsible Copermittees continue to perform the specific monitoring and assessments specified in Specific Provision 3.d, to demonstrate compliance with Specific Provisions 3.b.(3)(a), 3.b.(3)(b), 3.b.(3)(c) and/or 3.b.(3)(d).

### c. INTERIM TMDL COMPLIANCE REQUIREMENTS

The interim total nitrogen and total phosphorus TMDL compliance requirements for Rainbow Creek consist of the following:

(1) Interim Compliance Dates and WQBELs

The Responsible Copermittee must comply with the interim WQBELs, expressed as annual loads, by December 31 of the interim compliance year given in Table 3.4.

**Table 3.4**
*Interim Water Quality Based Effluent Limitations Expressed as Annual Loads in MS4 Discharges from Specific Land Uses to Rainbow Creek*

| | Total N Interim Effluent Limitations (kg/yr) | | | Total P Interim Effluent Limitations (kg/yr) | | |
|---|---|---|---|---|---|---|
| | Interim Compliance Date | | | Interim Compliance Date | | |
| **Land Use** | **2009** | **2013** | **2017** | **2009** | **2013** | **2017** |
| Commercial nurseries | 390 | 299 | 196 | 20 | 16 | 10 |
| Park | 5 | 3 | 3 | 0.15 | 0.10 | 0.10 |
| Residential areas | 507 | 390 | 260 | 99 | 74 | 47 |
| Urban areas | 40 | 27 | 27 | 9 | 6 | 6 |

(2) Interim TMDL Compliance Determination

Compliance with interim WQBELs, on or after the interim TMDL compliance dates, may be demonstrated via one of the following methods:

(a) There is no direct or indirect discharge from the Responsible Copermittee's MS4s to the receiving water; OR

(b) There are no exceedances of the final receiving water limitations under Specific Provision 3.b.(2)(a) in the receiving water at, or downstream of the Responsible Copermittee's MS4 outfalls; OR

(c) There are no exceedances of the final effluent limitations under Specific Provision 3.b.(2)(b)(i) at the Responsible Copermittee's MS4 outfalls; OR

(d) The annual pollutant loads from given land uses discharging to and from the MS4s do not exceed the final effluent limitations under Specific Provision 3.b.(2)(b)(ii); OR

(e) The annual pollutant loads from given land uses discharging to and from the MS4s do not exceed the interim effluent limitations under Specific Provision 3.c.(1); OR

(f) The Responsible Copermittee has submitted and is fully implementing a Water Quality Improvement Plan, accepted by the San Diego Water Board, which provides reasonable assurance that the interim TMDL compliance requirements will be achieved by the interim compliance dates.

### d. SPECIFIC MONITORING AND ASSESSMENT REQUIREMENTS

(1) The Responsible Copermittee must incorporate into the Water Quality Improvement Plan and implement the Sampling and Analysis Plan for Rainbow Creek Nutrient Reduction TMDL Implementation Water Quality Monitoring, dated January 2010.

(2) The results of any monitoring conducted during the reporting period, and assessment of whether the interim and final TMDL compliance requirements have been achieved must be submitted as part of the Transitional Monitoring and Assessment Program and Water Quality Improvement Plan Annual Reports required under Provision F.3.b of this Order.

(3) For assessing and determining compliance with the concentration-based effluent limitations under Specific Provision 3.b.(2)(b)(i), dry and wet weather discharge concentrations may be calculated based on a flow-weighted average across all major MS4 outfalls along a water body segment or within a jurisdiction if samples are collected within a similar time period.

## 4. Total Maximum Daily Loads for Dissolved Copper, Lead, and Zinc in Chollas Creek

### a. APPLICABILITY

(1) TMDL Basin Plan Amendment: Resolution No. R9-2007-0043

(2) TMDL Adoption and Approval Dates:

| | |
|---|---|
| San Diego Water Board Adoption Date: | June 13, 2007 |
| State Water Board Approval Date: | July 15, 2008 |
| Office of Administrative Law Approval Date: | October 22, 2008 |
| US EPA Approval Date: | December 18, 2008 |

(3) TMDL Effective Date: October 22, 2008

(4) Watershed Management Area: San Diego Bay

(5) Water Body: Chollas Creek

(6) Responsible Copermittees: City of La Mesa, City of Lemon Grove, City of San Diego, County of San Diego, San Diego Unified Port District

### b. FINAL TMDL COMPLIANCE REQUIREMENTS

The final dissolved copper, lead, and zinc TMDL compliance requirements for Chollas Creek consist of the following:

(1) Final TMDL Compliance Date

The Responsible Copermittees must comply with the final TMDL compliance requirements by October 22, 2028.

(2) Final Water Quality Based Effluent Limitations

(a) Final Receiving Water Limitations

Discharges from the MS4s must not cause or contribute to the exceedance of the following receiving water limitations by the compliance date under Specific Provision 4.b.(1):

**Table 4.1**
*Final Receiving Water Limitations Expressed as Concentrations in Chollas Creek*

| Constituent | Exposure Duration | Receiving Water Limitation (µg/L) | Averaging Period |
|---|---|---|---|
| Dissolved Copper | Acute | $(0.96) \times e^{[0.9422 \times \ln(\text{hardness}) - 1.700]} \times \text{WER}^*$ | 1 hour |
| | Chronic | $(0.96) \times e^{[0.8545 \times \ln(\text{hardness}) - 1.702]} \times \text{WER}^*$ | 4 days |
| Dissolved Lead | Acute | $[1.46203 - 0.145712 \times \ln(\text{hardness})] \times e^{[1.273 \times \ln(\text{hardness}) - 1.460]} \times \text{WER}^*$ | 1 hour |
| | Chronic | $[1.46203 - 0.145712 \times \ln(\text{hardness})] \times e^{[1.273 \times \ln(\text{hardness}) - 4.705]} \times \text{WER}^*$ | 4 days |
| Dissolved Zinc | Acute | $(0.978) \times e^{[0.8473 \times \ln(\text{hardness}) + 0.884]} \times \text{WER}^*$ | 1 hour |
| | Chronic | $(0.986) \times e^{[0.8473 \times \ln(\text{hardness}) + 0.884]} \times \text{WER}^*$ | 4 days |

Notes:
* The Water Effect Ratio (WER) is assumed to be 1.0 unless there is a site-specific and chemical-specific WER provided in the Basin Plan.

(b) Final Effluent Limitations

Discharges from the MS4s containing pollutant loads that do not exceed the following effluent limitations by the compliance date under Specific Provision 4.b.(1) will not cause or contribute to exceedances of the receiving water limitations under Specific Provision 4.b.(2)(a):

**Table 4.2**
*Final Effluent Limitations as Expressed Concentrations in MS4 Discharges to Chollas Creek*

| Constituent | Exposure Duration | Effluent Limitation (µg/L) | Averaging Period |
|---|---|---|---|
| Dissolved Copper | Acute | $90\% \times (0.96) \times e^{[0.9422 \times \ln(\text{hardness}) - 1.700]} \times \text{WER}^*$ | 1 hour |
| | Chronic | $90\% \times (0.96) \times e^{[0.8545 \times \ln(\text{hardness}) - 1.702]} \times \text{WER}^*$ | 4 days |
| Dissolved Lead | Acute | $90\% \times [1.46203 - 0.145712 \times \ln(\text{hardness})] \times e^{[1.273 \times \ln(\text{hardness}) - 1.460]} \times \text{WER}^*$ | 1 hour |
| | Chronic | $90\% \times [1.46203 - 0.145712 \times \ln(\text{hardness})] \times e^{[1.273 \times \ln(\text{hardness}) - 4.705]} \times \text{WER}^*$ | 4 days |
| Dissolved Zinc | Acute | $90\% \times (0.978) \times e^{[0.8473 \times \ln(\text{hardness}) + 0.884]} \times \text{WER}^*$ | 1 hour |
| | Chronic | $90\% \times (0.986) \times e^{[0.8473 \times \ln(\text{hardness}) + 0.884]} \times \text{WER}^*$ | 4 days |

Notes:
* The Water Effect Ratio (WER) is assumed to be 1.0 unless there is a site-specific and chemical-specific WER provided in the Basin Plan.

(c) Best Management Practices

(i) The Responsible Copermittees must implement BMPs to achieve the receiving water limitations under Specific Provision 4.b.(2)(a) and/or the effluent limitations under Specific Provision 4.b.(2)(b) for Chollas Creek.

(ii) The Responsible Copermittees should coordinate any BMPs implemented to address this TMDL with Caltrans and the U.S. Navy as possible.

(3) Final TMDL Compliance Determination

Compliance with the final WQBELs, on or after the final TMDL compliance date, may be demonstrated via one of the following methods:

(a) There is no direct or indirect discharge from the Responsible Copermittee's MS4s to the receiving water; OR

(b) There are no exceedances of the final receiving water limitations under Specific Provision 4.b.(2)(a) in the receiving water at, or downstream of the Responsible Copermittee's MS4 outfalls; OR

(c) There are no exceedances of the final effluent limitations under Specific Provision 4.b.(2)(b) at the Responsible Copermittee's MS4 outfalls; OR

(d) The Responsible Copermittees develop and implement the Water Quality Improvement Plan as follows:

(i) Incorporate the BMPs required under Specific Provision 4.b.(2)(c) as part of the Water Quality Improvement Plan,

(ii) Include an analysis in the Water Quality Improvement Plan, utilizing a watershed model or other watershed analytical tools, to demonstrate that the implementation of the BMPs required under Provision 4.b.(2)(c) achieves compliance with Specific Provisions 4.b.(3)(a), 4.b.(3)(b) and/or 4.b.(3)(c),

(iii) The results of the analysis must be accepted by the San Diego Water Board as part of the Water Quality Improvement Plan,

(iv) The Responsible Copermittees continue to implement the BMPs required under Specific Provision 4.b.(2)(c), AND

(v) The Responsible Copermittees continue to perform the specific monitoring and assessments specified in Specific Provision 4.d, to demonstrate compliance with Specific Provisions 4.b.(3)(a), 4.b.(3)(b) and/or 4.b.(3)(c).

### c. Interim TMDL Compliance Requirements

The interim dissolved copper, lead, and zinc TMDL compliance requirements for Chollas Creek consist of the following:

(1) Interim Compliance Date and WQBELs

The Responsible Copermittee must comply with the interim WQBELs, expressed as concentrations, by the interim compliance date given in Table 4.3:

**Table 4.3**
*Interim Water Quality Based Effluent Limitations Expressed as Concentrations in MS4 Discharges to Chollas Creek*

| Interim Compliance Date | Constituent | Exposure Duration | Effluent Limitation (µg/L) | Averaging Period |
|---|---|---|---|---|
| October 22, 2018 | Dissolved Copper | Acute | $1.2 \times 90\% \times (0.96) \times e^{[0.9422 \times \ln(\text{hardness}) - 1.700]} \times \text{WER}^*$ | 1 hour |
| | | Chronic | $1.2 \times 90\% \times (0.96) \times e^{[0.8545 \times \ln(\text{hardness}) - 1.702]} \times \text{WER}^*$ | 4 days |
| | Dissolved Lead | Acute | $1.2 \times 90\% \times [1.46203 - 0.145712 \times \ln(\text{hardness})] \times e^{[1.273 \times \ln(\text{hardness}) - 1.460]} \times \text{WER}^*$ | 1 hour |
| | | Chronic | $1.2 \times 90\% \times [1.46203 - 0.145712 \times \ln(\text{hardness})] \times e^{[1.273 \times \ln(\text{hardness}) - 4.705]} \times \text{WER}^*$ | 4 days |
| | Dissolved Zinc | Acute | $1.2 \times 90\% \times (0.978) \times e^{[0.8473 \times \ln(\text{hardness}) + 0.884]} \times \text{WER}^*$ | 1 hour |
| | | Chronic | $1.2 \times 90\% \times (0.986) \times e^{[0.8473 \times \ln(\text{hardness}) + 0.884]} \times \text{WER}^*$ | 4 days |

Notes:
* The Water Effect Ratio (WER) is assumed to be 1.0 unless there is a site-specific and chemical-specific WER provided in the Basin Plan.

