CONDITIONAL WAIVER OF WASTE DISCHARGE REQUIREMENTS
FOR DISCHARGES FROM IRRIGATED AGRICULTURAL LANDS
ORDER NO. R4-2016 – 0143

APPENDIX 5

WATER QUALITY BENCHMARKS BASED UPON TMDL LOAD ALLOCATIONS

<table>
<tr><th>Calleguas Creek Watershed and Mugu Lagoon OC Pesticides & PCBs TMDL</th><th>Compliance Date</th></tr>
<tr><td>
Compliance with interim and final sediment based load allocations (LAs) is measured as an in-stream annual average at the base of each subwatershed.

Interim Sediment LAs (ng/g)
<table>
<tr><th rowspan="2">Constituent</th><th colspan="6">Subwatershed</th></tr>
<tr><th>Mugu Lagoon[1]</th><th>Calleguas Creek</th><th>Revolon Slough</th><th>Arroyo Las Posas</th><th>Arroyo Simi</th><th>Conejo Creek</th></tr>
<tr><td>Chlordane</td><td>25.0</td><td>17.0</td><td>48.0</td><td>3.3</td><td>3.3</td><td>3.4</td></tr>
<tr><td>4,4-DDD</td><td>69.0</td><td>66.0</td><td>400.0</td><td>290.0</td><td>14.0</td><td>5.3</td></tr>
<tr><td>4,4- DDE</td><td>300.0</td><td>470.0</td><td>1,600.0</td><td>950.0</td><td>170.0</td><td>20.0</td></tr>
<tr><td>4,4-DDT</td><td>39.0</td><td>110.0</td><td>690.0</td><td>670.0</td><td>25.0</td><td>2.0</td></tr>
<tr><td>Dieldrin</td><td>19.0</td><td>3.0</td><td>5.7</td><td>1.1</td><td>1.1</td><td>3.0</td></tr>
<tr><td>PCBs</td><td>180.0</td><td>3,800.0</td><td>7,600.0</td><td>25,700.0</td><td>25,700.0</td><td>3,800.0</td></tr>
<tr><td>Toxaphene</td><td>22,900.0</td><td>260.0</td><td>790.0</td><td>230.0</td><td>230.0</td><td>260.0</td></tr>
</table>
[1]The Mugu Lagoon subwatershed includes Duck Pond/Agricultural Drain/Mugu/Oxnard Drain #2.
</td><td>March 24, 2006</td></tr>
<tr><td>
Final Sediment LAs (ng/g)
<table>
<tr><th rowspan="2">Constituent</th><th colspan="6">Subwatershed</th></tr>
<tr><th>Mugu Lagoon[1]</th><th>Calleguas Creek</th><th>Revolon Slough</th><th>Arroyo Las Posas</th><th>Arroyo Simi</th><th>Conejo Creek</th></tr>
<tr><td>Chlordane</td><td>3.3</td><td>3.3</td><td>0.9</td><td>3.3</td><td>3.3</td><td>3.3</td></tr>
<tr><td>4,4-DDD</td><td>2.0</td><td>2.0</td><td>2.0</td><td>2.0</td><td>2.0</td><td>2.0</td></tr>
<tr><td>4,4- DDE</td><td>2.2</td><td>1.4</td><td>1.4</td><td>1.4</td><td>1.4</td><td>1.4</td></tr>
<tr><td>4,4-DDT</td><td>0.3</td><td>0.3</td><td>0.3</td><td>0.3</td><td>0.3</td><td>0.3</td></tr>
<tr><td>Dieldrin</td><td>4.3</td><td>0.2</td><td>0.1</td><td>0.2</td><td>0.2</td><td>0.2</td></tr>
<tr><td>PCBs</td><td>180.0</td><td>120.0</td><td>130.0</td><td>120.0</td><td>120.0</td><td>120.0</td></tr>
<tr><td>Toxaphene</td><td>360.0</td><td>0.6</td><td>1.0</td><td>0.6</td><td>0.6</td><td>0.6</td></tr>
</table>
[1] The Mugu Lagoon subwatershed includes Duck Pond/Agricultural Drain/Mugu/Oxnard Drain #2.
</td><td>March 24, 2026</td></tr>
<tr><td>Siltation LAs
2,704 tons/yr reduction in sediment yield to Mugu Lagoon. The baseline from which the load reduction will be evaluated will be determined by a special study of this TMDL. The results of this special study are due March 24, 2014.</td><td>March 24, 2015</td></tr>
</table>

