

**Amendment to the Water Quality Control Plan – Los Angeles Region to incorporate the
Marina del Rey Harbor Toxic Pollutants TMDL**

Adopted by the California Regional Water Quality Control Board, Los Angeles Region on October 6, 2005 and revised on [Insert Date].

Amendments:

Chapter 7. Total Maximum Daily Loads (TMDLs) Summaries, Section 7-18 (Marina del Rey Harbor Toxic Pollutants TMDL)

This TMDL was adopted by the Regional Water Quality Control Board on October 6, 2005.

This TMDL was approved by:

The State Water Resources Control Board on ~~[Insert Date]~~ January 13, 2006.

The Office of Administrative Law on ~~[Insert Date]~~ March 13, 2006.

The U.S. Environmental Protection Agency on ~~[Insert Date]~~ March 13, 2006.

This TMDL was revised by the Regional Water Quality Control Board on [Insert Date].

This revised TMDL was approved by:

The State Water Resources Control Board on [Insert Date].

The Office of Administrative Law on [Insert Date].

The U.S. Environmental Protection Agency on [Insert Date].

The following tables include the elements of this TMDL.

Attachment A to Resolution No. R13-XXX

Table 7-18.1. Marina del Rey Harbor Toxic Pollutants TMDL: Elements

Element	Key Findings and Regulatory Provisions																													
Problem Statement	<p>The back basins of Marina del Rey Harbor are <u>is</u> on the Clean Water Act Section 303(d) list of impaired waterbodies for chlordane, copper, lead, zinc, PCBs, DDT, dieldrin, —sediment toxicity and a fish consumption advisory. Review of available data during the development of this TMDL indicated that dieldrin <u>is</u> and DDT are no longer <u>a</u> causes of impairment, <u>and that there is a dissolved copper impairment in the water column as well as in the sediment.</u> The following designated beneficial uses are impaired by chlordane, copper, lead, zinc, PCBs, <u>DDT</u>, and <u>sediment</u> toxicity: water contact recreation (REC1); marine habitat (MAR); wildlife habitat (WILD); commercial and sport fishing (COMM); and shellfish harvesting (SHELL).</p>																													
Numeric Target <i>(Interpretation of the narrative and numeric water quality objective, used to calculate the allocations)</i>	<p><u>Numeric Targets for Sediment</u></p> <p><u>Sediment targets were established based on the narrative objectives of this Basin Plan, the State’s Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality (EBE Plan Part 1), the sediment quality guidelines compiled by the National Oceanic and Atmospheric Administration (NOAA), and associated sediments targets required to achieve fish tissue targets. The EBE Plan Part 1, includes sediment objectives to protect aquatic life (direct effects) and human health (indirect effects of sediment contamination in fish tissue), and the lower objective is used as the numeric target.</u></p> <p>Numeric targets for the harbor sediments are based on the sediment quality guidelines compiled by the National Oceanic and Atmospheric Administration, which are used in evaluating waterbodies within the Los Angeles Region for development of the 303(d) list. The NOAA Effects Range-Low (ERLs) guidelines are established as the numeric targets for copper, lead, zinc, chlordane, Total DDTs, and p,p’-DDE in sediments in Marina del Rey Harbor. The numeric target for total PCBs in sediment is selected to protect humans from consumption of contaminated fish tissue and is based on the fish tissue target and the food web bioaccumulation model developed by Gobas and Arnot (2010)¹.</p> <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th colspan="3" style="text-align: center; border-top: 1px solid black; border-bottom: 1px solid black;">Numeric Targets for Metals in Sediment (mg/kg)</th> </tr> <tr> <th style="text-align: center; border-bottom: 1px solid black;">Copper</th> <th style="text-align: center; border-bottom: 1px solid black;">Lead</th> <th style="text-align: center; border-bottom: 1px solid black;">Zinc</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">34</td> <td style="text-align: center;">46.7</td> <td style="text-align: center;">150</td> </tr> </tbody> </table> <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th colspan="4" style="text-align: center; border-top: 1px solid black; border-bottom: 1px solid black;">Numeric Targets for Organic Compounds in Sediment (µg/kg)</th> </tr> <tr> <th colspan="2" style="text-align: center; border-bottom: 1px solid black;">Chlordane</th> <th colspan="2" style="text-align: center; border-bottom: 1px solid black;">Total PCBs</th> </tr> </thead> <tbody> <tr> <td colspan="2" style="text-align: center; border-bottom: 1px solid black;">0.5</td> <td colspan="2" style="text-align: center; border-bottom: 1px solid black;">22.7</td> </tr> <tr> <th style="text-align: center; border-bottom: 1px solid black;"><u>Chlordane</u></th> <th style="text-align: center; border-bottom: 1px solid black;"><u>Total PCBs</u></th> <th style="text-align: center; border-bottom: 1px solid black;"><u>Total DDTs</u></th> <th style="text-align: center; border-bottom: 1px solid black;"><u>p,p’-DDE</u></th> </tr> <tr> <td style="text-align: center;"><u>0.5</u></td> <td style="text-align: center;"><u>3.2</u></td> <td style="text-align: center;"><u>1.58</u></td> <td style="text-align: center;"><u>2.2</u></td> </tr> </tbody> </table>	Numeric Targets for Metals in Sediment (mg/kg)			Copper	Lead	Zinc	34	46.7	150	Numeric Targets for Organic Compounds in Sediment (µg/kg)				Chlordane		Total PCBs		0.5		22.7		<u>Chlordane</u>	<u>Total PCBs</u>	<u>Total DDTs</u>	<u>p,p’-DDE</u>	<u>0.5</u>	<u>3.2</u>	<u>1.58</u>	<u>2.2</u>
Numeric Targets for Metals in Sediment (mg/kg)																														
Copper	Lead	Zinc																												
34	46.7	150																												
Numeric Targets for Organic Compounds in Sediment (µg/kg)																														
Chlordane		Total PCBs																												
0.5		22.7																												
<u>Chlordane</u>	<u>Total PCBs</u>	<u>Total DDTs</u>	<u>p,p’-DDE</u>																											
<u>0.5</u>	<u>3.2</u>	<u>1.58</u>	<u>2.2</u>																											

¹ Gobas F. A.P.C. and J.A. Arnot. 2010. Food web bioaccumulation model for polychlorinated biphenyls in San Francisco Bay, California, USA. *Environmental Toxicology and Chemistry* 23(6): 1385-1395.

Attachment A to Resolution No. R13-XXX

Element	Key Findings and Regulatory Provisions
	<p><u>In addition to the above numeric sediment targets, the categories designated in the EBE Plan Part 1 as Unimpacted and Likely Unimpacted by the interpretation and integration of multiple lines of evidence shall be considered as the protective narrative objective for sediment toxicity and benthic community effects. The thresholds established in the EBE Plan Part 1 are based on statistical significance and magnitude of the effect. Therefore, this TMDL implicitly includes sediment toxicity and benthic community targets by its application of the EBE Plan Part 1.</u></p> <p><u>Numeric Targets for Water Column and Fish Tissue</u></p> <p><u>In addition to the sediment numeric targets, water column and fish tissue targets are set for to address the PCB impairment in fish tissue and a water column target is set to address the dissolved copper impairment.</u></p> <p><u>The California Toxics Rule (CTR) criterion for the protection of human health from the consumption of aquatic organisms is selected as the final numeric target for total PCBs in the water column. However, given the inability of current analytical methods to detect concentrations at this low level, an interim numeric target will be applied. The CTR Chronic Criterion for the protection of aquatic life in saltwater is selected as the interim numeric target for the fish tissue impairment by PCBs. This numeric target will remain in effect until advances in technology allow for analysis of PCBs at lower detection limits.</u></p> <p><u>Interim Target for total PCBs in the Water Column: 0.03µg/L</u></p> <p><u>Final Target for total PCBs in the Water Column: 0.00017 µg/L</u></p> <p><u>The numeric Target-target for PCBs in fish tissue is the Threshold Tissue Residue Level that is derived from CTR human health criteria, which are adopted criteria for water designated to protect humans from consumption of contaminated fish or other aquatic organismsOffice of Environmental Health Hazard Assessment (OEHHA) Fish Contaminant Goal (FCG).</u></p> <p><u>Numeric Target for total PCBs in Fish Tissue: 5.33.6 µg/Kg</u></p> <p><u>The numeric targets for copper in the water column are set equal to the CTR saltwater copper criteria for the protection of aquatic life.</u></p> <p><u>Numeric Targets for Dissolved Copper in the Water Column:</u></p> <p><u>Acute (single sample maximum): 4.8 µg/L</u></p> <p><u>Chronic (four-day average): 3.1 µg/L</u></p>
<i>Source Analysis</i>	<p>Urban storm water has been recognized as a substantial source of metals. Numerous researchers have documented that the most prevalent metals in urban storm water (i.e., copper, lead, and zinc) are consistently associated with suspended solids. Because metals are typically associated with fine particles in storm water runoff, they have the potential to accumulate in marine sediments where they may pose a</p>