(2) Interim TMDL Compliance Determination

Compliance with interim WQBELs, on or after the interim TMDL compliance date, may be demonstrated via one of the following methods:

(a) There is no direct or indirect discharge from the Responsible Copermittee's MS4s to the receiving water; OR

(b) There are no exceedances of the applicable receiving water limitations under Specific Provision 4.b.(2)(a) in the receiving water at, or downstream of the Responsible Copermittee's MS4 outfalls; OR

(c) There are no exceedances of the final effluent limitations under Specific Provision 4.b.(2)(b) at the Responsible Copermittee's MS4 outfalls; OR

(d) There are no exceedances of the interim effluent limitations under Specific Provision 4.c.(1) at the Responsible Copermittee's MS4 outfalls; OR

(e) The Responsible Copermittees have submitted and is fully implementing a Water Quality Improvement Plan, accepted by the San Diego Water Board, which provides reasonable assurance that the interim TMDL compliance requirements will be achieved by the interim compliance date.

### d. Specific Monitoring and Assessment Requirements

(1) The Responsible Copermittees must implement the monitoring and assessment requirements issued under Investigation Order No. R9-2004-0277, *California Department of Transportation and San Diego Municipal Separate Storm Sewer System Copermittees Responsible for the Discharge of Diazinon into the Chollas Creek Watershed*, when it is amended to include monitoring requirements for the Total Maximum Daily Loads for Dissolved Copper, Lead, and Zinc in Chollas Creek. The monitoring reports required under Investigation Order No. R9-2004-0277 must be submitted as part of the Transitional Monitoring and Assessment Program and Water Quality Improvement Plan Annual Reports required under Provision F.3.b of this Order.

(2) The Responsible Copermittees must monitor the effluent of the MS4 outfalls discharging to Chollas Creek for dissolved copper, lead, and zinc, and calculate or estimate the monthly and annual dissolved copper, lead, and zinc loads, in accordance with the requirements of Provisions D.2, D.4.b.(1), and D.4.b.(2) of this Order. The monitoring and assessment results must be submitted as part of the Transitional Monitoring and Assessment Program and Water Quality Improvement Plan Annual Reports required under Provision F.3.b of this Order.

(3) For assessing and determining compliance with the concentration-based effluent limitations under Specific Provision 4.b.(2)(b) or 4.c.(1), dry and wet weather discharge concentrations may be calculated based on a flow-weighted average across all major MS4 outfalls along a water body segment or within a jurisdiction if samples are collected within a similar time period.

## 5. Total Maximum Daily Loads for Indicator Bacteria, Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in San Diego Bay

### a. APPLICABILITY

(1) TMDL Basin Plan Amendment: Resolution No. R9-2008-0027

(2) TMDL Adoption and Approval Dates:

| | |
|---|---|
| San Diego Water Board Adoption Date: | June 11, 2008 |
| State Water Board Approval Date: | June 16, 2009 |
| Office of Administrative Law Approval Date: | September 15, 2009 |
| US EPA Approval Date: | October 26, 2009 |

(3) TMDL Effective Date: September 15, 2009

(4) Watershed Management Areas: See Table 5.0

(5) Water Bodies: See Table 5.0

(6) Responsible Copermittees: See Table 5.0

**Table 5.0**
*Applicability of Total Maximum Daily Loads for Indicator Bacteria*
*Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in San Diego Bay*

| Watershed Management Area | Water Body | Segment or Area | Responsible Copermittees |
|---|---|---|---|
| South Orange County | Dana Point Harbor | Baby Beach | -City of Dana Point<br>-County of Orange |
| San Diego Bay | San Diego Bay | Shelter Island Shoreline Park | - San Diego Unified Port District |

### b. FINAL TMDL COMPLIANCE REQUIREMENTS

The final indicator bacteria TMDL compliance requirements for segments or areas of the water bodies listed in Table 5.0 consist of the following:

(1) Final TMDL Compliance Dates

(a) Baby Beach in Dana Point Harbor

The Responsible Copermittees for MS4 discharges to Baby Beach must be in compliance with the final TMDL compliance requirements according to the following compliance dates:

**Table 5.1**
*Compliance Dates to Achieve Final TMDL Compliance Requirements For Baby Beach in Dana Point Harbor*

| Constituent | Dry Weather WLA Compliance Date | Wet Weather WLA Compliance Date |
|---|---|---|
| Total Coliform | September 15, 2014 | September 15, 2009 |
| Fecal Coliform | | September 15, 2009 |
| *Enterococcus* | | September 15, 2019 |

(b) Shelter Island Shoreline Park in San Diego Bay

The Responsible Copermittee for MS4 discharges to Shelter Island Shoreline Park must be in compliance with the final TMDL compliance requirements as of December 31, 2012.

(2) Final Water Quality Based Effluent Water Limitations

(a) Final Receiving Water Limitations

Discharges from the MS4s must not cause or contribute to the exceedance of the following receiving water limitations by the compliance dates under Specific Provision 5.b.(1):

**Table 5.2**
*Final Receiving Water Limitations Expressed as Bacteria Densities in the Water Body*

| | Receiving Water Limitations | |
|---|---|---|
| Constituent | Single Sample Maximum[1,2] | 30-Day Geometric Mean[2] |
| Total Coliform | 10,000 MPN/100mL | 1,000 MPN/100mL |
| Fecal Coliform | 400 MPN/100mL | 200 MPN/100mL |
| *Enterococcus* | 104 MPN/100mL | 35 MPN/100mL |

Notes:
1. During wet weather days, only the single sample maximum receiving water limitations are required to be achieved.
2. During dry weather days, the single sample maximum and 30-day geometric mean receiving water limitations are required to be achieved.

(b) Final Effluent Limitations

(i) Discharges from the MS4s containing indicator bacteria densities that do not exceed the following effluent limitations by the compliance dates under Specific Provision 5.b.(1) will not cause or contribute to exceedances of the receiving water limitations under Specific Provision 5.b.(2)(a):

**Table 5.3a**
*Final Effluent Limitations as Expressed as Bacteria Densities in MS4 Discharges to the Water Body*

| | Effluent Limitations | |
|---|---|---|
| **Constituent** | **Single Sample Maximum[1,2]** | **30-Day Geometric Mean[2]** |
| Total Coliform | 10,000 MPN/100mL | 1,000 MPN/100mL |
| Fecal Coliform | 400 MPN/100mL | 200 MPN/100mL |
| *Enterococcus* | 104 MPN/100mL | 35 MPN/100mL |

Notes:
1. During wet weather days, only the single sample maximum effluent limitations are required to be achieved.
2. During dry weather days, the single sample maximum and 30-day geometric mean effluent limitations are required to be achieved.

(ii) Discharges from the MS4s containing indicator bacteria loads that do not exceed the following effluent limitations by the compliance dates under Specific Provision 5.b.(1) will not cause or contribute to exceedances of the receiving water limitations under Specific Provision 5.b.(2)(a):

**Table 5.4a**
*Final Effluent Limitations Expressed as Bacteria Loads in MS4 Discharges to the Baby Beach in Dana Point Harbor*

| **Constituent** | **Dry Weather Final Effluent Limitation** | **Wet Weather Final Effluent Limitation** |
|---|---|---|
| Total Coliform | $0.86 \times 10^9$ MPN/day | $3{,}254 \times 10^9$ MPN/30days |
| Fecal Coliform | $0.17 \times 10^9$ MPN/day | $112 \times 10^9$ MPN/30days |
| *Enterococcus* | $0.03 \times 10^9$ MPN/day | $114 \times 10^9$ MPN/30days |

**Table 5.4b**
*Final Effluent Limitations Expressed as Bacteria Loads in MS4 Discharges to the Shelter Island Shoreline Park in San Diego Bay*

| **Constituent** | **Dry Weather Final Effluent Limitation** | **Wet Weather Final Effluent Limitation** |
|---|---|---|
| Total Coliform | 0 MPN/day | $198 \times 10^9$ MPN/30days |
| Fecal Coliform | 0 MPN/day | $8 \times 10^9$ MPN/30days |
| *Enterococcus* | 0 MPN/day | $26 \times 10^9$ MPN/30days |

(iii) Indicator bacteria percent load reductions from the Responsible Copermittees' MS4s that are greater than or equal to the following effluent limitations by the compliance dates under Specific Provision 5.b.(1) will not cause or contribute to exceedances of the receiving water limitations under Specific Provision 5.b.(2)(a):

**Table 5.5a**
*Final Effluent Limitations Expressed as Percent Load Reductions* in MS4 Discharges to Baby Beach in Dana Point Harbor*

| Constituent | Dry Weather Final Effluent Limitation | Wet Weather Final Effluent Limitation |
|---|---|---|
| Total Coliform | 90.4% | 0% |
| Fecal Coliform | 82.7% | 0% |
| *Enterococcus* | 96.2% | 62.2% |

Notes:
* The percent load reductions are relative to data collected between 1996-2002. For pollutant load reductions of 0%, pollutant loads discharged from the Responsible Copermittees' MS4s must not exceed the loads in Table 5.4a, unless an updated model or analysis, accepted by the San Diego Water Board, identifies a different allowable pollutant load that can be discharged from the Responsible Copermittee's MS4s to the water body.

**Table 5.5b**
*Final Effluent Limitations Expressed as Percent Load Reductions** in MS4 Discharges to Shelter Island Shoreline Park in San Diego Bay*

| Constituent | Dry Weather Final Effluent Limitation | Wet Weather Final Effluent Limitation |
|---|---|---|
| Total Coliform | 0% | 0% |
| Fecal Coliform | 0% | 0% |
| *Enterococcus* | 0% | 0% |

Notes:
* The percent load reductions are relative to data collected between 1999-2004. For pollutant load reductions of 0%, pollutant loads discharged from the Responsible Copermittee's MS4s must not exceed the loads in Table 5.4b, unless an updated model or analysis, accepted by the San Diego Water Board, identifies a different allowable pollutant load that can be discharged from the Responsible Copermittee's MS4s to the water body.

(c) Best Management Practices

(i) The Water Quality Improvement Plans for the applicable Watershed Management Areas in Table 5.0 must incorporate the Bacteria Load Reduction Plan (BLRP) required to be developed pursuant to Resolution No. R9-2008-0027.