<table>
<tr><th>Calleguas Creek Watershed and Mugu Lagoon Toxicity, Chlorpyrifos, and Diazinon TMDL</th><th>Compliance Date</th></tr>
<tr><td>Interim Chlorpyrifos Load Allocations (ug/L) apply watershed-wide
<table><tr><th>Acute (1hour)</th><th>Chronic (4 day)</th></tr><tr><td>2.57</td><td>0.810</td></tr></table>
Interim Diazinon Load Allocations (ug/L) apply watershed-wide
<table><tr><th>Acute (1hour)</th><th>Chronic (4 day)</th></tr><tr><td>0.278</td><td>0.138</td></tr></table></td><td>March 24, 2006</td></tr>
<tr><td>A load allocation of 1.0 TUc applies watershed-wide.</td><td>March 24, 2006</td></tr>
<tr><td>Final Chlorpyrifos Load Allocations (ug/L)
<table><tr><th>Subwatershed</th><th>Acute & Chronic</th></tr><tr><td>Arroyo Simi</td><td>0.014</td></tr><tr><td>Las Posas</td><td>0.014</td></tr><tr><td>Conejo</td><td>0.014</td></tr><tr><td>Calleguas</td><td>0.0133</td></tr><tr><td>Revolon</td><td>0.0133</td></tr><tr><td>Mugu Lagoon</td><td>0.014</td></tr></table>
Final Diazinon Load Allocations (ug/L) apply watershed-wide
<table><tr><th>Acute & Chronic</th></tr><tr><td>0.1</td></tr></table></td><td>March 24, 2016</td></tr>
</table>

<table>
<tr><th>Calleguas Creek Watershed Boron, Chloride, Sulfate and TDS (Salts) TMDL</th><th>Compliance Date</th></tr>
<tr><td>
Interim Dry Weather Load Allocations
<table>
<tr><th>Constituent</th><th>Interim Limit (mg/L)</th></tr>
<tr><td>Boron Total</td><td>1.8</td></tr>
<tr><td>Chloride Total</td><td>230</td></tr>
<tr><td>Sulfate Total</td><td>1962</td></tr>
<tr><td>TDS Total</td><td>3995</td></tr>
</table>
Interim dry weather load allocations are measured as in-stream monthly averages at the based of each subwatershed, except for chloride which is measured as an instantaneous maximum.

Dry weather LAs apply when flow rates are below the 86th percentile and there was no measurable precipitation in the previous 24 hour period.

The 86th percentile flow rate shall be calculated based on flow in the hydrologic year (Oct. 1st – Sept. 30th) that the sample was collected.
</td><td>Dec. 2, 2008</td></tr>
<tr><td>
Final Dry Weather Load Allocations
<table>
<tr><th>Subwatershed</th><th>Boron Allocation (lb/day)</th><th>Chloride Allocation (lb/day)</th><th>TDS Allocation (lb/day)</th><th>Sulfate Allocation (lb/day)</th></tr>
<tr><td>Simi</td><td>641</td><td>3,631</td><td>1,068</td><td>4</td></tr>
<tr><td>Las Posas</td><td>2,109</td><td>11,952</td><td>3,515</td><td>N/A</td></tr>
<tr><td>Conejo</td><td>743</td><td>4,212</td><td>1,239</td><td>N/A</td></tr>
<tr><td>Camarillo</td><td>59</td><td>336</td><td>99</td><td>N/A</td></tr>
<tr><td>Pleasant Valley</td><td>305</td><td>1,730</td><td>509</td><td>N/A</td></tr>
<tr><td>Revolon</td><td>7,238</td><td>41,015</td><td>12,063</td><td>48</td></tr>
</table>
Dry weather LAs apply in the receiving water at the base of each subwatershed when flow rates are below the 86th percentile and there was no measurable precipitation in the previous 24 hour period.