Attachment A to Resolution No. R13-XXX

Element	Key Findings and Regulatory Provisions													
	<p>risk of toxicity. Similar to metals, the majority of organic constituents in storm water are associated with particulates. <u>Once the particles accumulate in the sediments in the harbor, the sediments themselves can become a source through sediment re-suspension and are thus assigned load allocations.</u></p> <p>Passive leaching <u>and hull cleaning</u> of copper-based anti-fouling paints <u>is a potential source of copper loading to the sediment. However, there is insufficient information available to quantify the contribution of boat discharges to the sediment pollutant load. This TMDL requires a study designed to estimate copper partitioning between the water column and sediment in Marina del Rey harbor, in order to determine the impact of passive leaching on the marine sediment.</u> <u>are recognized as substantial sources of dissolved copper to the water column. Site-specific modeling supports the conclusion that copper-based anti-fouling paints are the primary source of dissolved copper to the water column and a major contributor to the copper impairment in the water column. Copper-based anti-fouling paints are also a potential source of copper to the sediments. Addressing the copper impairment in the water column should consequently address the contribution of this source to the sediment impairment.</u></p> <p>Direct deposition of airborne particles to the water surface may be responsible for contributing copper, lead, and zinc, <u>chlordanes, PCBs, and DDTs</u> to the Marina del Rey back basins Harbor. The estimated contribution from this source is minor. Indirect atmospheric deposition reflects the process by which metals <u>and organic compounds</u> deposited on the land surface may be washed off during storm events and delivered to Marina del Rey Harbor. The loading of metals <u>and organic compounds</u> associated with indirect atmospheric deposition <u>are is</u> accounted for in the storm water runoff.</p>													
<p><i>Loading Capacity</i></p>	<p>TMDLs are developed for copper, lead, zinc, chlordanes, <u>DDTs</u>, and PCBs within the sediments of Marina del Rey Harbor 's back basins.</p> <p>The loading capacity for Marina del Rey Harbor is calculated by multiplying the numeric targets by the average annual total suspended solids (TSS) loading to the harbor sediment. The average annual TSS discharged to the back basins of the harbor is <u>64,16684,612</u> kilograms per year (kg/yr). The TMDL is set equal to the loading capacity.</p> <p style="text-align: center;"><u>Metals Loading Capacity (kilograms/year)</u></p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;"><u>Copper</u></td> <td style="text-align: center;"><u>Lead</u></td> <td style="text-align: center;"><u>Zinc</u></td> </tr> <tr> <td style="text-align: center;"><u>2.18</u></td> <td style="text-align: center;"><u>3.0</u></td> <td style="text-align: center;"><u>9.6</u></td> </tr> </table> <p style="text-align: center;"><u>Organics Loading Capacity (grams/year)</u></p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;"><u>Chlordane</u></td> <td style="text-align: center;"><u>Total PCBs</u></td> </tr> <tr> <td style="text-align: center;"><u>0.03</u></td> <td style="text-align: center;"><u>1.46</u></td> </tr> </table> <p style="text-align: center;"><u>Metals Loading Capacity (kilograms/year)</u></p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;"><u>Copper</u></td> <td style="text-align: center;"><u>Lead</u></td> <td style="text-align: center;"><u>Zinc</u></td> </tr> </table>	<u>Copper</u>	<u>Lead</u>	<u>Zinc</u>	<u>2.18</u>	<u>3.0</u>	<u>9.6</u>	<u>Chlordane</u>	<u>Total PCBs</u>	<u>0.03</u>	<u>1.46</u>	<u>Copper</u>	<u>Lead</u>	<u>Zinc</u>
<u>Copper</u>	<u>Lead</u>	<u>Zinc</u>												
<u>2.18</u>	<u>3.0</u>	<u>9.6</u>												
<u>Chlordane</u>	<u>Total PCBs</u>													
<u>0.03</u>	<u>1.46</u>													
<u>Copper</u>	<u>Lead</u>	<u>Zinc</u>												