(ii) The Responsible Copermittee must implement BMPs to achieve the receiving water limitations under Specific Provision 5.b.(2)(a) and/or the effluent limitations under Specific Provision 5.b.(2)(b) for the segments or areas of the water bodies listed in Table 5.0

(3) Final TMDL Compliance Determination

Compliance with the final WQBELs, on or after the final TMDL compliance dates, may be demonstrated via one of the following methods:

(a) There is no direct or indirect discharge from the Responsible Copermittee's MS4s to the receiving water; OR

(b) There are no exceedances of the final receiving water limitations under Specific Provision 5.b.(2)(a) in the receiving water at, or downstream of the Responsible Copermittee's MS4 outfalls; OR

(c) There are no exceedances of the final effluent limitations under Specific Provision 5.b.(2)(b)(i) at the Responsible Copermittee's MS4 outfalls; OR

(d) The pollutant loads discharging from the Responsible Copermittees' MS4 outfalls do not exceed the final effluent limitations under Specific Provision 5.b.(2)(b)(ii); OR

(e) The pollutant load reductions for discharges from the Responsible Copermittees' MS4 outfalls are greater than or equal to the final effluent limitations under Specific Provision 5.b.(2)(b)(iii); OR

(f) The Responsible Copermittees can demonstrate that exceedances of the final receiving water limitations under Specific Provision 5.b.(2)(a) in the receiving water are due to loads from natural sources, AND pollutant loads from the Copermittees' MS4s are not causing or contributing to the exceedances; OR

(g) The Responsible Copermittees develop and implement the Water Quality Improvement Plan as follows:

(i) Incorporate the BMPs required under Specific Provision 5.b.(2)(c) as part of the Water Quality Improvement Plan,

(ii) Include an analysis in the Water Quality Improvement Plan, utilizing a watershed model or other watershed analytical tools, to demonstrate that the implementation of the BMPs required under Provision 5.b.(2)(c) achieves compliance with Specific Provisions 5.b.(3)(a), 5.b.(3)(b), 5.b.(3)(c), 5.b.(3)(d), 5.b.(3)(e) and/or 5.b.(3)(f),

(iii) The results of the analysis must be accepted by the San Diego Water Board as part of the Water Quality Improvement Plan,

(iv) The Responsible Copermittees continue to implement the BMPs required under Specific Provision 5.b.(2)(c), AND

(v) The Responsible Copermittees continue to perform the specific monitoring and assessments specified in Specific Provision 5.d, to demonstrate compliance with Specific Provisions 5.b.(3)(a), 5.b.(3)(b), 5.b.(3)(c), 5.b.(3)(d), 5.b.(3)(e) and/or 5.b.(3)(f).

### c. INTERIM TMDL COMPLIANCE REQUIREMENTS

The interim indicator bacteria TMDL compliance requirements for segments or areas of the water bodies listed in Table 5.0 consist of the following:

(1) Baby Beach in Dana Point Harbor

(a) Interim TMDL Compliance Dates and WQBELs

The Responsible Copermittees for MS4 discharges to Baby Beach must comply with the following interim WQBELs by the interim compliance dates given in Tables 5.6a and/or 5.6b:

**Table 5.6a**
*Interim Water Quality Based Effluent Limitations Expressed as Bacteria Loads in MS4 Discharges to Baby Beach in Dana Point Harbor*

| Constituent | Interim Compliance Dates | Dry Weather Interim Effluent Limitation | Wet Weather Interim Effluent Limitation |
|---|---|---|---|
| Total Coliform | September 15, 2012 | $4.93 \times 10^9$ MPN/day | $3{,}254 \times 10^9$ MPN/30days* |
| Fecal Coliform | September 15, 2012 | $0.59 \times 10^9$ MPN/day | $112 \times 10^9$ MPN/30days* |
| *Enterococcus* | September 15, 2012 | $0.42 \times 10^9$ MPN/day | $301 \times 10^9$ MPN/30days |
| | September 15, 2016 | $0.03 \times 10^9$ MPN/day * | $207 \times 10^9$ MPN/30days |

Notes:
* Same as the final effluent limitations in Table 5.4a.

**Table 5.6b**
*Interim Water Quality Based Effluent Limitations Expressed as Percent Load Reductions* in MS4 Discharges to Baby Beach in Dana Point Harbor*

| Constituent | Interim Compliance Dates | Dry Weather Interim Effluent Limitation | Wet Weather Interim Effluent Limitation |
|---|---|---|---|
| Total Coliform | September 15, 2012 | 45.2% | 0%** |
| Fecal Coliform | September 15, 2012 | 41.4% | 0%** |
| *Enterococcus* | September 15, 2012 | 48.1% | 0% |
| | September 15, 2016 | 96.2%** | 31.1% |

Notes:
* The percent load reductions are relative to data collected between 1996-2002. For pollutant load reductions of 0%, pollutant loads discharged from the Responsible Copermittees' MS4s must not exceed the loads in Table 5.6a, unless an updated model or analysis, accepted by the San Diego Water Board, identifies a different allowable pollutant load that can be discharged from the Responsible Copermittee's MS4s to the waterbody.
** Same as the final effluent limitations in Table 5.5a.

(b) Interim Compliance Determination

Compliance with interim WQBELs, on or after the interim TMDL compliance dates, may be demonstrated via one of the following methods:

(i) There is no direct or indirect discharge from the Responsible Copermittee's MS4s to the receiving water; OR

(ii) There are no exceedances of the final receiving water limitations under Specific Provision 5.b.(2)(a) in the receiving water at, or downstream of the Responsible Copermittee's MS4 outfalls; OR

(iii) There are no exceedances of the final effluent limitations under Specific Provision 5.b.(2)(b)(i) at the Responsible Copermittee's MS4 outfalls; OR

(iv) The pollutant loads discharging from the Responsible Copermittees' MS4 outfalls do not exceed the final effluent limitations under Specific Provision 5.b(2)(b)(ii); OR

(v) The Responsible Copermittees can demonstrate that exceedances of the applicable receiving water limitations under Specific Provision 5.b.(2)(a) in the receiving water are due to loads from natural sources, AND pollutant loads from the Copermittees' MS4s are not causing or contributing to the exceedances; OR

(vi) The pollutant loads discharging from the Responsible Copermittees' MS4 outfalls do not exceed the interim effluent limitations under Table 5.6a of Specific Provision 5.c.(1)(a); OR

(vii) The pollutant load reductions for discharges from the Responsible Copermittees' MS4 outfalls are greater than or equal to the interim effluent limitations under Table 5.6b of Specific Provision 5.c.(1)(a); OR

(viii) The Responsible Copermittees have submitted and are fully implementing a Water Quality Improvement Plan, accepted by the San Diego Water Board, which provides reasonable assurance that the interim TMDL compliance requirements will be achieved by the interim compliance dates.

(2) Shelter Island Shoreline Park in San Diego Bay

The Responsible Copermittee for MS4 discharges to Shelter Island Shoreline Park must be in compliance with the final indicator bacteria TMDL requirements as of December 31, 2012.

### d. SPECIFIC MONITORING AND ASSESSMENT REQUIREMENTS

(1) Monitoring Stations

Monitoring locations should consist of, at a minimum, the same locations used to collect data required pursuant to Order Nos. R9-2007-0001 and R9-2009-0002, and beach monitoring for Health and Safety Code section 115880.[38] If discharges of bacteria from the MS4 exceed the applicable interim or final WQBELs, additional monitoring locations and/or other source identification methods must be implemented to identify the sources causing the exceedances. The additional monitoring locations must also be used to demonstrate that the bacteria loads from the identified anthropogenic sources have been addressed and are no longer causing exceedances in the receiving waters.

(2) Monitoring Procedures

(a) The Responsible Copermittees must collect dry weather monitoring samples from the receiving water monitoring stations at least monthly. Dry weather samples collected from additional monitoring stations established to identify sources must be collected at an appropriate frequency to demonstrate bacteria loads from the identified anthropogenic sources have been addressed and are no longer causing exceedances in the receiving waters.

(b) The Responsible Copermittees must collect wet weather monitoring samples within the first 24 hours of a storm event[39] of the rainy season (i.e. October 1 through April 30). Wet weather samples collected from receiving water stations and any additional monitoring stations established to identify sources must be collected at an appropriate frequency to demonstrate bacteria loads from the identified sources have been addressed and are no longer causing exceedances in the receiving waters.

(c) Samples must be analyzed for total coliform, fecal coliform, and *Enterococcus* indicator bacteria.

[38] Commonly referred to as AB 411 monitoring
[39] Wet weather days are defined by the TMDL as storm events of 0.2 inches or greater and the following 72 hours. The Responsible Copermittees may choose to limit their wet weather sampling requirements to storm events of 0.2 inches or greater, or also include storm events of 0.1 inches or greater as defined by the federal regulations [40CFR122.26(d)(2)(iii)(A)(2)].

(3) Assessment and Reporting Requirements

(a) The Responsible Copermittees must analyze the dry weather and wet weather monitoring data to assess whether the interim and final WQBELs have been achieved.

(b) For assessing and determining compliance with the concentration-based effluent limitations under Specific Provision 5.b.(2)(b)(i), dry and wet weather discharge bacteria densities may be calculated based on a flow-weighted average across all major MS4 outfalls along a water body segment or within a jurisdiction if samples are collected within a similar time period.

(c) The Responsible Copermittees must analyze the dry weather and wet weather monitoring data to correlate elevated bacteria levels with known or suspected sewage spills from wastewater collection systems and treatment plants or boats.

(d) The monitoring and assessment results must be submitted as part of the Transitional Monitoring and Assessment Program and Water Quality Improvement Plan Annual Reports required under Provision F.3.b of this Order.

## 6. Revised Total Maximum Daily Loads for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek)

### a. APPLICABILITY

(1) TMDL Basin Plan Amendment: Resolution No. R9-2010-0001

(2) TMDL Adoption and Approval Dates:

| | |
|---|---|
| San Diego Water Board Adoption Date: | February 10, 2010 |
| State Water Board Approval Date: | December 14, 2010 |
| Office of Administrative Law Approval Date: | April 4, 2011 |
| US EPA Approval Date: | June 22, 2011 |

(3) TMDL Effective Date: April 4, 2011

(4) Watershed Management Areas: See Table 6.0

(5) Water Bodies: See Table 6.0

(6) Responsible Copermittees: See Table 6.0

**Table 6.0**
*Applicability of Total Maximum Daily Loads for Indicator Bacteria*
*Project I - Twenty Beaches and Creeks in the San Diego Region (including Tecolote Creek)*

| Watershed Management Area and Watershed | Water Body | Segment or Area | Responsible Copermittees |
|---|---|---|---|
| **South Orange County**<br>San Joaquin Hills HSA (901.11) and Laguna Beach HSA (901.12) | Pacific Ocean Shoreline | Cameo Cove at Irvine Cove Drive – Riviera Way | -City of Laguna Beach<br>-County of Orange<br>-Orange County Flood Control District |
| | | at Heisler Park - North | |
| | Pacific Ocean Shoreline | at Main Laguna Beach | -City of Aliso Viejo<br>-City of Laguna Beach<br>-City of Laguna Woods<br>-County of Orange<br>-Orange County Flood Control District |
| | | Laguna Beach at Ocean Avenue | |
| | | Laguna Beach at Cleo Street | |
| | | Arch Cove at Bluebird Canyon Road | |
| | | Laguna Beach at Dumond Drive | |
| **South Orange County**<br>Aliso HSA (901.13) | Pacific Ocean Shoreline | Laguna Beach at Lagunita Place / Blue Lagoon Place at Aliso Beach | -City of Aliso Viejo<br>-City of Laguna Beach<br>-City of Laguna Hills<br>-City of Laguna Niguel<br>-City of Laguna Woods<br>-City of Lake Forest<br>-City of Mission Viejo<br>-County of Orange<br>-Orange County Flood Control District |
| | Aliso Creek | Entire reach (7.2 miles) and associated tributaries:<br>- Aliso Hills Channel<br>- English Canyon Creek<br>- Dairy Fork Creek<br>- Sulfur Creek<br>- Wood Canyon Creek | |
| | Aliso Creek Mouth | at mouth | |