The 86th percentile flow rate shall be calculated based on flow in the hydrologic year (Oct. 1st – Sept. 30th) that the sample was collected.
</td><td>Dec. 23, 2023</td></tr>
</table>

<table>
<tr><th>Calleguas Creek Watershed and Mugu Lagoon Metals and Selenium TMDL</th><th>Compliance Date</th></tr>
<tr><td>
Interim Load Allocations for total recoverable metals
<table>
<tr><th></th><th colspan="3">Calleguas and Conejo Creek</th></tr>
<tr><th>Constituent</th><th>Dry Daily Maximum (ug/L)</th><th>Dry Monthly Average (ug/L)</th><th>Wet Daily Maximum (ug/L)</th></tr>
<tr><td>Copper</td><td>24</td><td>19</td><td>1390</td></tr>
<tr><td>Nickel</td><td>43</td><td>42</td><td>--</td></tr>
<tr><td>Selenium</td><td>--</td><td>--</td><td>--</td></tr>
</table>
<table>
<tr><th></th><th colspan="3">Revolon Slough</th></tr>
<tr><th>Constituent</th><th>Dry Daily Maximum (ug/L)</th><th>Dry Monthly Average (ug/L)</th><th>Wet Daily Maximum (ug/L)</th></tr>
<tr><td>Copper</td><td>24</td><td>19</td><td>1390</td></tr>
<tr><td>Nickel</td><td>43</td><td>42</td><td>--</td></tr>
<tr><td>Selenium</td><td>6.7 (c)</td><td>6 (c)</td><td>--</td></tr>
</table>
c – Attainment of interim limits will be evaluated in consideration of background loading data, if available.

Dry weather LAs apply to days when flows in the stream are less than the 86th percentile flow rate for each subwatershed. Wet weather LAs apply to days when flows in the stream exceed the 86th percentile flow rate for each subwatershed.

The 86th percentile flow rate shall be calculated based on flow in the hydrologic year (Oct. 1st – Sept. 30th) that the sample was collected.
</td><td>March 26, 2007</td></tr>
<tr><td>
Interim Load allocations for Mercury in Suspended Sediment (lbs/year)
<table>
<tr><th>Flow Range
million gallons/year</th><th>Calleguas Creek</th><th>Revolon Slough</th></tr>
<tr><td>0-15,000</td><td>3.9</td><td>2</td></tr>
<tr><td>15,000-25,000</td><td>12.6</td><td>4.8</td></tr>
<tr><td>Above 25,000</td><td>77.5</td><td>12.2</td></tr>
</table>
Interim load allocations are measured in-stream at the based of Revolon Slough and Calleguas Creek.
</td><td>March 26, 2007</td></tr>
</table>

Calleguas Creek Watershed and Mugu Lagoon Metals and Selenium TMDL	Compliance Date
Dry Weather - Final Load allocations (lbs/day) for total recoverable metals **Calleguas Creek** * If site-specific WERs are approved by the Regional Board, TMDL load allocations shall be implemented in accordance with the approved WERs using the equations set forth above. **Revolon Slough** * If site-specific WERs are approved by the Regional Board, TMDL load allocations shall be implemented in accordance with the approved WERs using the equations set forth above. Wet Weather Final Load Allocations (lbs/day) for total recoverable metals * If site-specific WERs are approved by the Regional Board, TMDL load allocations shall be implemented in accordance with the approved WERs using the equations set forth above. Q = Daily storm volume	March 26, 2022