Attachment A to Resolution No. R13-XXX

Element	Key Findings and Regulatory Provisions																														
	<table style="margin: auto; border-collapse: collapse;"> <tr> <td style="border-bottom: 1px solid black; width: 25%;"></td> <td style="border-bottom: 1px solid black; width: 25%; text-align: center;">2.88</td> <td style="border-bottom: 1px solid black; width: 25%; text-align: center;">3.95</td> <td style="border-bottom: 1px solid black; width: 25%; text-align: center;">12.69</td> </tr> <tr> <td colspan="4" style="text-align: center; border-top: 1px solid black;">Organics Loading Capacity (grams/year)</td> </tr> <tr> <td style="border-bottom: 1px solid black; text-align: center;">Chlordane</td> <td style="border-bottom: 1px solid black; text-align: center;">Total PCBs</td> <td style="border-bottom: 1px solid black; text-align: center;">Total DDTs</td> <td style="border-bottom: 1px solid black; text-align: center;">p,p'-DDE</td> </tr> <tr> <td style="text-align: center;">0.04</td> <td style="text-align: center;">1.92</td> <td style="text-align: center;">0.13</td> <td style="text-align: center;">0.19</td> </tr> </table> <p><u>A TMDL is also developed for dissolved copper in the water column. Based on modeling results, the loading capacity for copper in the water column is 557 kg/yr.</u></p>		2.88	3.95	12.69	Organics Loading Capacity (grams/year)				Chlordane	Total PCBs	Total DDTs	p,p'-DDE	0.04	1.92	0.13	0.19														
	2.88	3.95	12.69																												
Organics Loading Capacity (grams/year)																															
Chlordane	Total PCBs	Total DDTs	p,p'-DDE																												
0.04	1.92	0.13	0.19																												
Load Allocations (for nonpoint sources)	<p>Load allocations (LA) are developed for nonpoint sources in Marina del Rey Harbor, which <u>Non-point sources of the sediment impairment includes direct atmospheric deposition and internal sources from the harbor sediments. Non-point sources of the water column copper impairment include the discharge of dissolved copper from boat hulls through passive leaching and hull cleaning.</u></p> <p><u>LAs for Sediment Impairments</u></p> <p>The load allocations <u>for atmospheric deposition</u> are not assigned to a particular nonpoint source or group of nonpoint sources. The mass-based load allocation for direct atmospheric deposition is equal to the percentage of the watershed covered by water (5.4<u>11.7</u>%) multiplied by the total loading capacity.</p> <p><u>Metals Load Allocations for Direct Atmospheric Deposition (kg/yr)</u></p> <table style="margin: auto; border-collapse: collapse;"> <tr> <td style="border-bottom: 1px solid black; width: 33%; text-align: center;">Copper</td> <td style="border-bottom: 1px solid black; width: 33%; text-align: center;">Lead</td> <td style="border-bottom: 1px solid black; width: 33%; text-align: center;">Zinc</td> </tr> <tr> <td style="text-align: center;">0.12</td> <td style="text-align: center;">0.16</td> <td style="text-align: center;">0.52</td> </tr> </table> <p><u>Organics Load Allocations for Direct Atmospheric Deposition(g/yr)</u></p> <table style="margin: auto; border-collapse: collapse;"> <tr> <td style="border-bottom: 1px solid black; width: 50%; text-align: center;">Chlordane</td> <td style="border-bottom: 1px solid black; width: 50%; text-align: center;">Total PCBs</td> </tr> <tr> <td style="text-align: center;">0.002</td> <td style="text-align: center;">0.079</td> </tr> </table> <p><u>Metals Load Allocations for Direct Atmospheric Deposition (kg/yr)</u></p> <table style="margin: auto; border-collapse: collapse;"> <tr> <td style="border-bottom: 1px solid black; width: 33%; text-align: center;">Copper</td> <td style="border-bottom: 1px solid black; width: 33%; text-align: center;">Lead</td> <td style="border-bottom: 1px solid black; width: 33%; text-align: center;">Zinc</td> </tr> <tr> <td style="text-align: center;">0.34</td> <td style="text-align: center;">0.46</td> <td style="text-align: center;">1.49</td> </tr> </table> <p><u>Organics Load Allocations for Direct Atmospheric Deposition(g/yr)</u></p> <table style="margin: auto; border-collapse: collapse;"> <tr> <td style="border-bottom: 1px solid black; width: 25%; text-align: center;">Chlordane</td> <td style="border-bottom: 1px solid black; width: 25%; text-align: center;">Total PCBs</td> <td style="border-bottom: 1px solid black; width: 25%; text-align: center;">Total DDTs</td> <td style="border-bottom: 1px solid black; width: 25%; text-align: center;">p,p'-DDE</td> </tr> <tr> <td style="text-align: center;">0.005</td> <td style="text-align: center;">0.225</td> <td style="text-align: center;">0.016</td> <td style="text-align: center;">0.022</td> </tr> </table> <p><u>The in-harbor LAs for concentrations in sediment are set equal to the numeric targets.</u></p> <p style="text-align: center;"><u>Load Allocations for Metals in Sediment (mg/kg)</u></p> <table style="margin: auto; border-collapse: collapse;"> <tr> <td style="border-bottom: 1px solid black; width: 33%; text-align: center;">Copper</td> <td style="border-bottom: 1px solid black; width: 33%; text-align: center;">Lead</td> <td style="border-bottom: 1px solid black; width: 33%; text-align: center;">Zinc</td> </tr> <tr> <td style="text-align: center;">34</td> <td style="text-align: center;">46.7</td> <td style="text-align: center;">150</td> </tr> </table>	Copper	Lead	Zinc	0.12	0.16	0.52	Chlordane	Total PCBs	0.002	0.079	Copper	Lead	Zinc	0.34	0.46	1.49	Chlordane	Total PCBs	Total DDTs	p,p'-DDE	0.005	0.225	0.016	0.022	Copper	Lead	Zinc	34	46.7	150
Copper	Lead	Zinc																													
0.12	0.16	0.52																													
Chlordane	Total PCBs																														
0.002	0.079																														
Copper	Lead	Zinc																													
0.34	0.46	1.49																													
Chlordane	Total PCBs	Total DDTs	p,p'-DDE																												
0.005	0.225	0.016	0.022																												
Copper	Lead	Zinc																													
34	46.7	150																													

Attachment A to Resolution No. R13-XXX

Element	Key Findings and Regulatory Provisions																																																				
	<p style="text-align: center;"><u>Load Allocations for Organic Compounds in Sediment (µg/kg)</u></p> <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="text-align: center; border-bottom: 1px solid black;">Chlordane</td> <td style="text-align: center; border-bottom: 1px solid black;">Total PCBs</td> <td style="text-align: center; border-bottom: 1px solid black;">Total DDTs</td> <td style="text-align: center; border-bottom: 1px solid black;">p,p'-DDE</td> </tr> <tr> <td style="text-align: center;">0.5</td> <td style="text-align: center;">3.2</td> <td style="text-align: center;">1.58</td> <td style="text-align: center;">2.2</td> </tr> </table> <p style="text-align: center;"><u>LAs for Copper Water Column Impairment</u></p> <p style="text-align: center;"><u>The LAs for discharges of dissolved copper from boats is an 85% reduction in the baseline copper load from boats.</u></p>	Chlordane	Total PCBs	Total DDTs	p,p'-DDE	0.5	3.2	1.58	2.2																																												