**Table 6.0** (Cont'd)
*Applicability of Total Maximum Daily Loads for Indicator Bacteria*
*Project I - Twenty Beaches and Creeks in the San Diego Region (including Tecolote Creek)*

| Watershed Management Area and Watershed | Water Body | Segment or Area | Responsible Copermittees |
|---|---|---|---|
| **South Orange County**<br>Dana Point HSA (901.14) | Pacific Ocean Shoreline | Aliso Beach at West Street | -City of Dana Point<br>-City of Laguna Beach<br>-City of Laguna Niguel<br>-County of Orange<br>-Orange County Flood Control District |
| | | Aliso Beach at Table Rock Drive | |
| | | 100 Steps Beach at Pacific Coast Hwy at hospital (9th Avenue) | |
| | | at Salt Creek (large outlet) | |
| | | Salt Creek Beach at Salt Creek service road | |
| | | Salt Creek Beach at Strand Road | |
| **South Orange County**<br>Lower San Juan HSA (901.27) | Pacific Ocean Shoreline | at San Juan Creek | -City of Dana Point<br>-City of Laguna Hills<br>-City of Laguna Niguel<br>-City of Mission Viejo<br>-City of Rancho Santa Margarita<br>-City of San Juan Capistrano<br>-County of Orange<br>-Orange County Flood Control District |
| | San Juan Creek | lower 1 mile | |
| | San Juan Creek Mouth | at mouth | |
| **South Orange County**<br>San Clemente HA (901.30) | Pacific Ocean Shoreline | at Poche Beach | -City of Dana Point<br>-City of San Clemente<br>-County of Orange<br>-Orange County Flood Control District |
| | | Ole Hanson Beach Club Beach at Pico Drain | |
| | | San Clemente City Beach at El Portal Street Stairs | |
| | | San Clemente City Beach at Mariposa Street | |
| | | San Clemente City Beach at Linda Lane | |
| | | San Clemente City Beach at South Linda Lane | |
| | | San Clemente City Beach at Lifeguard Headquarters | |
| | | under San Clemente Municipal Pier | |
| | | San Clemente City Beach at Trafalgar Canyon (Trafalgar Lane) | |
| | | San Clemente State Beach at Riviera Beach | |
| | | Can Clemente State Beach at Cypress Shores | |

**Table 6.0** (Cont'd)
*Applicability of Total Maximum Daily Loads for Indicator Bacteria*
*Project I - Twenty Beaches and Creeks in the San Diego Region (including Tecolote Creek)*

| Watershed Management Area and Watershed | Water Body | Segment or Area | Responsible Copermittees |
|---|---|---|---|
| **San Luis Rey River**<br>San Luis Rey HU (903.00) | Pacific Ocean Shoreline | at San Luis Rey River mouth | -City of Oceanside<br>-City of Vista<br>-County of San Diego |
| **Carlsbad**<br>San Marcos HA (904.50) | Pacific Ocean Shoreline | at Moonlight State Beach | -City of Carlsbad<br>-City of Encinitas<br>-City of Escondido<br>-City of San Marcos<br>-County of San Diego |
| **San Dieguito River**<br>San Dieguito HU (905.00) | Pacific Ocean Shoreline | at San Dieguito Lagoon mouth | -City of Del Mar<br>-City of Escondido<br>-City of Poway<br>-City of San Diego<br>-City of Solana Beach<br>-County of San Diego |
| **Penasquitos**<br>Miramar Reservoir HA (906.10) | Pacific Ocean Shoreline | Torrey Pines State Beach at Del Mar (Anderson Canyon) | -City of Del Mar<br>-City of Poway<br>-City of San Diego<br>-County of San Diego |
| **Mission Bay**<br>Scripps HA (906.30) | Pacific Ocean Shoreline | La Jolla Shores Beach at El Paseo Grande | -City of San Diego |
| | | La Jolla Shores Beach at Caminito del Oro | |
| | | La Jolla Shores Beach at Vallecitos | |
| | | La Jolla Shores Beach at Avenida de la Playa | |
| | | at Casa Beach, Children's Pool | |
| | | South Casa Beach at Coast Boulevard | |
| | | Whispering Sands Beach at Ravina Street | |
| | | Windansea Beach at Vista de la Playa | |
| | | Windansea Beach at Bonair Street | |
| | | Windansea Beach at Playa del Norte | |
| | | Windansea Beach at Palomar Avenue | |
| | | at Tourmaline Surf Park | |
| | | Pacific Beach at Grand Avenue | |
| **Mission Bay**<br>Tecolote HA (906.50) | Tecolote Creek | Entire reach and tributaries | |

**Table 6.0** (Cont'd)
*Applicability of Total Maximum Daily Loads for Indicator Bacteria*
*Project I- Twenty Beaches and Creeks in the San Diego Region (including Tecolote Creek)*

| Watershed Management Area and Watershed | Water Body | Segment or Area | Responsible Copermittees |
|---|---|---|---|
| **San Diego River**<br><br>Mission San Diego HSA (907.11) and Santee HSA (907.12) | Forrester Creek | lower 1 mile | -City of El Cajon<br>-City of Santee<br>-County of San Diego |
| | San Diego River | lower 6 miles | -City of El Cajon<br>-City of La Mesa<br>-City of San Diego<br>-City of Santee<br>-County of San Diego |
| | Pacific Ocean Shoreline | at San Diego River mouth at Dog Beach | |
| **San Diego Bay**<br><br>Chollas HSA (908.22) | Chollas Creek | lower 1.2 miles | -City of La Mesa<br>-City of Lemon Grove<br>-City of San Diego<br>-County of San Diego<br>- San Diego Unified Port District |

### b. FINAL TMDL COMPLIANCE REQUIREMENTS

The final indicator bacteria TMDL compliance requirements for the water bodies listed in Table 6.0 consist of the following:

(1) Final TMDL Compliance Dates

The Responsible Copermittees for MS4 discharges to the water bodies listed in Table 6.0 must be in compliance with the final TMDL compliance requirements according to the following compliance dates:

**Table 6.1**
*Compliance Dates to Achieve Final TMDL Compliance Requirements*

| Constituent | Dry Weather TMDL Compliance Date | Wet Weather TMDL Compliance Date* |
|---|---|---|
| Total Coliform | April 4, 2021 | April 4, 2031<br>(April 4, 2021) |
| Fecal Coliform | | |
| *Enterococcus* | | |

* The Wet Weather TMDL Compliance Date in parenthesis applies if the applicable Water Quality Improvement Plan does not include load reduction programs for other constituents (e.g. metals, pesticides, trash, nutrients, sediment, etc.) together with bacteria load reduction requirements of these TMDLs.

(2) Final Water Quality Based Effluent Limitations

(a) Final Receiving Water Limitations

Discharges from the MS4s must not cause or contribute to the exceedance of the following receiving water limitations by the compliance dates under Specific Provision 6.b.(1):

**Table 6.2a**
*Final Receiving Water Limitations Expressed as Bacteria Densities and Allowable Exceedance Frequencies for Beaches*

| Constituent | Wet Weather Days | | Dry Weather Days | |
|---|---|---|---|---|
| | Single Sample Maximum[a,b] (MPN/100mL) | Single Sample Maximum Allowable Exceedance Frequency[c] | 30-Day Geometric Mean[b] (MPN/100mL) | 30-Day Geometric Mean Allowable Exceedance Frequency |
| Total Coliform | 10,000 | 22% | 1,000 | 0% |
| Fecal Coliform | 400 | 22% | 200 | 0% |
| *Enterococcus* | 104 | 22% | 35 | 0% |

Notes:
a. During wet weather days, only the single sample maximum receiving water limitations are required to be achieved.
b. During dry weather days, the single sample maximum and 30-day geometric mean receiving water limitations are required to be achieved.
c. The 22% single sample maximum allowable exceedance frequency only applies to wet weather days. For dry weather days, the dry weather bacteria densities must be consistent with the single sample maximum REC-1 water quality objectives in the Ocean Plan.

**Table 6.2b**
*Final Receiving Water Limitations Expressed as Bacteria Densities and Allowable Exceedance Frequencies for Creeks*

| Constituent | Wet Weather Days | | Dry Weather Days | |
|---|---|---|---|---|
| | Single Sample Maximum[a,b] (MPN/100mL) | Single Sample Maximum Allowable Exceedance Frequency[c] | 30-Day Geometric Mean[b] (MPN/100mL) | 30-Day Geometric Mean Allowable Exceedance Frequency |
| Fecal Coliform | 400 | 22% | 200 | 0% |
| *Enterococcus* | 61 (104) | 22% | 33 | 0% |

Notes:
a. During wet weather days, only the single sample maximum receiving water limitations are required to be achieved.
b. During dry weather days, the single sample maximum and 30-day geometric mean receiving water limitations are required to be achieved.
c. The 22% single sample maximum allowable exceedance frequency only applies to wet weather days. For dry weather days, the dry weather bacteria densities must be consistent with the single sample maximum REC-1 water quality objectives in the Basin Plan.
d. A single sample maximum of 104 MPN/100ml for *Enterococcus* may be applied as a receiving water limitation for creeks, instead of 61 MPN/100mL, if one or more of the creeks addressed by these TMDLs (San Juan Creek, Aliso Creek, Tecolote Creek, Forrester Creek, San Diego River, and/or Chollas Creek) is designated with a "moderately to lightly used area" or less frequent usage frequency in the Basin Plan. Otherwise, the single sample maximum of 61 MPN/100mL for *Enterococcus* must be used to assess compliance with the allowable exceedance frequency.

(b) Final Effluent Limitations

(i) Discharges from the MS4s containing indicator bacteria densities that do not exceed the following effluent limitations by the compliance dates under Specific Provision 6.c.(1) will not cause or contribute to exceedances of the receiving water limitations under Specific Provision 6.b.(2)(a):

**Table 6.2c**
*Final Effluent Limitations Expressed as Bacteria Densities and Allowable Exceedance Frequencies in MS4 Discharges to the Water Body*

| Constituent | Concentration-Based Effluent Limitations | | | |
|---|---|---|---|---|
| | Single Sample Maximum[a,b] (MPN/100mL) | Single Sample Maximum Allowable Exceedance Frequency[c] | 30-Day Geometric Mean[b] (MPN/100mL) | 30-Day Geometric Mean Allowable Exceedance Frequency |
| Total Coliform[d] | 10,000 | 22% | 1,000 | 0% |
| Fecal Coliform | 400 | 22% | 200 | 0% |
| *Enterococcus* | 104[e] / 61[f] | 22% | 35[e] / 33[f] | 0% |

Notes:
a. During wet weather days, only the single sample maximum effluent limitations are required to be achieved.
b. During dry weather days, the single sample maximum and 30-day geometric mean effluent limitations are required to be achieved.
c. The 22% single sample maximum allowable exceedance frequency only applies to wet weather days. For dry weather days, the dry weather bacteria densities must be consistent with the single sample maximum REC-1 water quality objectives in the Ocean Plan for discharges to beaches, and the Basin Plan for discharges to creeks and creek mouths.
d. Total coliform effluent limitations only apply to MS4 outfalls that discharge to the Pacific Ocean Shorelines and creek mouths listed in Table 6.0.
e. This *Enterococcus* effluent limitation applies to MS4 discharges to segments of areas of Pacific Ocean Shoreline listed in Table 6.0.
f. This *Enterococcus* effluent limitation applies to MS4 discharges to segments or areas of creeks or creek mouths listed in Table 6.0.