Constituent	Calleguas Creek		
	Low Flow	Avg. Flow	Elevated Flow
Copper*	0.07 x (WER – 0.03)	0.12 x (WER – 0.02)	0.31 x (WER – 0.05)
Nickel	0.420	0.260	0.970
Selenium	--	--	--

Calleguas Creek	
Flow Category	**Flow Rate (cfs)**
Low	0 - 5
Average	5 - 21
Elevated	21 - 30

	Revolon Slough		
Constituent	**Low Flow**	**Avg. Flow**	**Elevated Flow**
Copper*	0.07 x (WER – 0.03)	0.14 x (WER – 0.07)	0.35 x (WER – 0.07)
Nickel	0.390	0.690	1.600
Selenium	0.008	0.007	0.018

Revolon Slough	
Flow Category	**Flow Rate (cfs)**
Low	0 - 10
Average	10 - 17
Elevated	17 - 22

Constituent	Calleguas Creek	Revolon Slough
Copper*	$(0.00017 \times Q^2 \times 0.01 \times Q - 0.05) \times WER - 0.02$	$(0.00123 \times Q^2 + 0.0034 \times Q) \times WER$
Nickel	$0.014 \times Q^2 + 0.82 \times Q$	$0.027 \times Q^2 + 0.47 \times Q$
Selenium	--	$0.1 \times Q^2 + 1.8 \times Q$

<table>
<tr><th>Calleguas Creek Watershed and Mugu Lagoon Metals and Selenium TMDL</th><th>Compliance Date</th></tr>
<tr><td>Final Load allocations for Mercury in Suspended Sediment (lbs/year)

<table>
<tr><th></th><th>Calleguas Creek</th><th>Revolon Slough</th></tr>
<tr><th>Flow Range MGY</th><th>Agriculture</th><th>Agriculture</th></tr>
<tr><td>0-15,000</td><td>0.5</td><td>0.2</td></tr>
<tr><td>15,000-25,000</td><td>1.9</td><td>0.8</td></tr>
<tr><td>Above 25,000</td><td>11.2</td><td>2.2</td></tr>
</table>

Final load allocations are measured in-stream at the based of Revolon Slough and Calleguas Creek.</td><td>March 26, 2022</td></tr>
</table>

<table>
<tr><th>Calleguas Creek Nitrogen Compounds and Related Effects TMDL</th><th>Compliance Date</th></tr>
<tr><td>
<table>
<tr><th>Nitrate-N + Nitrite-N (mg/L)</th></tr>
<tr><td>9.0</td></tr>
</table>
</td><td>July 16, 2010</td></tr>
</table>

Revolon Slough and Beardsley Wash Trash TMDL	Compliance Date
LAs are zero trash. Dischargers may achieve compliance with the LAs by implementing a minimum frequency of assessment and collection/best management practice (MFAC/BMP) program. By March 6, 2010, agricultural dischargers must demonstrate full compliance and attainment of the zero trash target's requirement that trash is not accumulating in deleterious amounts between the required trash assessment and collection events.	March 6, 2010

Upper Santa Clara River Chloride TMDL, Revisions	Compliance Date
<table><tr><th>Reach</th><th>Chloride LA (mg/L)</th></tr><tr><td>4B, 5, and 6</td><td>100</td></tr></table>	April 28, 2015

Santa Clara River Nitrogen Compounds TMDL	Compliance Date
<table><tr><th>Reach</th><th>NH_3-N + NO_2-N + NO_3-N (mg-N/L)</th></tr><tr><td>7</td><td>8.5</td></tr><tr><td>Mint Canyon Reach 1 Wheeler Canyon/Todd Barranca Brown Barranca/Long Canyon Other Santa Clara River Reaches</td><td>10</td></tr></table>	March 23, 2004