Chlordane	Total PCBs	Total DDTs	p,p'-DDE																																																		
0.5	3.2	1.58	2.2																																																		
<i>Waste Load Allocations (for point sources)</i>	<p>Waste load allocations (WLA) are assigned to point sources for the Marina del Rey watershed. A grouped mass-based waste load allocation is developed for the storm water permittees (Los Angeles County MS4, Caltrans, General Construction and General Industrial) by subtracting the load allocations from the total loading capacity. Concentration-based waste load allocations are developed for other point sources in the watershed.</p> <p style="text-align: center;"><u>Metals Waste Load Allocations for Storm Water (kg/yr)</u></p> <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="text-align: center; border-bottom: 1px solid black;">Copper</td> <td style="text-align: center; border-bottom: 1px solid black;">Lead</td> <td style="text-align: center; border-bottom: 1px solid black;">Zinc</td> </tr> <tr> <td style="text-align: center;">2.06</td> <td style="text-align: center;">2.83</td> <td style="text-align: center;">9.11</td> </tr> </table> <p style="text-align: center;"><u>Organics Waste Load Allocations for Storm Water (g/yr)</u></p> <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="text-align: center; border-bottom: 1px solid black;">Chlordane</td> <td style="text-align: center; border-bottom: 1px solid black;">Total PCBs</td> </tr> <tr> <td style="text-align: center;">0.03</td> <td style="text-align: center;">1.38</td> </tr> </table> <p style="text-align: center;"><u>Metals Waste Load Allocations for Storm Water (kg/yr)</u></p> <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="text-align: center; border-bottom: 1px solid black;">Copper</td> <td style="text-align: center; border-bottom: 1px solid black;">Lead</td> <td style="text-align: center; border-bottom: 1px solid black;">Zinc</td> </tr> <tr> <td style="text-align: center;">2.54</td> <td style="text-align: center;">3.49</td> <td style="text-align: center;">11.20</td> </tr> </table> <p style="text-align: center;"><u>Organics Waste Load Allocations for Storm Water (g/yr)</u></p> <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="text-align: center; border-bottom: 1px solid black;">Chlordane</td> <td style="text-align: center; border-bottom: 1px solid black;">Total PCBs</td> <td style="text-align: center; border-bottom: 1px solid black;">Total DDT</td> <td style="text-align: center; border-bottom: 1px solid black;">p,p'-DDE</td> </tr> <tr> <td style="text-align: center;">0.04</td> <td style="text-align: center;">1.70</td> <td style="text-align: center;">0.12</td> <td style="text-align: center;">0.16</td> </tr> </table> <p>The storm water waste load allocations are apportioned between the MS4 permittees, Caltrans, the general construction and the general industrial storm water permits <u>permittees</u> based on an estimate of the percentage of land area covered under each permit.</p> <p style="text-align: center;"><u>Metals Storm Water WLAs Apportioned between Permits (kg/yr)</u></p> <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="text-align: center; border-bottom: 1px solid black;"></td> <td style="text-align: center; border-bottom: 1px solid black;">Copper</td> <td style="text-align: center; border-bottom: 1px solid black;">Lead</td> <td style="text-align: center; border-bottom: 1px solid black;">Zinc</td> </tr> <tr> <td style="text-align: center;">MS4 Permittees</td> <td style="text-align: center;">2.01</td> <td style="text-align: center;">2.75</td> <td style="text-align: center;">8.85</td> </tr> <tr> <td style="text-align: center;">Caltrans</td> <td style="text-align: center;">0.022</td> <td style="text-align: center;">0.03</td> <td style="text-align: center;">0.096</td> </tr> <tr> <td style="text-align: center;">General Construction</td> <td style="text-align: center;">0.033</td> <td style="text-align: center;">0.045</td> <td style="text-align: center;">0.144</td> </tr> <tr> <td style="text-align: center;">General Industrial</td> <td style="text-align: center;">0.004</td> <td style="text-align: center;">0.006</td> <td style="text-align: center;">0.018</td> </tr> </table> <p style="text-align: center;"><u>Metals Storm Water WLAs Apportioned between Permittees (kg/yr)</u></p> <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="text-align: center; border-bottom: 1px solid black;"></td> <td style="text-align: center; border-bottom: 1px solid black;">Copper</td> <td style="text-align: center; border-bottom: 1px solid black;">Lead</td> <td style="text-align: center; border-bottom: 1px solid black;">Zinc</td> </tr> <tr> <td style="text-align: center;">MS4 Permittees</td> <td style="text-align: center;">1.96</td> <td style="text-align: center;">2.69</td> <td style="text-align: center;">8.64</td> </tr> </table>	Copper	Lead	Zinc	2.06	2.83	9.11	Chlordane	Total PCBs	0.03	1.38	Copper	Lead	Zinc	2.54	3.49	11.20	Chlordane	Total PCBs	Total DDT	p,p'-DDE	0.04	1.70	0.12	0.16		Copper	Lead	Zinc	MS4 Permittees	2.01	2.75	8.85	Caltrans	0.022	0.03	0.096	General Construction	0.033	0.045	0.144	General Industrial	0.004	0.006	0.018		Copper	Lead	Zinc	MS4 Permittees	1.96	2.69	8.64
Copper	Lead	Zinc																																																			
2.06	2.83	9.11																																																			
Chlordane	Total PCBs																																																				
0.03	1.38																																																				
Copper	Lead	Zinc																																																			
2.54	3.49	11.20																																																			
Chlordane	Total PCBs	Total DDT	p,p'-DDE																																																		
0.04	1.70	0.12	0.16																																																		
	Copper	Lead	Zinc																																																		
MS4 Permittees	2.01	2.75	8.85																																																		
Caltrans	0.022	0.03	0.096																																																		
General Construction	0.033	0.045	0.144																																																		
General Industrial	0.004	0.006	0.018																																																		
	Copper	Lead	Zinc																																																		
MS4 Permittees	1.96	2.69	8.64																																																		