(ii) Indicator bacteria percent load reductions from the Responsible Copermittees' MS4s that are greater than or equal to the following effluent limitations by the compliance dates under Specific Provision 6.b.(1) will not cause or contribute to exceedances of the receiving water limitations under Specific Provision 6.b.(2)(a):

**Table 6.3**
*Final Effluent Limitations Expressed as Percent Load Reductions* in MS4 Discharges to the Water Body*

| *Watershed Management Areas* | *Watershed and Water Bodies* | *Load-Based Effluent Limitations* | | | | | |
|---|---|---|---|---|---|---|---|
| | | *Dry Weather* | | | *Wet Weather* | | |
| | | *Total Coliform* | *Fecal Coliform* | *Entero-coccus* | *Total Coliform* | *Fecal Coliform* | *Entero-coccus* |
| **South Orange County** | **San Joaquin Hills HSA** (901.11) and **Laguna Hills HSA** (901.12)<br>- Pacific Ocean Shoreline | 91.78% | 91.72% | 98.28% | 46.85% | 52.07% | 51.26% |
| | **Aliso HSA** (901.13)<br>- Pacific Ocean Shoreline<br>- Aliso Creek<br>- Aliso Creek mouth | 95.47% | 95.58% | 99.13% | 25.29% | 26.62% | 27.52% (27.37%)** |
| | **Dana Point HSA** (901.14)<br>- Pacific Ocean Shoreline | 95.04% | 95.03% | 98.98% | 13.15% | 14.86% | 15.16% |
| | **Lower San Juan HSA** (901.27)<br>- Pacific Ocean Shoreline<br>- San Juan Creek<br>- San Juan Creek mouth | 72.96% | 74.21% | 94.94% | 19.21% | 12.82% | 27.12% (26.90%)** |
| | **San Clemente HA** (901.30)<br>- Pacific Ocean Shoreline | 94.28% | 94.23% | 98.83% | 23.85% | 24.58% | 25.26% |
| **San Luis Rey River** | **San Luis Rey HU** (903.00)<br>- Pacific Ocean Shoreline | 38.13% | 39.09% | 87.38% | 5.62% | 3.12% | 11.69% |

**Table 6.3 (Cont'd)**
*Final Effluent Limitations Expressed as Percent Load Reductions* in MS4 Discharges to the Water Body*

| Watershed Management Areas | Watershed and Water Bodies | Load-Based Effluent Limitations | | | | | |
|---|---|---|---|---|---|---|---|
| | | Dry Weather | | | Wet Weather | | |
| | | Total Coliform | Fecal Coliform | Entero-coccus | Total Coliform | Fecal Coliform | Entero-coccus |
| **Carlsbad** | **San Marcos HA** (904.50)<br>- Pacific Ocean Shoreline | 82.82% | 82.55% | 96.03% | 18.47% | 18.98% | 20.19% |
| **San Dieguito River** | **San Dieguito HU** (905.00)<br>- Pacific Ocean Shoreline | 14.39% | 20.72% | 83.48% | 4.29% | 1.46% | 7.72% |
| **Penasquitos** | **Miramar Reservoir HA** (906.10)<br>- Pacific Ocean Shoreline | 96.50% | 96.59% | 99.42% | 1.61% | 1.99% | 1.93% |
| **Mission Bay** | **Scripps HA** (906.30)<br>- Pacific Ocean Shoreline | 96.44% | 96.42% | 99.25% | 16.32% | 21.14% | 18.82% |
| | **Tecolote HA** (906.50)<br>- Tecolote Creek | 94.51% | 94.59% | 98.94% | 16.51% | 20.47% | 18.15% (18.08%)** |
| **San Diego River** | **Mission San Diego HSA** (907.11) and **Santee HSA** (907.12)<br>- Pacific Ocean Shoreline<br>- Forrester Creek (lower 1 mile)<br>- San Diego River (lower 6 miles) | 74.03% | 69.44% | 93.96% | 38.14% | 53.22% | 42.74% (42.47%)** |
| **San Diego Bay** | **Chollas HSA** (908.22)<br>- Chollas Creek | 92.06% | 92.15% | 98.46% | 17.82% | 24.84% | 21.46% (21.36%)** |

Notes:
* The percent load reductions are based on reducing loads compared to pollutant loads from 2001 to 2002.
** The alternative *Enterococcus* percent load reduction was calculated based on a numeric target of 104 MPN/100mL instead of 61 MPN/100mL, protective of the REC-1 "moderately to lightly used area" usage frequency that is protective of freshwater creeks and downstream beaches. Acceptable evidence that impaired freshwater creeks can be considered "moderately to lightly used areas" must be provided before these alternative pollutant load reductions can be utilized.

(c) Best Management Practices

(i) The Water Quality Improvement Plans for the applicable Watershed Management Areas in Table 6.0 must incorporate the Bacteria Load Reduction Plans (BLRPs) or Comprehensive Load Reduction Plans (CLRPs) required to be developed pursuant to Resolution No. R9-2010-0001.

(ii) The Responsible Copermittee must implement BMPs to achieve the receiving water limitations under Specific Provision 6.b.(2)(a) and/or the effluent limitations under Specific Provision 6.b.(2)(b) for the segments or areas of the water bodies listed in Table 6.0.

(iii) The Responsible Copermittees should coordinate any BMPs implemented to address this TMDL with Caltrans, owners/operators of small MS4s, and agricultural dischargers as possible.

(3) Final TMDL Compliance Determination

Compliance with the final WQBELs, on or after the final TMDL compliance dates, may be demonstrated via one of the following methods:

(a) There is no direct or indirect discharge from the Responsible Copermittee's MS4s to the receiving water; OR

(b) There are no exceedances of the final receiving water limitations under Specific Provision 6.b.(2)(a) in the receiving water at, or downstream of the Responsible Copermittee's MS4 outfalls; OR

(c) There are no exceedances of the final effluent limitations under Specific Provision 6.b.(2)(b)(i) at the Responsible Copermittee's MS4 outfalls; OR

(d) The pollutant load reductions for discharges from the Responsible Copermittees' MS4 outfalls are greater than or equal to the final effluent limitations under Specific Provision 6.b.(2)(b)(ii); OR

(e) The Responsible Copermittees can demonstrate that exceedances of the final receiving water limitations under Specific Provision 6.b.(2)(a) in the receiving water are due to loads from natural sources, AND pollutant loads from the Copermittees' MS4s are not causing or contributing to the exceedances; OR

(f) The Responsible Copermittees develop and implement the Water Quality Improvement Plan as follows:

(i) Incorporate the BMPs required under Specific Provision 6.b.(2)(c) as part of the Water Quality Improvement Plan,

(ii) Include an analysis in the Water Quality Improvement Plan, utilizing a watershed model or other watershed analytical tools, to demonstrate that the implementation of the BMPs required under Provision 6.b.(2)(c) achieves compliance with Specific Provisions 6.b.(3)(a), 6.b.(3)(b), 6.b.(3)(c), 6.b.(3)(d), and/or 6.b.(3)(e),

(iii) The results of the analysis must be accepted by the San Diego Water Board as part of the Water Quality Improvement Plan,

(iv) The Responsible Copermittees continue to implement the BMPs required under Specific Provision 6.b.(2)(c), AND

(v) The Responsible Copermittees continue to perform the specific monitoring and assessments specified in Specific Provision 6.d, to demonstrate compliance with Specific Provisions 6.b.(3)(a), 6.b.(3)(b), 6.b.(3)(c), 6.b.(3)(d), 6.b.(3)(e) and/or 6.b.(3)(f).

### c. INTERIM TMDL COMPLIANCE REQUIREMENTS

The interim indicator bacteria TMDL compliance requirements for the water bodies listed in Table 6.0 consist of the following:

(1) Interim TMDL Compliance Dates

The Responsible Copermittees must achieve compliance with the interim TMDL compliance requirements, as determined in accordance with Specific Provision 6.c.(3), by the interim compliance dates given in Table 6.4, unless alternative interim compliance dates are accepted by the San Diego Water Board Executive Officer as part of the Water Quality Improvement Plan.

**Table 6.4**
*Interim Compliance Dates to Achieve Interim TMDL Compliance Requirements*

| Watershed Management Area and Watershed | Water Body | Segment or Area | Interim Compliance Dates | |
|---|---|---|---|---|
| | | | Interim Dry Weather WQBELs | Interim Wet Weather WQBELs* |
| **South Orange County**<br>San Joaquin Hills HSA (901.11) and Laguna Beach HSA (901.12) | Pacific Ocean Shoreline | Cameo Cove at Irvine Cove Drive – Riviera Way | April 4, 2016 | April 4, 2021 (April 4, 2016) |
| | | at Heisler Park - North | | |
| | Pacific Ocean Shoreline | at Main Laguna Beach | April 4, 2016 | April 4, 2021 (April 4, 2016) |
| | | Laguna Beach at Ocean Avenue | | |
| | | Laguna Beach at Cleo Street | | |
| | | Arch Cove at Bluebird Canyon Road | | |
| | | Laguna Beach at Dumond Drive | | |
| **South Orange County**<br>Aliso HSA (901.13) | Pacific Ocean Shoreline | Laguna Beach at Lagunita Place / Blue Lagoon Place at Aliso Beach | April 4, 2016 | April 4, 2021 (April 4, 2016) |
| | Aliso Creek | Entire reach (7.2 miles) and associated tributaries:<br>- Aliso Hills Channel<br>- English Canyon Creek<br>- Dairy Fork Creek<br>- Sulfur Creek<br>- Wood Canyon Creek | April 4, 2018 | April 4, 2021 (April 4, 2018) |
| | Aliso Creek Mouth | at mouth | April 4, 2018 | April 4, 2021 (April 4, 2018) |
| **South Orange County**<br>Dana Point HSA (901.14) | Pacific Ocean Shoreline | Aliso Beach at West Street | April 4, 2016 | April 4, 2021 (April 4, 2016) |
| | | Aliso Beach at Table Rock Drive | | |
| | | 100 Steps Beach at Pacific Coast Hwy at hospital (9th Avenue) | | |
| | | at Salt Creek (large outlet) | | |
| | | Salt Creek Beach at Salt Creek service road | April 4, 2017 | April 4, 2021 (April 4, 2017) |
| | | Salt Creek Beach at Strand Road | April 4, 2017 | April 4, 2021 (April 4, 2017) |

**Table 6.4** (Cont'd)
*Interim Compliance Dates to Achieve Interim WQBELs*

| Watershed Management Area and Watershed | Water Body | Segment or Area | Interim Compliance Dates | |
|---|---|---|---|---|
| | | | Interim Dry Weather WQBELs | Interim Wet Weather WQBELs* |
| **South Orange County** Lower San Juan HSA (901.27) | Pacific Ocean Shoreline | at San Juan Creek | April 4, 2016 | April 4, 2021 (April 4, 2016) |
| | San Juan Creek | lower 1 mile | April 4, 2018 | April 4, 2021 (April 4, 2018) |
| | San Juan Creek Mouth | at mouth | April 4, 2016 | April 4, 2021 (April 4, 2016) |
| **South Orange County** San Clemente HA (901.30) | Pacific Ocean Shoreline | at Poche Beach | April 4, 2016 | April 4, 2021 (April 4, 2016) |
| | | Ole Hanson Beach Club Beach at Pico Drain | April 4, 2016 | April 4, 2021 (April 4, 2016) |
| | | San Clemente City Beach at El Portal Street Stairs | April 4, 2017 | April 4, 2021 (April 4, 2017) |
| | | San Clemente City Beach at Mariposa Street | | |
| | | San Clemente City Beach at Linda Lane | April 4, 2016 | April 4, 2021 (April 4, 2016) |
| | | San Clemente City Beach at South Linda Lane | April 4, 2018 | April 4, 2021 (April 4, 2018) |
| | | San Clemente City Beach at Lifeguard Headquarters | April 4, 2017 | April 4, 2021 (April 4, 2017) |
| | | under San Clemente Municipal Pier | | |
| | | San Clemente City Beach at Trafalgar Canyon (Trafalgar Lane) | April 4, 2018 | April 4, 2021 (April 4, 2018) |
| | | San Clemente State Beach at Riviera Beach | April 4, 2016 | April 4, 2021 (April 4, 2016) |
| | | Can Clemente State Beach at Cypress Shores | April 4, 2017 | April 4, 2021 (April 4, 2017) |
| **San Luis Rey River** San Luis Rey HU (903.00) | Pacific Ocean Shoreline | at San Luis Rey River mouth | April 4, 2017 | April 4, 2021 (April 4, 2017) |
| **Carlsbad** San Marcos HA (904.50) | Pacific Ocean Shoreline | at Moonlight State Beach | April 4, 2016 | April 4, 2021 (April 4, 2016) |
| **San Dieguito River** San Dieguito HU (905.00) | Pacific Ocean Shoreline | at San Dieguito Lagoon mouth | April 4, 2016 | April 4, 2021 (April 4, 2016) |