Malibu Creek Watershed Nutrients TMDL	Compliance Date
<table><tr><th>Season</th><th>Total Nitrogen (lbs/day)</th><th>Total Phosphorus (lbs/day)</th></tr><tr><td>Summer (April 15 – November 15)</td><td>3</td><td>0.2</td></tr></table> <table><tr><th>Season</th><th>Nitrogen (mg/L) (nitrate-N + nitrite-N)</th></tr><tr><td>Winter (November 16 – April 14)</td><td>8</td></tr></table>	March 21, 2003

Ventura River Estuary Trash TMDL	Compliance Date
LAs are zero trash. Dischargers may achieve compliance with the LAs by implementing a minimum frequency of assessment and collection/best management practice (MFAC/BMP) program. By March 6, 2010, agricultural dischargers must demonstrate full compliance and attainment of the zero trash target's requirement that trash is not accumulating in deleterious amounts between the required trash assessment and collection events.	March 6, 2010

<table>
<tr><th>The Santa Clara River Estuary Toxaphene TMDL</th><th>Compliance Date</th></tr>
<tr><td>
<table>
<tr><th>Reach</th><th>Toxaphene Fish Tissue Target</th><th>Toxaphene Allocation for Concentration in Suspended Sediment</th></tr>
<tr><td>Santa Clara River Estuary</td><td>6.1 (µg/kg)</td><td>0.1 (µg/kg)</td></tr>
</table>
Within ten years of the compliance date, toxaphene concentrations in fish tissue shall be attenuating such that it appears that numeric targets will be achieved within 15 years.
</td><td>October 7, 2010</td></tr>
</table>

<table>
<tr><th>McGrath Lake PCBs, Pesticides and Sediment Toxicity TMDL</th><th>Compliance Date</th></tr>
<tr><td>
<table>
<tr><th>Pollutant</th><th>Water Column Load Allocation (µg/L)</th><th>Load Allocation for Concentration in Suspended Sediment (µg/dry kg)</th></tr>
<tr><td>Chlordane</td><td>0.00059</td><td>0.5</td></tr>
<tr><td>Dieldrin</td><td>0.00014</td><td>0.02</td></tr>
<tr><td>4,4’-DDT</td><td>0.00059</td><td>1</td></tr>
<tr><td>4,4’-DDE</td><td>0.00059</td><td>2.2</td></tr>
<tr><td>4,4’-DDD</td><td>0.00084</td><td>2</td></tr>
<tr><td>Total DDT</td><td>--</td><td>1.58</td></tr>
<tr><td>Total PCBs</td><td>0.00017</td><td>22.7</td></tr>
</table>
</td><td>June 30, 2021</td></tr>
</table>

Oxnard Drain No. 3 Pesticides, PCBs, and Sediment Toxicity TMDL	Compliance Date

Constituents	Water Allocations, chronic (ug/L)	Sediment [1,2]	Alternate Sediment [1,3]
Bifenthrin4	0.0006	-	-
Chlordane, total	0.00059	0.5	3.3
Chlorpyrifos[4]	0.0056	-	-
4,4'-DDT	0.00059	1	0.3
4,4'-DDE	0.00059	2.2	2.2
4,4'-DDD	0.00084	2	2
Dieldrin	0.00014	0.02	4.3
PCBs, total	0.00017	22.7	180
Sediment Toxicity	-	No significant chronic sediment toxicity (See below and Section 3 for more details)	-
Toxaphene	0.0002	0.1	360

October 6, 2011

1: Sediment concentrations associated with suspended sediment and Oxnard Drain 3 bottom sediment.

2: Sediment allocations apply if there are fish tissue or sediment toxicity exceedances. All sediment allocations are ERLs, except toxaphene. Toxaphene does not have an ERL, so the TEL concentration was selected.

3: The alternate sediment allocation applies when the fish tissue target and the sediment toxicity allocation are achieved in Oxnard Drain 3. The alternate sediment allocation concentrations match the Mugu Lagoon TMDL allocations.