Attachment A to Resolution No. R13-XXX

Element	Key Findings and Regulatory Provisions																									
	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;"><u>Caltrans</u></td> <td style="width: 15%; text-align: right;"><u>0.032</u></td> <td style="width: 15%; text-align: right;"><u>0.04</u></td> <td style="width: 10%; text-align: right;"><u>0.14</u></td> </tr> <tr> <td><u>General Construction</u></td> <td style="text-align: right;"><u>0.20</u></td> <td style="text-align: right;"><u>0.28</u></td> <td style="text-align: right;"><u>0.89</u></td> </tr> <tr> <td><u>General Industrial</u></td> <td style="text-align: right;"><u>0.010</u></td> <td style="text-align: right;"><u>0.014</u></td> <td style="text-align: right;"><u>0.046</u></td> </tr> </table>	<u>Caltrans</u>	<u>0.032</u>	<u>0.04</u>	<u>0.14</u>	<u>General Construction</u>	<u>0.20</u>	<u>0.28</u>	<u>0.89</u>	<u>General Industrial</u>	<u>0.010</u>	<u>0.014</u>	<u>0.046</u>													
<u>Caltrans</u>	<u>0.032</u>	<u>0.04</u>	<u>0.14</u>																							
<u>General Construction</u>	<u>0.20</u>	<u>0.28</u>	<u>0.89</u>																							
<u>General Industrial</u>	<u>0.010</u>	<u>0.014</u>	<u>0.046</u>																							
	<p style="text-align: center;"><u>Organics Storm Water WLAs Apportioned between Permits (g/yr)</u></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;"></td> <td style="width: 20%; text-align: center;"><u>Chlordane</u></td> <td style="width: 20%; text-align: center;"><u>Total PCBs</u></td> </tr> <tr> <td><u>MS4 Permittees</u></td> <td style="text-align: right;"><u>0.0295</u></td> <td style="text-align: right;"><u>1.34</u></td> </tr> <tr> <td><u>Caltrans</u></td> <td style="text-align: right;"><u>0.0003</u></td> <td style="text-align: right;"><u>0.015</u></td> </tr> <tr> <td><u>General Construction</u></td> <td style="text-align: right;"><u>0.0005</u></td> <td style="text-align: right;"><u>0.022</u></td> </tr> <tr> <td><u>General Industrial</u></td> <td style="text-align: right;"><u>0.0001</u></td> <td style="text-align: right;"><u>0.003</u></td> </tr> </table>		<u>Chlordane</u>	<u>Total PCBs</u>	<u>MS4 Permittees</u>	<u>0.0295</u>	<u>1.34</u>	<u>Caltrans</u>	<u>0.0003</u>	<u>0.015</u>	<u>General Construction</u>	<u>0.0005</u>	<u>0.022</u>	<u>General Industrial</u>	<u>0.0001</u>	<u>0.003</u>										
	<u>Chlordane</u>	<u>Total PCBs</u>																								
<u>MS4 Permittees</u>	<u>0.0295</u>	<u>1.34</u>																								
<u>Caltrans</u>	<u>0.0003</u>	<u>0.015</u>																								
<u>General Construction</u>	<u>0.0005</u>	<u>0.022</u>																								
<u>General Industrial</u>	<u>0.0001</u>	<u>0.003</u>																								
	<p style="text-align: center;"><u>Organics Storm Water WLAs Apportioned between Permittees (g/yr)</u></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;"></td> <td style="width: 15%; text-align: center;"><u>Chlordane</u></td> <td style="width: 15%; text-align: center;"><u>Total PCBs</u></td> <td style="width: 15%; text-align: center;"><u>Total DDT</u></td> <td style="width: 25%; text-align: center;"><u>p'p-DDE</u></td> </tr> <tr> <td><u>MS4 Permittees</u></td> <td style="text-align: right;"><u>0.0288</u></td> <td style="text-align: right;"><u>1.31</u></td> <td style="text-align: right;"><u>0.091</u></td> <td style="text-align: right;"><u>0.13</u></td> </tr> <tr> <td><u>Caltrans</u></td> <td style="text-align: right;"><u>0.0005</u></td> <td style="text-align: right;"><u>0.021</u></td> <td style="text-align: right;"><u>0.0015</u></td> <td style="text-align: right;"><u>0.0020</u></td> </tr> <tr> <td><u>General Construction</u></td> <td style="text-align: right;"><u>0.0030</u></td> <td style="text-align: right;"><u>0.13</u></td> <td style="text-align: right;"><u>0.0094</u></td> <td style="text-align: right;"><u>0.013</u></td> </tr> <tr> <td><u>General Industrial</u></td> <td style="text-align: right;"><u>0.0002</u></td> <td style="text-align: right;"><u>0.0069</u></td> <td style="text-align: right;"><u>0.0005</u></td> <td style="text-align: right;"><u>0.0007</u></td> </tr> </table> <p>Each storm water permittee enrolled under the general construction or industrial storm water permits will receive an individual waste load allocation on a per acre basis, based on the acreage of their facility.</p>		<u>Chlordane</u>	<u>Total PCBs</u>	<u>Total DDT</u>	<u>p'p-DDE</u>	<u>MS4 Permittees</u>	<u>0.0288</u>	<u>1.31</u>	<u>0.091</u>	<u>0.13</u>	<u>Caltrans</u>	<u>0.0005</u>	<u>0.021</u>	<u>0.0015</u>	<u>0.0020</u>	<u>General Construction</u>	<u>0.0030</u>	<u>0.13</u>	<u>0.0094</u>	<u>0.013</u>	<u>General Industrial</u>	<u>0.0002</u>	<u>0.0069</u>	<u>0.0005</u>	<u>0.0007</u>
	<u>Chlordane</u>	<u>Total PCBs</u>	<u>Total DDT</u>	<u>p'p-DDE</u>																						
<u>MS4 Permittees</u>	<u>0.0288</u>	<u>1.31</u>	<u>0.091</u>	<u>0.13</u>																						
<u>Caltrans</u>	<u>0.0005</u>	<u>0.021</u>	<u>0.0015</u>	<u>0.0020</u>																						
<u>General Construction</u>	<u>0.0030</u>	<u>0.13</u>	<u>0.0094</u>	<u>0.013</u>																						
<u>General Industrial</u>	<u>0.0002</u>	<u>0.0069</u>	<u>0.0005</u>	<u>0.0007</u>																						
	<p style="text-align: center;"><u>Metals per Acre WLAs for Individual General Construction or Industrial Storm Water Permittees (g/yr/ac)</u></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%; text-align: center;"><u>Copper</u></td> <td style="width: 33%; text-align: center;"><u>Lead</u></td> <td style="width: 34%; text-align: center;"><u>Zinc</u></td> </tr> <tr> <td style="text-align: center;"><u>2.3</u></td> <td style="text-align: center;"><u>3.1</u></td> <td style="text-align: center;"><u>10</u></td> </tr> </table>	<u>Copper</u>	<u>Lead</u>	<u>Zinc</u>	<u>2.3</u>	<u>3.1</u>	<u>10</u>																			
<u>Copper</u>	<u>Lead</u>	<u>Zinc</u>																								
<u>2.3</u>	<u>3.1</u>	<u>10</u>																								
	<p style="text-align: center;"><u>Metals per Acre WLAs for Individual General Construction or Industrial Storm Water Permittees (g/yr/ac)</u></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%; text-align: center;"><u>Copper</u></td> <td style="width: 33%; text-align: center;"><u>Lead</u></td> <td style="width: 34%; text-align: center;"><u>Zinc</u></td> </tr> <tr> <td style="text-align: center;"><u>1.7</u></td> <td style="text-align: center;"><u>2.3</u></td> <td style="text-align: center;"><u>7.3</u></td> </tr> </table>	<u>Copper</u>	<u>Lead</u>	<u>Zinc</u>	<u>1.7</u>	<u>2.3</u>	<u>7.3</u>																			
<u>Copper</u>	<u>Lead</u>	<u>Zinc</u>																								
<u>1.7</u>	<u>2.3</u>	<u>7.3</u>																								
	<p style="text-align: center;"><u>Organics per acre WLAs for Individual General Construction or Industrial Storm Water Permittees (mg/yr/ac)</u></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;"></td> <td style="width: 20%; text-align: center;"><u>Chlordane</u></td> <td style="width: 20%; text-align: center;"><u>Total PCBs</u></td> </tr> <tr> <td></td> <td style="text-align: right;"><u>0.03</u></td> <td style="text-align: right;"><u>1.5</u></td> </tr> </table>		<u>Chlordane</u>	<u>Total PCBs</u>		<u>0.03</u>	<u>1.5</u>																			
	<u>Chlordane</u>	<u>Total PCBs</u>																								
	<u>0.03</u>	<u>1.5</u>																								
	<p style="text-align: center;"><u>Organics per acre WLAs for Individual General Construction or Industrial Storm Water Permittees (mg/yr/ac)</u></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; text-align: center;"><u>Chlordane</u></td> <td style="width: 25%; text-align: center;"><u>Total PCBs</u></td> <td style="width: 25%; text-align: center;"><u>Total DDTs</u></td> <td style="width: 25%; text-align: center;"><u>p.p'-DDE</u></td> </tr> <tr> <td style="text-align: center;"><u>0.02</u></td> <td style="text-align: center;"><u>1.1</u></td> <td style="text-align: center;"><u>0.08</u></td> <td style="text-align: center;"><u>0.11</u></td> </tr> </table> <p>Concentration-based waste load allocations are assigned to the minor NPDES permits and general non-storm water NPDES permits that discharge to Marina del Rey Harbor. Any future minor NPDES permits or enrollees under a general non-storm water NPDES permit will also be subject to the concentration-based waste load allocations.</p>	<u>Chlordane</u>	<u>Total PCBs</u>	<u>Total DDTs</u>	<u>p.p'-DDE</u>	<u>0.02</u>	<u>1.1</u>	<u>0.08</u>	<u>0.11</u>																	
<u>Chlordane</u>	<u>Total PCBs</u>	<u>Total DDTs</u>	<u>p.p'-DDE</u>																							
<u>0.02</u>	<u>1.1</u>	<u>0.08</u>	<u>0.11</u>																							