**Table 6.4** (Cont'd)
*Interim Compliance Dates to Achieve Interim WQBELs*

| Watershed Management Area and Watershed | Water Body | Segment or Area | Interim Compliance Dates | |
|---|---|---|---|---|
| | | | Interim Dry Weather WQBELs | Interim Wet Weather WQBELs* |
| **Penasquitos** Miramar Reservoir HA (906.10) | Pacific Ocean Shoreline | Torrey Pines State Beach at Del Mar (Anderson Canyon) | April 4, 2016 | April 4, 2021 (April 4, 2016) |
| **Mission Bay** Scripps HA (906.30) | Pacific Ocean Shoreline | La Jolla Shores Beach at El Paseo Grande | April 4, 2016 | April 4, 2021 (April 4, 2016) |
| | | La Jolla Shores Beach at Caminito del Oro | | |
| | | La Jolla Shores Beach at Vallecitos | | |
| | | La Jolla Shores Beach at Avenida de la Playa | | |
| | | at Casa Beach, Children's Pool | | |
| | | South Casa Beach at Coast Boulevard | | |
| | | Whispering Sands Beach at Ravina Street | | |
| | | Windansea Beach at Vista de la Playa | | |
| | | Windansea Beach at Bonair Street | | |
| | | Windansea Beach at Playa del Norte | | |
| | | Windansea Beach at Palomar Avenue | | |
| | | at Tourmaline Surf Park | | |
| | | Pacific Beach at Grand Avenue | | |
| **Mission Bay** Tecolote HA (906.50) | Tecolote Creek | Entire reach and tributaries | | |
| **San Diego River** Mission San Diego HSA (907.11) and Santee HSA (907.12) | Forrester Creek | lower 1 mile | April 4, 2018 | April 4, 2021 (April 4, 2018) |
| | San Diego River | lower 6 miles | | |
| | Pacific Ocean Shoreline | at San Diego River mouth at Dog Beach | | |
| **San Diego Bay** Chollas HSA (908.22) | Chollas Creek | lower 1.2 miles | April 4, 2018 | April 4, 2021 (April 4, 2018) |

* The Interim Compliance Dates to achieve the Interim Wet Weather WQBELs in parenthesis apply if the applicable Water Quality Improvement Plan does not include load reduction programs for other constituents (e.g. metals, pesticides, trash, nutrients, sediment, etc.) together with bacteria load reduction requirements of these TMDLs.

(2) Interim Water Quality Based Effluent Limitations

The Responsible Copermittees for discharges to the water bodies in Table 6.0 must comply with the following interim WQBELs by the interim compliance dates given in Specific Provision 6.c.(1):

(a) Interim Receiving Water Limitations

(i) *Interim Dry Weather Receiving Water Limitations*

The Responsible Copermittee must calculate the "existing" exceedance frequencies of the 30-day geometric mean water quality objectives for each of the indicator bacteria by analyzing the available monitoring data collected between January 1, 1996 and December 31, 2002. "Existing" exceedance frequencies may be calculated by water body and/or by Watershed Management Area listed in Table 6.0. Separate "existing" exceedance frequencies must be calculated for beaches and creeks/creek mouths.

The Responsible Copermittees must achieve a 50 percent reduction in the "existing" exceedance frequency of the 30-day geometric mean WQBELs for the water bodies listed in Table 6.0 by the interim compliance dates given in Table 6.4. A 50 percent reduction in the "existing" exceedance frequency is equivalent to half of the "existing" exceedance frequency of the 30-day geometric mean WQBELs.

The "existing" exceedance frequencies and the interim dry weather allowable exceedance frequencies (i.e. interim dry weather receiving water limitations) calculated by the Responsible Copermittees must be included in the Water Quality Improvement Plans for the applicable Watershed Management Areas.

(ii) *Interim Wet Weather Receiving Water Limitations*

The Responsible Copermittees must achieve the interim wet weather receiving water limitations in Table 6.5, expressed as interim wet weather allowable exceedance frequencies, by the interim compliance dates given in Table 6.4.

**Table 6.5**
*Interim Wet Weather Receiving Water Limitations Expressed as Interim Wet Weather Allowable Exceedance Frequencies*

| Watershed Management Area and Watershed | Water Body | Segment or Area | Interim Wet Weather Allowable Exceedance Frequencies | | |
|---|---|---|---|---|---|
| | | | Total Coliform | Fecal Coliform | *Entero-coccus* |
| **South Orange County**<br>San Joaquin Hills HSA (901.11) and Laguna Beach HSA (901.12) | Pacific Ocean Shoreline | Cameo Cove at Irvine Cove Drive – Riviera Way | 38% | 37% | 39% |
| | | at Heisler Park - North | | | |
| | Pacific Ocean Shoreline | at Main Laguna Beach | | | |
| | | Laguna Beach at Ocean Avenue | | | |
| | | Laguna Beach at Cleo Street | | | |
| | | Arch Cove at Bluebird Canyon Road | | | |
| | | Laguna Beach at Dumond Drive | | | |
| **South Orange County**<br>Aliso HSA (901.13) | Pacific Ocean Shoreline | Laguna Beach at Lagunita Place / Blue Lagoon Place at Aliso Beach | 41% | 41% | 42% |
| | Aliso Creek | Entire reach (7.2 miles) and associated tributaries:<br>- Aliso Hills Channel<br>- English Canyon Creek<br>- Dairy Fork Creek<br>- Sulfur Creek<br>- Wood Canyon Creek | 41% | 41% | 42% |
| | Aliso Creek Mouth | at mouth | 41% | 41% | 42% |
| **South Orange County**<br>Dana Point HSA (901.14) | Pacific Ocean Shoreline | Aliso Beach at West Street | 36% | 36% | 36% |
| | | Aliso Beach at Table Rock Drive | | | |
| | | 100 Steps Beach at Pacific Coast Hwy at hospital (9th Avenue) | | | |
| | | at Salt Creek (large outlet) | | | |
| | | Salt Creek Beach at Salt Creek service road | | | |
| | | Salt Creek Beach at Strand Road | | | |

**Table 6.5** (Cont'd)
*Interim Wet Weather Receiving Water Limitations Expressed as Interim Wet Weather Allowable Exceedance Frequencies*

| Watershed Management Area and Watershed | Water Body | Segment or Area | Interim Wet Weather Allowable Exceedance Frequencies | | |
|---|---|---|---|---|---|
| | | | Total Coliform | Fecal Coliform | *Entero-coccus* |
| **South Orange County** Lower San Juan HSA (901.27) | Pacific Ocean Shoreline | at San Juan Creek | 44% | 44% | 48% |
| | San Juan Creek | lower 1 mile | 44% | 44% | 47% |
| | San Juan Creek Mouth | at mouth | 44% | 44% | 47% |
| **South Orange County** San Clemente HA (901.30) | Pacific Ocean Shoreline | at Poche Beach | 35% | 35% | 36% |
| | | Ole Hanson Beach Club Beach at Pico Drain | | | |
| | | San Clemente City Beach at El Portal Street Stairs | | | |
| | | San Clemente City Beach at Mariposa Street | | | |
| | | San Clemente City Beach at Linda Lane | | | |
| | | San Clemente City Beach at South Linda Lane | | | |
| | | San Clemente City Beach at Lifeguard Headquarters | | | |
| | | under San Clemente Municipal Pier | | | |
| | | San Clemente City Beach at Trafalgar Canyon (Trafalgar Lane) | | | |
| | | San Clemente State Beach at Riviera Beach | | | |
| | | Can Clemente State Beach at Cypress Shores | | | |
| **San Luis Rey River** San Luis Rey HU (903.00) | Pacific Ocean Shoreline | at San Luis Rey River mouth | 45% | 44% | 47% |
| **Carlsbad** San Marcos HA (904.50) | Pacific Ocean Shoreline | at Moonlight State Beach | 40% | 40% | 41% |
| **San Dieguito River** San Dieguito HU (905.00) | Pacific Ocean Shoreline | at San Dieguito Lagoon mouth | 33% | 33% | 36% |

**Table 6.5** (Cont'd)
*Interim Wet Weather Receiving Water Limitations Expressed as Interim Wet Weather Allowable Exceedance Frequencies*

| Watershed Management Area and Watershed | Water Body | Segment or Area | Interim Wet Weather Allowable Exceedance Frequencies | | |
|---|---|---|---|---|---|
| | | | Total Coliform | Fecal Coliform | *Entero-coccus* |
| **Penasquitos**<br>Miramar Reservoir HA (906.10) | Pacific Ocean Shoreline | Torrey Pines State Beach at Del Mar (Anderson Canyon) | 26% | 26% | 26% |
| **Mission Bay**<br>Scripps HA (906.30) | Pacific Ocean Shoreline | La Jolla Shores Beach at El Paseo Grande | 37% | 37% | 37% |
| | | La Jolla Shores Beach at Caminito del Oro | | | |
| | | La Jolla Shores Beach at Vallecitos | | | |
| | | La Jolla Shores Beach at Avenida de la Playa | | | |
| | | at Casa Beach, Children's Pool | | | |
| | | South Casa Beach at Coast Boulevard | | | |
| | | Whispering Sands Beach at Ravina Street | | | |
| | | Windansea Beach at Vista de la Playa | | | |
| | | Windansea Beach at Bonair Street | | | |
| | | Windansea Beach at Playa del Norte | | | |
| | | Windansea Beach at Palomar Avenue | | | |
| | | at Tourmaline Surf Park | | | |
| | | Pacific Beach at Grand Avenue | | | |
| **Mission Bay**<br>Tecolote HA (906.50) | Tecolote Creek | Entire reach and tributaries | 49% | 49% | 51% |
| **San Diego River**<br>Mission San Diego HSA (907.11) and Santee HSA (907.12) | Forrester Creek | lower 1 mile | 46% | 43% | 49% |
| | San Diego River | lower 6 miles | 46% | 43% | 49% |
| | Pacific Ocean Shoreline | at San Diego River mouth at Dog Beach | 46% | 43% | 51% |
| **San Diego Bay**<br>Chollas HSA (908.22) | Chollas Creek | lower 1.2 miles | 41% | 41% | 43% |

(b) Interim Effluent Limitations

Indicator bacteria percent load reductions from the Responsible Copermittees' MS4s that are greater than or equal to the following effluent limitations by the interim compliance dates under Specific Provision 6.c.(1) will not cause or contribute to exceedances of the receiving water limitations under Specific Provision 6.c.(2)(a):