4: Bifenthrin and chlorpyrifos allocations included to address the sediment toxicity impairment.

Malibu Creek and Lagoon TMDLs for Sedimentation and Nutrients to Address Benthic Community Impairments	Compliance Date

Total Nitrogen (mg/L) Summer	Total Nitrogen (mg/L) Winter	Total Phosphorus (mg/L) Summer	Total Phosphorus (mg/L) Winter
0.65	1.00	0.10	0.10

March 26, 2012

<table>
<tr><th>Ventura River Algae TMDL</th><th>Compliance Date</th></tr>
<tr><td>
Dry-weather LAs for Agriculture are expressed as daily loads based on an estimated 331 dry-weather days per year as follows:
<table>
<tr><th>Reach</th><th>Total Nitrogen (lb/day)</th><th>Total Phosphorus (lb/day)</th></tr>
<tr><td>All Reaches</td><td>16</td><td>0.12</td></tr>
</table>
Wet-weather allocations are as follows:
<table>
<tr><th>Reach</th><th>Nitrate-N + Nitrite-N (mg/L)</th></tr>
<tr><td>Estuary</td><td>*</td></tr>
<tr><td>Reach 1</td><td>*</td></tr>
<tr><td>Reach 2</td><td>10</td></tr>
<tr><td>Cañada Larga</td><td>10</td></tr>
<tr><td>Reach 3</td><td>5</td></tr>
<tr><td>San Antonio Creek</td><td>5</td></tr>
<tr><td>Reach 4</td><td>5</td></tr>
<tr><td>Reach 5</td><td>5</td></tr>
</table>
To assist in implementation of LAs, area-weighted benchmarks can be applied; if used, they shall be 0.008 lb/day/acre TN and $6.3x10^{-5}$ lb/acre/day TP.
</td><td>June 28, 2019</td></tr>
</table>

<table>
<tr><th>Santa Clara River Bacteria TMDL</th><th>Compliance Date</th></tr>
<tr><td>
Interim Allowable exceedance days:
<table>
<tr><th>Time Period</th><th>Santa Clara River Reaches 3, 5, 6, & 7</th><th>Santa Clara River Estuary</th></tr>
<tr><td>Dry Weather</td><td>17 allowable exceedance days of single sample objectives</td><td>Not Applicable</td></tr>
<tr><td>Wet Weather</td><td>61 allowable exceedance days of single sample objectives</td><td>62 allowable exceedance days of single sample objectives</td></tr>
<tr><td>Summer Dry Weather (April 1 – October 31)</td><td>Not Applicable</td><td>150 allowable exceedance days of single sample objectives</td></tr>
<tr><th>Time Period</th><th>Santa Clara River Reaches 3, 5, 6, & 7</th><th>Santa Clara River Estuary</th></tr>
<tr><td>Winter Dry Weather (November 1 – March 31)</td><td>Not Applicable</td><td>49 allowable exceedance days of single sample objectives</td></tr>
</table>
</td><td>January 31, 2012</td></tr>
</table>

Final Allowable exceedance days:

Time Period	Santa Clara River Reaches 3, 5, 6, & 7	Santa Clara River Estuary
Dry Weather	5 allowable exceedance days of single sample objectives	Not Applicable
	0 allowable exceedances of geometric mean objectives	
Wet Weather	16 allowable exceedance days of single sample objectives	25 allowable exceedance days of single sample objectives
	0 allowable exceedances of geometric mean objectives	0 allowable exceedances of geometric mean objectives
Summer Dry Weather	Not Applicable	10 allowable exceedance days of single sample objectives
		0 allowable exceedances of geometric mean objectives
Winter Dry Weather (November 1 – March 31)	Not Applicable	12 allowable exceedance days of single sample objectives
		0 allowable exceedances of geometric mean objectives

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

March 21, 2023 dry weather

March 21, 2029 wet weather