Attachment A to Resolution No. R13-XXX

Element	Key Findings and Regulatory Provisions																														
	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4" style="text-align: center; border-bottom: 1px solid black;">Metals Concentration-based Waste Load Allocations (mg/kg)</th> </tr> <tr> <th style="width: 33%;"></th> <th style="width: 33%; text-align: center;">Copper</th> <th style="width: 33%; text-align: center;">Lead</th> <th style="width: 33%; text-align: center;">Zinc</th> </tr> </thead> <tbody> <tr> <td></td> <td style="text-align: center;">34</td> <td style="text-align: center;">46.7</td> <td style="text-align: center;">150</td> </tr> </tbody> </table> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center; border-bottom: 1px solid black;">Organic Concentration-based Waste Load Allocations (µg/kg)</th> </tr> <tr> <th style="width: 50%;">Chlordane</th> <th style="width: 50%;">Total PCBs</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">0.5</td> <td style="text-align: center;">22.7</td> </tr> </tbody> </table> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4" style="text-align: center; border-bottom: 1px solid black;">Organic Concentration-based Waste Load Allocations (µg/kg)</th> </tr> <tr> <th style="width: 25%;"><u>Chlordane</u></th> <th style="width: 25%;"><u>Total PCBs</u></th> <th style="width: 25%;"><u>Total DDTs</u></th> <th style="width: 25%;"><u>p,p'-DDE</u></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;"><u>0.5</u></td> <td style="text-align: center;"><u>3.2</u></td> <td style="text-align: center;"><u>1.58</u></td> <td style="text-align: center;"><u>2.2</u></td> </tr> </tbody> </table>	Metals Concentration-based Waste Load Allocations (mg/kg)					Copper	Lead	Zinc		34	46.7	150	Organic Concentration-based Waste Load Allocations (µg/kg)		Chlordane	Total PCBs	0.5	22.7	Organic Concentration-based Waste Load Allocations (µg/kg)				<u>Chlordane</u>	<u>Total PCBs</u>	<u>Total DDTs</u>	<u>p,p'-DDE</u>	<u>0.5</u>	<u>3.2</u>	<u>1.58</u>	<u>2.2</u>
Metals Concentration-based Waste Load Allocations (mg/kg)																															
	Copper	Lead	Zinc																												
	34	46.7	150																												
Organic Concentration-based Waste Load Allocations (µg/kg)																															
Chlordane	Total PCBs																														
0.5	22.7																														
Organic Concentration-based Waste Load Allocations (µg/kg)																															
<u>Chlordane</u>	<u>Total PCBs</u>	<u>Total DDTs</u>	<u>p,p'-DDE</u>																												
<u>0.5</u>	<u>3.2</u>	<u>1.58</u>	<u>2.2</u>																												
Margin of Safety	<p>An implicit margin of safety is applied through the use of the more protective <u>numeric targets, including the ERL sediment quality guideline values and Fish Contaminant Goal fish tissue value for PCBs.</u></p> <p><u>An implicit margin of safety is included by virtue of the selection of multiple numeric targets, including targets for water, sediment and fish tissue, and the use of multiple lines of evidence (benthic community, sediment chemistry, and sediment toxicity) required by the EBE Plan Part 1.</u></p> <p><u>Conservative modeling assumptions provide a margin of safety in addressing copper in the water column.</u></p>																														
Implementation	<p><u>Compliance with the TMDL shall be determined through water, sediment, and fish tissue monitoring. and comparison with the WLAs and LAs and numeric targets.</u></p> <p><u>Compliance with the sediment TMDLs for metals, chlordane, total DDTs, and p,p'-DDE shall be based on achieving the LAs and WLAs or, alternatively, demonstrating attainment of the Sediment Quality Objectives in the EBE Plan Part 1 through the sediment triad/multiple lines of evidence approach outlined therein.</u></p> <p><u>Compliance with the TMDL for total PCBs shall be based on achieving the LAs or WLAs, the PCB fish tissue related sediment target, or, alternatively, by meeting fish tissue targets. If monitoring data or special studies indicate that load and waste load allocations will be attained, but fish tissue targets may not be achieved, the Regional Board shall reconsider the TMDL to modify the waste load and load allocations to ensure that the fish tissue targets are attained.</u></p> <p>The regulatory mechanisms used to implement the TMDL will include the Los Angeles County Municipal Storm Water<u>Separate Storm Sewer System (MS4)</u> NPDES Permit (MS4), the State of California Department of Transportation (Caltrans) Storm Water Permit, minor NPDES permits, general NPDES permits, general industrial storm water NPDES permits, <u>and</u> general construction storm water NPDES</p>																														

Attachment A to Resolution No. R13-XXX

Element	Key Findings and Regulatory Provisions
	<p>permits. Nonpoint sources will be regulated through the authority contained in sections 13263 and 13269 of the Water Code, in conformance with the State Water Resources Control Board’s Nonpoint Source Implementation and Enforcement Policy (May 2004). Each The NPDES permit for each point source assigned a WLA shall be reopened or amended at re-issuance, in accordance with applicable laws, to incorporate the applicable WLAs as a permit requirement.</p> <p>The Regional Board shall reconsider this TMDL in six years after the effective date of the TMDL based on additional data obtained from special studies. Table 7-18.2 presents the implementation schedule for the responsible permittees <u>entities</u>.</p> <p>Minor NPDES Permits and General Non-Storm Water NPDES Permits:</p> <p>The concentration-based waste load allocations for the minor NPDES permits permittees and general non-storm water NPDES permits permittees will be implemented through NPDES as permit limits. Permit writers may translate applicable waste load allocations into effluent limits for the minor and general NPDES permits by <u>applying the effluent limitation procedures in Section 1.4 of the State Water Resources Control Board’s Policy for Implementation of Toxic Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California</u> or <u>applying other applicable engineering practices</u> methodologies authorized under federal regulations. The minor and currently enrolled general non-storm water NPDES permittees are allowed up to seven years from the effective date of the TMDL <u>March 22, 2016</u> to achieve the waste load allocations.</p> <p>General Industrial Storm Water Permit:</p> <p>The Regional Board will develop a watershed specific general industrial storm water permit to incorporate waste load allocations. Concentration based permit limits may be set to achieve the mass based waste load allocations. These concentration based limits would be equal to the concentration based waste load allocations assigned to the other NPDES permits. It is expected that permit writers will translate the waste load allocations into BMPs, based on BMP performance data. However, the permit writers must provide adequate justification and documentation to demonstrate that specified BMPs are expected to result in attainment of the numeric waste load allocations. The general industrial storm water permittees are allowed up to seven years from the effective date of the TMDL to achieve the waste load allocations.</p> <p>General <u>Industrial and</u> Construction Storm Water Permits:</p> <p>Waste load allocations will be incorporated into the State Board general permits upon renewal or into a watershed specific general construction storm water permits developed by the Regional Board.</p> <p>Within seven years of the effective date of the TMDL, the construction industry will submit the results of BMP effectiveness studies to</p>

Attachment A to Resolution No. R13-XXX

Element	Key Findings and Regulatory Provisions
	<p>determine BMPs that will achieve compliance with the waste load allocations assigned to construction storm water permittees. Regional Board staff will bring the recommended BMPs before the Regional Board for consideration within eight years of the effective date of the TMDL. General construction storm water permittees will be considered in compliance with waste load allocations if they implement these Regional Board approved BMPs.</p> <p>All g<u>General construction permittees must attain WLAs by March 22, 2016. General industrial permittees must attain WLAs by March 22, 2016. Permittees may demonstrate compliance with WLAs in one of two ways.</u></p> <p><u>First, general industrial and construction storm water permittees may be deemed in compliance with permit limitations if they demonstrate that there are no exceedances of the permit limitations at their discharge points or outfalls.</u></p> <p><u>Second, if permittees provide a quantitative demonstration that control measures and best management practices (BMPs) will achieve WLAs consistent with the schedule in Table 7-3218.2, then compliance may be demonstrated by implementation of those control measures and BMPs, subject to Executive Officer approval.</u>implement the approved BMPs within nine years of the effective date of the TMDL. If no effectiveness studies are conducted and no BMPs are approved by the Regional Board within eight years of the effective date of the TMDL, each general construction storm water permit holder will be subject to site-specific BMPs and monitoring requirements to demonstrate compliance with waste load allocations.</p> <p>MS4 and Caltrans Storm Water Permits:</p> <p>The County of Los Angeles, <u>County of Los Angeles Flood Control District,</u> City of Los Angeles, and Culver City are jointly responsible for meeting the mass-based waste load allocations for assigned to the MS4 permittees. Caltrans is responsible for meeting their-its mass-based waste load allocations, however, they-it may choose to work with the <u>other</u> MS4 permittees. The primary jurisdiction for the Marina del Rey Harbor watershed is the County of Los Angeles.</p> <p><u>Compliance with the sediment WLAs for Cu, Pb, Zn, Chlordane, total PCBs, p'p-DDE and total DDT may be demonstrated via any one of three different means:</u></p> <ol style="list-style-type: none"> <u>a. The qualitative sediment condition of Unimpacted or Likely Unimpacted via the interpretation and integration of multiple lines of evidence as defined in the EBE Plan Part 1, is met.</u> <u>b. Sediment numeric targets are met in bed sediments.</u> <u>c. Final sediment WLAs, as presented above, are met.</u> <p><u>Compliance with the sediment WLAs for PCBs may be demonstrated via any of four different means:</u></p> <ol style="list-style-type: none"> <u>a. Fish tissue targets are met in species resident to the waterbody.</u>