**Table 6.6**
*Interim Effluent Limitations Expressed as Percent Load Reductions* in MS4 Discharges to the Water Body*

| *Watershed Management Areas* | *Watersheds and Water Bodies* | *Load-Based Effluent Limitations* | | | | | |
|---|---|---|---|---|---|---|---|
| | | *Dry Weather* | | | *Wet Weather* | | |
| | | *Total Coliform* | *Fecal Coliform* | *Entero-coccus* | *Total Coliform* | *Fecal Coliform* | *Entero-coccus* |
| **South Orange County** | **San Joaquin Hills HSA** (901.11) and **Laguna Hills HSA** (901.12)<br>- Pacific Ocean Shoreline | 45.89% | 45.86% | 49.14% | 23.43% | 26.04% | 25.63% |
| | **Aliso HSA** (901.13)<br>- Pacific Ocean Shoreline<br>- Aliso Creek<br>- Aliso Creek mouth | 47.74% | 47.79% | 49.57% | 12.65% | 13.31% | 13.76% (13.69%)** |
| | **Dana Point HSA** (901.14)<br>- Pacific Ocean Shoreline | 47.52% | 47.52% | 49.49% | 6.58% | 7.43% | 7.58% |
| | **Lower San Juan HSA** (901.27)<br>- Pacific Ocean Shoreline<br>- San Juan Creek<br>- San Juan Creek mouth | 36.48% | 37.11% | 47.47% | 9.61% | 6.41% | 13.56% (13.45%)** |
| | **San Clemente HA** (901.30)<br>- Pacific Ocean Shoreline | 47.14% | 47.12% | 49.42% | 11.93% | 12.29% | 12.63% |
| **San Luis Rey River** | **San Luis Rey HU** (903.00)<br>- Pacific Ocean Shoreline | 19.07% | 19.55% | 43.69% | 2.81% | 1.56% | 5.85% |
| **Carlsbad** | **San Marcos HA** (904.50)<br>- Pacific Ocean Shoreline | 41.41% | 41.28% | 48.02% | 9.24% | 9.49% | 10.10% |

**Table 6.6 (Cont'd)**
*Interim Effluent Limitations Expressed as Percent Load Reductions* in MS4 Discharges to the Water Body*

| Watershed Management Areas | Watersheds and Water Bodies | Load-Based Effluent Limitations | | | | | |
|---|---|---|---|---|---|---|---|
| | | Dry Weather | | | Wet Weather | | |
| | | Total Coliform | Fecal Coliform | Entero-coccus | Total Coliform | Fecal Coliform | Entero-coccus |
| **San Dieguito River** | **San Dieguito HU** (905.00)<br>- Pacific Ocean Shoreline | 7.20% | 10.36% | 41.74% | 2.15% | 0.73% | 3.86% |
| **Penasquitos** | **Miramar Reservoir HA** (906.10)<br>- Pacific Ocean Shoreline | 48.25% | 48.30% | 49.71% | 0.81% | 1.00% | 0.97% |
| **Mission Bay** | **Scripps HA** (906.30)<br>- Pacific Ocean Shoreline | 48.22% | 48.21% | 49.63% | 8.16% | 10.57% | 9.41% |
| | **Tecolote HA** (906.50)<br>- Tecolote Creek | 47.26% | 47.30% | 49.47% | 8.26% | 10.24% | 9.08% (9.04%)** |
| **San Diego River** | **Mission San Diego HSA** (907.11) and **Santee HSA** (907.12)<br>- Pacific Ocean Shoreline<br>- Forrester Creek (lower 1 mile)<br>- San Diego River (lower 6 miles) | 37.02% | 34.72% | 46.98% | 19.07% | 26.61% | 21.37% (21.24%)** |
| **San Diego Bay** | **Chollas HSA** (908.22)<br>- Chollas Creek | 46.03% | 46.08% | 49.23% | 8.91% | 12.42% | 10.73% (10.68%)** |

Notes:
* The percent load reductions are based on reducing loads compared to pollutant loads from 2001 to 2002.
** The alternative *Enterococcus* percent load reduction was calculated based on a numeric target of 104 MPN/100mL instead of 61 MPN/100mL, protective of the REC-1 "moderately to lightly used area" usage frequency that is protective of freshwater creeks and downstream beaches. Acceptable evidence that impaired freshwater creeks can be considered "moderately to lightly used areas" must be provided before these alternative pollutant load reductions can be utilized.

(3) Interim TMDL Compliance Determination

Compliance with the interim WQBELs, on or after the interim TMDL compliance dates, may be demonstrated via one of the following methods:

(a) There is no direct or indirect discharge from the Responsible Copermittee's MS4s to the receiving water; OR

(b) There are no exceedances of the final receiving water limitations under Specific Provision 6.b.(2)(a) in the receiving water at, or downstream of the Responsible Copermittee's MS4 outfalls; OR

(c) There are no exceedances of the final effluent limitations under Specific Provision 6.b.(2)(b)(i) at the Responsible Copermittee's MS4 outfalls; OR

(d) The pollutant load reductions for discharges from the Responsible Copermittees' MS4 outfalls are greater than or equal to the final effluent limitations under Specific Provision 6.b.(2)(b)(ii); OR

(e) The Responsible Copermittees can demonstrate that exceedances of the final receiving water limitations under Specific Provision 6.b.(2)(a) in the receiving water are due to loads from natural sources, AND pollutant loads from the Copermittees' MS4s are not causing or contributing to the exceedances; OR

(f) There are no exceedances of the interim receiving water limitations under Specific Provision 6.c.(2)(a) in the receiving water at, or downstream of the Responsible Copermittees' MS4 outfalls; OR

(g) The pollutant load reductions for discharges from the Responsible Copermittees' MS4 outfalls are greater than or equal to the interim effluent limitations under Specific Provision 6.c.(2)(b); OR

(h) The Responsible Copermittees have submitted and are fully implementing a Water Quality Improvement Plan, accepted by the San Diego Water Board, which provides reasonable assurance that the interim TMDL compliance requirements will be achieved by the interim compliance dates.

**d. SPECIFIC MONITORING AND ASSESSMENT REQUIREMENTS**

(1) Monitoring and Assessment Requirements for Beaches

(a) Monitoring Stations

For beaches addressed by the TMDL, monitoring locations should consist of, at a minimum, the same locations used to collect data required pursuant to Order Nos. R9-2007-0001 and R9-2009-0002, and beach monitoring for Health and Safety Code section 115880.[40] If exceedances of the applicable interim or final receiving water limitations are observed in the monitoring data, additional monitoring locations and/or other source

[40] Commonly referred to as AB 411 monitoring

identification methods must be implemented to identify the sources causing the exceedances. The additional monitoring locations must also be used to demonstrate that the bacteria loads from the identified anthropogenic sources have been addressed and are no longer causing exceedances in the receiving waters.

(b) Monitoring Procedures

(i) The Responsible Copermittees must collect dry weather monitoring samples from the receiving water monitoring stations at least monthly. Dry weather samples collected from additional monitoring stations established to identify sources must be collected at an appropriate frequency to demonstrate bacteria loads from the identified sources have been addressed and are no longer causing exceedances in the receiving waters.

(ii) The Responsible Copermittees must collect wet weather monitoring samples from the receiving water monitoring stations at least once within the first 24 hours of the end of a storm event[41] during the rainy season (i.e. October 1 through April 30). Wet weather samples collected from receiving water stations and any additional monitoring stations established to identify sources must be collected at an appropriate frequency to demonstrate bacteria loads from the identified sources have been addressed and are no longer in exceedance of the allowable exceedance frequencies in the receiving waters.

(iii) Samples must be analyzed for total coliform, fecal coliform, and *Enterococcus* indicator bacteria.

(iv) For Pacific Ocean Shoreline segments or areas listed in Table 6.0 that have been de-listed from the Clean Water Act Section 303(d) List, the Responsible Copermittees may propose alternative monitoring procedures to demonstrate that the water bodies continue to remain in compliance with water quality standards under wet weather and dry weather conditions. The alternative monitoring procedures must be submitted as a part of the Water Quality Improvement Plans or any updates required under Provisions F.1 and F.2.c of the Order.

[41] Wet weather days are defined by the TMDL as storm events of 0.2 inches or greater and the following 72 hours. The Responsible Copermittees may choose to limit their wet weather sampling requirements to storm events of 0.2 inches or greater, or also include storm events of 0.1 inches or greater as defined by the federal regulations [40CFR122.26(d)(2)(iii)(A)(2)].

(c) Assessment and Reporting Requirements

(i) The Responsible Copermittees must analyze the dry weather and wet weather monitoring data to assess whether the interim and final WQBELs for the Pacific Ocean Shoreline segments or areas listed in Table 6.0 have been achieved.

(ii) Dry weather exceedance frequencies must be calculated as follows:

[a] 30-day geometric means must be calculated from the results of any dry weather samples collected from the segments or areas for each water body listed in Table 6.0;
[b] The method and number of samples need for calculating the 30-day geometric means must be consistent with the number of samples required by the Ocean Plan;
[c] Where there are multiple segments or areas associated with a water body listed in Table 6.0, the Copermittees may calculate geometric means for each segment or area, or combine the dry weather monitoring data from all the segments or areas to calculate geometric means for the water body;
[d] The exceedance frequency must be calculated by dividing the number of geometric means that exceed the geometric mean receiving water limitations in Table 6.2 by the total number of geometric means calculated from samples collected during the dry season.

(iii) Wet weather exceedance frequencies must be calculated as follows:

[a] If only one sample is collected for a storm event, the bacteria density for every wet weather day associated with that storm event must be assumed to be equal to the results from the one sample collected;
[b] If more than one sample is collected for a storm event, but not on a daily basis, the bacteria density for all wet weather days of the storm event not sampled must be assumed to be equal to the highest bacteria density result reported from the samples collected;
[c] If there are any storm events not sampled, the bacteria density for every wet weather day of those storm events must be assumed to be equal to the average of the highest bacteria densities reported from each storm event sampled; and
[d] The single sample maximum exceedance frequency must be calculated by dividing the number of wet weather days that exceed the single sample maximum receiving water limitations in Table 6.2 by the total number of wet weather days during the rainy season.
[e] The data collected for dry weather must be used in addition to the data collected for wet weather to calculate the wet weather 30-

day geometric means. The exceedance frequency of the wet weather 30-day geometric means must be calculated by dividing the number of geometric means that exceed the geometric mean receiving water limitations in Table 6.2 by the total number of geometric means calculated from samples collected during the wet season.

(iv) For assessing and determining compliance with the concentration-based effluent limitations under Specific Provision 6.b.(2)(b)(i), dry and wet weather discharge bacteria densities may be calculated based on a flow-weighted average across all major MS4 outfalls along a water body segment or within a jurisdiction if samples are collected within a similar time period.

(v) The monitoring and assessment results must be submitted as part of the Transitional Monitoring and Assessment Program and Water Quality Improvement Plan Annual Reports required under Provision F.3.b of this Order.

(2) Monitoring and Assessment Requirements for Creeks and Creek Mouths

(a) Monitoring Stations

For creeks addressed by the TMDL, monitoring locations should consist of, at a minimum, a location at or near the mouth of the creek (e.g. Mass Loading Station or Mass Emission Station) and one or more locations upstream of the mouth (e.g. Watershed Assessment Station). If exceedances of the applicable interim or final receiving water limitations are observed in the monitoring data, additional monitoring locations and/or other source identification methods must be implemented to identify the sources causing the exceedances. The additional monitoring locations must also be used to demonstrate that the bacteria loads from the identified sources have been addressed and are no longer causing exceedances in the receiving waters.

(b) Monitoring Procedures

(i) The Responsible Copermittees must collect dry weather monitoring samples from the receiving water monitoring stations in accordance with the requirements of Provision D.

(ii) The Responsible Copermittees must collect wet weather monitoring samples from the receiving water monitoring stations within the first 24 hours of the end of a storm event[42] during the rainy season (i.e. October 1 through April 30).

[42] Wet weather days are defined by the TMDL as storm events of 0.2 inches or greater and the following 72 hours. The Responsible Copermittees may choose to limit their wet weather sampling requirements to

(iii) Samples collected from receiving water monitoring stations must be analyzed for fecal coliform and *Enterococcus* indicator bacteria.

(iv) For creeks or creek mouths listed in Table 6.0 that have been de-listed from the Clean Water Act Section 303(d) List, the Responsible Copermittees may propose alternative monitoring procedures to demonstrate that the water bodies continue to remain in compliance with water quality standards under wet weather and dry weather conditions. The alternative monitoring procedures must be submitted as a part of the Water Quality Improvement Plans or any updates required under Provisions F.1 and F.2.c of the Order.

(c) Assessment and Reporting Requirements

(i) The Responsible Copermittees must analyze the receiving water monitoring data to assess whether the interim and final receiving water WQBELs for the creeks and creek mouths listed in Table 6.0 have been achieved.

(ii) Dry weather exceedance frequencies must be calculated as follows:

[a] 30-day geometric means must be calculated from the results of any dry weather samples collected from the segment or area for each water body listed in Table 6.0;
[b] The method and number of samples need for calculating the 30-day geometric means must be consistent with the number of samples required by the Basin Plan;
[c] The exceedance frequency must be calculated by dividing the number of 30-day geometric means that exceed the 30-day geometric mean receiving water limitations in Table 6.2 by the total number of 30-day geometric means calculated from samples collected during the dry season.

(iii) Wet weather exceedance frequencies must be calculated as follows:

[a] If only one sample is collected for a storm event, the bacteria density for every wet weather day associated with that storm event must be assumed to be equal to the results from the one sample collected;
[b] If more than one sample is collected for a storm event, but not on a daily basis, the bacteria density for all wet weather days of the storm event not sampled must be assumed to be equal to the highest bacteria density result reported from the samples collected;

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storm events of 0.2 inches or greater, or also include storm events of 0.1 inches or greater as defined by the federal regulations [40CFR122.26(d)(2)(iii)(A)(2)].

[c] If there are any storm events not sampled, the bacteria density for every wet weather day of those storm events must be assumed to be equal to the average of the highest bacteria densities reported from each of the storm events sampled; and

[d] The exceedance frequency must be calculated by dividing the number of wet weather days that exceed the single sample maximum receiving water limitations in Table 6.2 by the total number of wet weather days during the rainy season.

[e] The data collected for dry weather must be used in addition to the data collected for wet weather to calculate the wet weather 30-day geometric means. The exceedance frequency of the wet weather 30-day geometric means must be calculated by dividing the number of geometric means that exceed the geometric mean receiving water limitations in Table 6.2 by the total number of geometric means calculated from samples collected during the wet season.

(iv) The Responsible Copermittee must identify and incorporate additional MS4 outfall and receiving water monitoring stations and/or adjust monitoring frequencies to identify sources causing exceedances of the receiving water WQBELs.

(v) For assessing and determining compliance with the concentration-based effluent limitations under Specific Provision 6.b.(2)(b)(i), dry and wet weather discharge bacteria densities may be calculated based on a flow-weighted average across all major MS4 outfalls along a water body segment or within a jurisdiction if samples are collected within a similar time period.

(vi) The monitoring and assessment results must be submitted as part of the Transitional Monitoring and Assessment Program and Water Quality Improvement Plan Annual Reports required under Provision F.3.b of this Order.

## 7. Total Maximum Daily Loads for Sediment in Los Peñasquitos Lagoon

### a. APPLICABILITY

(1) TMDL Basin Plan Amendment: Resolution No. R9-2012-0033

(2) TMDL Adoption and Approval Dates:

| | |
|---|---|
| San Diego Water Board Adoption Date: | June 13, 2012 |
| State Water Board Approval Date: | January 21, 2014 |
| Office of Administrative Law Approval Date: | July 14, 2014 |
| US EPA Approval Date: | October 30, 2014 |

(3) TMDL Effective Date: July 14, 2014

(4) Watershed Management Area: Peñasquitos

(5) Water Body: Los Peñasquitos Lagoon

(6) Responsible Copermittees: County of San Diego, City of San Diego, City of Del Mar, and City of Poway

### b. FINAL TMDL COMPLIANCE REQUIREMENTS

The final sediment TMDL compliance requirements for Los Peñasquitos Lagoon consist of the following:

(1) Final TMDL Compliance Date

The Responsible Copermittees must be in compliance with the final TMDL compliance requirements by December 31, 2034.

(2) Final Water Quality Based Effluent Limitations

(a) Final Receiving Water Limitations

Discharges from the MS4s must not prohibit the sustainable restoration of tidal and non-tidal saltmarsh vegetation of at least 346 acres.

(b) Final Effluent Limitations

Discharges from the MS4s containing pollutant loads that do not exceed the following effluent limitations by the compliance date under Provision 7.b(1) will not cause or contribute to a failure of the receiving water condition specified under Specific Provision 7.b.(2)(a):

**Table 7.1**
*Final Effluent Limitations as Expressed as Wet Season Loads in MS4 Discharges to Los Peñasquitos Lagoon**

| Constituent | Effluent Limitation |
|---|---|
| Sediment | 2,580 tons/wet season |

* Final effluent limitations are to be achieved by the following Responsible Parties: County of San Diego, City of San Diego, City of Del Mar, City of Poway, Phase II MS4 permittees, Caltrans, general construction storm water NPDES permittees, and general industrial storm water NPDES permittees.

(c) Best Management Practices

(i) The Water Quality Improvement Plan for the Los Peñasquitos Watershed Management Area must incorporate the Sediment Load Reduction Plan required to be developed pursuant to Resolution No. R9-2012-0033.

(ii) The Responsible Copermittees must implement BMPs to achieve the receiving water limitations under Specific Provision 7.b.(2)(a) and/or the Copermittee's portion of the effluent limitations under Specific Provision 7.b.(2)(b) for Los Peñasquitos Lagoon.

(3) Final TMDL Compliance Determination

Compliance determination with the final WQBELs, on or after the final TMDL compliance date, may be demonstrated via one of the following methods:

(a) Successful restoration of 80 percent of the 1973 acreage of tidal and non-tidal lagoon salt marsh (346 acres) as described in Attachment A of Resolution No. R9-2010-0033; OR

(b) The Responsible Copermittees develop and implement the Water Quality Improvement Plan as follows:

(i) Incorporate the BMPs required under Specific Provision 7.b.(2)(c)(ii) and/or other implementation actions to achieve compliance with Specific Provision 7.b.(3)(a) as part of the Water Quality Improvement Plan,

(ii) Include an analysis in the Water Quality Improvement Plan, utilizing a watershed model or other watershed analytical tools, to demonstrate that the implementation of the BMPs required under Provision 7.b.(2)(c)(ii) or other implementation actions to achieve compliance with Specific Provision 7.b.(3)(a),

(iii) The results of the analysis must be accepted by the San Diego Water Board as part of the Water Quality Improvement Plan,

(iv) The Responsible Copermittees continue to implement the BMPs required under Specific Provision 7.b.(2)(c)(ii) or other implementation actions, AND

(v) The Responsible Copermittees continue to perform the specific monitoring and assessments specified in Specific Provision 7.d to demonstrate compliance with Specific Provision 7.b.(3)(a).

### c. Interim TMDL Compliance Requirements

The interim sediment TMDL compliance requirements for Los Penasquitos Lagoon consist of the following:

(1) Interim Compliance Dates and WQBELs

The Responsible Copermittees must comply with the interim WQBELs, expressed as wet season loads, by December 31 of the interim compliance year set forth in Table 7.2.

**Table 7.2**
*Interim Water Quality Based Effluent Limitations Expressed as Wet Season Loads in MS4 Discharges**

| Interim Compliance Date | Interim Effluent Limitations (tons/wet season) |
|---|---|
| December 31, 2019 | 6,691 |
| December 31, 2023 | 5,663 |
| December 31, 2027 | 4,636 |
| December 31, 2029 | 3,608 |

* Interim effluent limitations are to be achieved by the following Responsible Parties: County of San Diego, City of San Diego, City of Del Mar, City of Poway, Phase II MS4 permittees, Caltrans, general construction storm water NPDES permittees, and general industrial storm water NPDES permittees.

(2) Interim TMDL Compliance Determination

Compliance with interim WQBELs, on or after the interim TMDL compliance dates, may be demonstrated via one of the following methods:

(a) There is no direct or indirect discharge from the Responsible Copermittee's MS4s to the receiving water; OR

(b) The final receiving water limitation under Specific Provision 7.b.(2)(a) is met; OR

(c) There are no exceedances of the Copermittee's portion of interim effluent limitations under Table 7.2 at the Responsible Copermittee's MS4 outfalls; OR

(d) The Responsible Copermittees have submitted and is fully implementing a Water Quality Improvement Plan, accepted by the San Diego Water Board, which provides reasonable assurance that the Copermittee's portion of the interim TMDL compliance requirements described in Attachment A of Resolution No. R9-2010-0033 will be achieved by the interim compliance date.

**d. SPECIFIC MONITORING AND ASSESSMENT REQUIREMENTS**

(1) Watershed Monitoring

The Responsible Copermittees must conduct suspended sediment, bed load, and flow monitoring to calculate total sediment loading to the Los Peñasquitos Lagoon for each wet season (October 1 thru April 30) as set forth below:

(a) The Responsible Copermittees must monitor enough storm events throughout the season to quantify sediment loading over each wet season, and

(b) The Responsible Copermittees must monitor at least 3 stations to quantify cumulative sediment loading into Los Peñasquitos Lagoon. Stations must be located within the Los Peñasquitos, Carroll Canyon, and Carmel Creek tributaries prior to discharging into Los Peñasquitos Lagoon.

(2) Lagoon Monitoring

The Responsible Copermittees must monitor Los Peñasquitos Lagoon each Fall for changes in the extent of the vegetation types as set forth below:

(a) The Responsible Copermittees must acquire aerial photos of Los Peñasquitos Lagoon and digitize them at an approximate scale of 1:2,500,

(b) The Responsible Copermittees must appropriately interpret the vegetation and classify the various types as saltmarsh, non-tidal saltmarsh, freshwater marsh, non-tidal saltmarsh –*Lolium perrene* infested, southern willow scrub/mulefat scrub, herbaceous wetland, or upland land cover.

(3) Assessment and Reporting Requirements

(a) The Responsible Copermittees must analyze the monitoring data collected under Specific Provision 7.d(1) and 7.d(2) to assess whether the interim and final WQBELs have been achieved.

(b) For assessing and determining compliance with the final receiving water limitations under Specific Provision 7.b.(2)(a), the Responsible Copermittees must use the data acquired under Specific Provision 7.d.(2) to estimate the acreage of tidal and non-tidal saltmarsh actually restored.

(c) For assessing and determining compliance with the final effluent limitations under Specific Provision 7.b.(2)(b), the Responsible Copermittees must use the data acquired under Specific Provision 7.d.(1) to estimate sediment loading into Los Peñasquitos Lagoon. Sediment loading must be evaluated using a 3-year, weighted rolling average. The first reported average shall be calculated using data collected in the year, 2015-2016, 2016-2017, and 2017-2018 wet seasons.

(d) The monitoring and assessment results must be submitted as part of the Water Quality Improvement Plan Annual Reports required under Provision F.3.b of this Order.