Attachment A to Resolution No. R13-XXX

Element	Key Findings and Regulatory Provisions
	<p><u>b. Final sediment allocations, as presented above, are met.</u></p> <p><u>c. Sediment numeric targets to protect fish tissue are met in bed sediments.</u></p> <p><u>d. Demonstrate that the sediment quality condition protective of fish tissue is achieved per the Statewide Enclosed Bays and Estuaries Plan, as amended to address contaminants in resident finfish and wildlife.</u></p> <p>Each municipality and permittee will be required to meet the waste load allocations at the designated TMDL effectiveness monitoring points. <u>If permittees provide a quantitative demonstration as part of a watershed management program plan that control measures and BMPs will achieve WLAs consistent with the schedule in Table 7-18.2, then compliance with WLAs permit water quality based effluent limitations (WOBELs) may be demonstrated by implementation of those control measures and BMPs, subject to Executive Officer approval.</u> A phased implementation approach, using a combination of non-structural and structural BMPs may be used to achieve compliance with the waste load allocations. The administrative record and the fact sheets for the MS4 and Caltrans storm water permits must provide reasonable assurance that the BMPs selected will be sufficient to implement the numeric waste load allocations. We expect that <u>The quantitative demonstration must include an estimate of the</u> reductions to be achieved by each BMP will be documented and that sufficient monitoring will <u>must</u> be put in place <u>conducted</u> to verify that the desired <u>necessary</u> reductions are achieved. The permits should <u>must</u> also provide a mechanism to adjust the required BMPs as necessary to ensure their adequate performance.</p> <p>The implementation schedule for the MS4 and Caltrans permittees consists of a phased approach, with compliance to be achieved in prescribed percentages of the watershed <u>or as a reduction from the baseline loading</u>, with total compliance to be achieved within 10 years by March 22, 2018. <u>However, the Regional Board may extend the implementation period up to 15 years if an integrated water resources approach is employed.</u></p> <p><u>Load Allocations for In-Harbor Sediments</u></p> <p><u>The County of Los Angeles is the responsible party for the load allocations assigned to in-harbor sediments. Load allocations shall be implemented through the following:</u></p> <ol style="list-style-type: none"> <u>(1) Memorandum of Agreement (MOA), or</u> <u>(2) Cleanup and Abatement Order or other regulatory order</u> <p><u>The County of Los Angeles shall be allowed one year from the effective date of the TMDL reconsideration to enter into a MOA with the Regional Board, detailing the voluntary efforts that will be undertaken to attain the load allocations. The MOA shall include development of a contaminated sediment management plan. The MOA</u></p>

Attachment A to Resolution No. R13-XXX

Element	Key Findings and Regulatory Provisions
	<p><u>shall comply with the Water Quality Control Policy for Addressing Impaired Waters: Regulatory Structure and Options (“Policy”), including part II, section 2.c.ii. and related provisions, and shall be consistent with the requirements of this TMDL. If the MOA is timely adopted, and so long as it is implemented, the program described in the MOA shall be deemed “certified”, pursuant to the Policy, subject to the conditions of section 2.e. of the Policy. The MOA must be approved by the Executive Officer, and may be amended with Executive Officer approval, as necessary. If an MOA is not established within one year or if the responsible party does not comply with the terms of the MOA, a cleanup and abatement order pursuant to California Water Code section 13304 or another appropriate regulatory order shall be issued to implement the load allocations.</u></p> <p><u>Load Allocations for Discharges of Dissolved Copper</u> <u>The responsible parties for the load allocations assigned to discharges of dissolved copper from boats are the County of Los Angeles, individual anchorages, and persons owning boats moored in the Marina. LAs shall be implemented through waste discharge requirements (WDRs), waivers of WDRs, or other regulatory mechanisms in accordance with the Nonpoint Source Implementation and Enforcement Policy. Compliance with the load allocations may be demonstrated by any one of three means:</u></p> <p><u>a. Meeting numeric targets in the water column, or</u> <u>b. Demonstrating that 85% of boats in the harbor are using non-copper hull paints, or</u> <u>c. Another acceptable means of compliance approved by the Regional Board.</u></p> <p><u>Reconsideration of TMDL</u> <u>The TMDL may be reconsidered to revise the implementation schedule in order to ensure that pollutant sources are controlled and a suitable location for contaminated sediment disposal is available prior to remediation of contaminated sediments if the County has made a good faith effort to plan, fund, and permit sediment remediation activities.</u></p>
<p><i>Seasonal Variations and Critical Conditions</i></p>	<p>There is a high degree of inter- and intra-annual variability in total suspended solids discharged to Marina del Rey Harbor. This is a function of the storms, which are highly variable between years. The TMDL is based on a TSS load derived from long-term average rainfall over a 52-year period from 1948 to 2000. This time period contains a wide range of storm conditions and drain discharges to Marina del Rey Harbor. Use of the average condition for the TMDL is appropriate because issues of sediment effects on benthic communities and potential for bioaccumulation to higher trophic levels occurs over long time periods.</p>
<p><i>Monitoring</i></p>	<p>Effective mMonitoring will be required to assess the <u>on-going</u> condition of Marina del Rey Harbor and to assess the on-going effectiveness of efforts by attainment of WLAs and LAs assigned to dischargers to reduce toxic pollutants loading from and responsible</p>

Attachment A to Resolution No. R13-XXX

Element	Key Findings and Regulatory Provisions
	<p>parties in the Marina del Rey Watershed. Special studies may also be appropriate to provide further information about new data, new or alternative sources, and revised scientific assumptions. Below the Regional Board identifies the various goals of monitoring efforts and studies that shall be developed in a coordinated manner. The programs, reports, and studies will be included as requirements in subsequent permits or other orders will be developed in response to subsequent orders issued by the Executive Officer.</p> <p>Ambient Component</p> <p>A monitoring program is necessary to assess water quality throughout Marina del Rey Harbor and to assess fish tissue and sediment quality in the harbor's back basins. Data on background water quality for copper will help refine the numeric targets and waste load allocations and assist in the effective placement of BMPs. In addition, fish tissue data is required in Marina del Rey's back basins to confirm continued impairment.</p> <p>Water quality samples shall be collected monthly and analyzed for chlordane and total PCBs at detection limits that are at or below the minimum levels until the TMDL is reconsidered in the sixth year. The minimum levels are those published by the State Water Resources Control Board in Appendix 4 of the Policy for the Implementation of Toxic Standards for Inland Surface Water, Enclosed Bays, and Estuaries of California, March 2, 2000. Special emphasis should be placed on achieving detection limits that will allow evaluation relative to the CTR standards. If these can not be achieved with conventional techniques, then a special study should be proposed to evaluate concentrations of organics.</p> <p>Water quality samples shall also be collected monthly and analyzed for copper, lead, and zinc until the TMDL is reconsidered in the sixth year. For metals water column analysis, methods that allow for (1) the removal of salt matrix to reduce interference and avoid inaccurate results prior to the analysis; and (2) the use of trace metal clean sampling techniques, should be applied. Examples of such methods include EPA Method 1669 for sample collection and handling, and EPA Method 1640 for sample preparation and analysis.</p> <p>Storm water monitoring shall be conducted for metals (copper, lead, and zinc) and organics (chlordan and total PCBs) to provide assessment of water quality during wet weather conditions and loading estimates from the watershed to the harbor. Special emphasis should be placed on achieving lower detection limits for organochlorine compounds.</p> <p>The MS4 and Caltrans storm water permittees are jointly responsible for conducting bioaccumulation testing of fish and mussel tissue within the Harbor. The permittees are required to submit for approval of the Executive Officer a monitoring plan that will provide the data needed to</p>

Attachment A to Resolution No. R13-XXX

Element	Key Findings and Regulatory Provisions
	<p>confirm the 303(d) listing or de-listing, as applicable.</p> <p>Representative sediment sampling shall be conducted quarterly within the back basins of the harbor for copper, lead, zinc, chlordanes, and total PCBs at detection limits that are lower than the ERLs. Sediment samples shall also be analyzed for total organic carbon, grain size and sediment toxicity.</p> <p>Initial sediment toxicity monitoring should be conducted quarterly in the first year of the TMDL to define the baseline and semi-annually, thereafter, to evaluate effectiveness of the BMPs until the TMDL is reconsidered in the sixth year. The sediment toxicity testing shall include testing of multiple species, a minimum of three, for lethal and non-lethal endpoints. Toxicity testing may include: the 28 day and 10-day amphipod mortality test; the sea urchin fertilization testing of sediment pore water; and the bivalve embryo testing of the sediment/water interface. The chronic 28 day and shorter term 10-day amphipod tests may be conducted in the initial year of quarterly testing and the results compared. If there is no significant difference in the tests, then the less expensive 10-day test can be used throughout the rest of the monitoring, with some periodic 28-day testing.</p> <p><u>MS4 and Caltrans Effectiveness Component Monitoring</u></p> <p>MS4 permittees and Caltrans are jointly responsible for TMDL effectiveness monitoring. The wDischarge water quality samples shall be collected during wet weather, and shall be analyzed for total dissolved solids, settleable solids and total suspended solids if not already part of the sampling program. Sampling shall be designed to collect sufficient volumes of settleable and suspended solids to allow for analysis of copper, lead, zinc, chlordanes, total PCBs, total DDTs, p,p'-DDE, and total organic carbon in the sediment.</p> <p>Receiving water quality samples shall be collected monthly and analyzed for total PCBs at detection limits that are at or below the minimum levels. The minimum levels are those published by the State Water Resources Control Board in Appendix 4 of the Policy for the Implementation of Toxic Standards for Inland Surface Water, Enclosed Bays, and Estuaries of California, March 2, 2000. Special emphasis should be placed on achieving detection limits that will allow evaluation relative to the CTR standards.</p> <p>Receiving water quality samples shall also be collected monthly and analyzed for copper. For metals water column analysis, methods that allow for (1) the removal of salt matrix to reduce interference and avoid inaccurate results prior to the analysis; and (2) the use of trace metal clean sampling techniques, should be applied. Examples of such methods include EPA Method 1669 for sample collection and handling, and EPA Method 1640 for sample preparation and analysis.</p> <p>Monthly representative sediment sampling shall be conducted at existing monitoring locations throughout the harbor, and analyzed for</p>

Attachment A to Resolution No. R13-XXX

Element	Key Findings and Regulatory Provisions
	<p>copper, lead, zinc, chlordan, and total PCBs at detection limits that are lower than the ERLs. The, sediment samples shall also be analyzed for total organic carbon and grain size. Sediment toxicity testing shall be conducted semi-annually, and shall include testing of multiple species (a minimum of three) for lethal and non-lethal endpoints. Toxicity testing may include: the 28 day or 10 day amphipod mortality test; the sea urchin fertilization testing of sediment pore water; and the bivalve embryo testing of the sediment/water interface.</p> <p>Toxicity shall be indicated by an amphipod survival rate of 70% or less in a single test, in conjunction with a statistically significant decrease in amphipod survival relative to control organisms (significance determined by T test, $\alpha=0.05$). Accelerated monitoring maybe conducted to confirm toxicity at stations identified as toxic. Accelerated monitoring shall consist of six additional tests, approximately every two weeks, over a 12 week period. If the results of any two of the six accelerated tests are less than 90% survival, then the MS4 and Caltrans permittees shall conduct a Toxicity Identification Evaluation (TIE). Alternatively, responsible parties have the option of foregoing accelerated toxicity testing and conducting a TIE directly following an indication of toxicity. The TIE shall include reasonable steps to identify the sources of toxicity and steps to reduce the toxicity The Phase I TIE shall include the following treatments and corresponding blanks: baseline toxicity; particle removal by centrifugation; solid phase extraction of the centrifuged sample using C8, C18, or another media; complexation of metals using ethylenediaminetetraacetic acid (EDTA) addition to the raw sample; neutralization of oxidants/metals using sodium thiosulfate addition to the raw sample; and inhibition of organo-phosphate (OP) pesticide activation using piperonyl butoxide addition to the raw sample (crustacean toxicity tests only).</p> <p><u>Sediment quality objective evaluation as detailed in the EBE Plan Part 1 (sediment triad sampling) shall be performed every five years beginning in 2008. Sampling and analysis for the full chemical suite, two toxicity tests and four benthic indices as specified in the EBE Plan Part 1 shall be conducted and evaluated. In addition, one of the toxicity tests shall be a 10-day mortality test with <i>Leptocheirus plumulosus</i> as previous investigations in Marina del Rey Harbor have shown toxicity to this organism. Locations for sediment triad assessment and the methodology for combining results from sampling locations to determine sediment conditions shall be specified in the CMP to be approved by the Executive Officer. The sampling design shall be in compliance with the EBE Plan Part 1 Sediment Monitoring section (VII.E).</u></p> <p><u>A stressor identification is required by the EBE Plan Part 1 (VII.F) if sediments fail to meet SQOs. Based on the fact that the failure to meet SQOs has been documented, the MS4 and Caltrans permittees shall conduct a stressor identification in Marina del Rey Harbor and submit a report detailing the results of the stressor identification by December</u></p>

Attachment A to Resolution No. R13-XXX

Element	Key Findings and Regulatory Provisions
	<p data-bbox="581 233 699 264"><u>15, 2016.</u></p> <p data-bbox="581 300 1430 495"><u>Sediment chemistry and toxicity samples shall also be collected annually (in addition to, and in between, the sediment triad sampling events as described above) to evaluate trends in general sediment quality constituents (total organic carbon, grain size) and listed constituents (copper, lead, zinc, chlordane, PCBs, Total DDTs, and p,p'-DDE) relative to sediment quality targets.</u></p> <p data-bbox="581 531 1430 961"><u>Monitoring of fish and mussel tissue within the Harbor shall be conducted annually for total PCBs, chlordane and Total DDTs. The permittees are required to submit for approval of the Executive Officer a monitoring plan that will provide the data needed to assess the effectiveness of the TMDL. The general industrial storm water permit shall contain a model monitoring and reporting program to evaluate BMP effectiveness. A permittee enrolled under the general industrial permit shall have the choice of conducting individual monitoring based on the model program or participating in a group monitoring effort. MS4 permittees are encouraged to take the lead in group monitoring efforts for industrial facilities within their jurisdiction because compliance with waste load allocations by these facilities will in many cases translate to reductions in contaminate loads to the MS4 system.</u></p> <p data-bbox="581 978 1430 1178"><u>Currently, several of the constituents of concern have numeric targets that are lower than the readily available detection limits. As analytical methods and detection limits continue to improve (i.e., development of lower detection limits) and become more environmentally relevant, responsible parties shall incorporate new method detection limits in the monitoring plan.</u></p> <p data-bbox="581 1255 906 1287"><u>Oxford Basin Monitoring</u></p> <p data-bbox="581 1304 1430 1598"><u>The Los Angeles County Flood Control District shall monitor any discharges of sediment from Oxford Basin to the harbor. This monitoring shall be initiated after completion of the Oxford Basin Enhancement Project and shall be used to determine attainment of numeric targets in the area of Oxford Basin that mixes with the water in Basin E of the harbor. Effectiveness monitoring developed as part of the Proposition 84 grant agreement for the Oxford Basin Enhancement Project may be used to meet this requirement; however, the monitoring shall continue beyond the term of the Proposition 84 grant.</u></p> <p data-bbox="581 1654 1256 1686"><u>Other Permittees and Responsible Parties Monitoring</u></p> <p data-bbox="581 1703 1430 1862"><u>Monitoring for other permittees, general industrial and construction stormwater permittees, and responsible parties for the in-harbor sediment and dissolved copper load allocations shall be included in the regulatory mechanisms developed to implement the load and waste load allocations for these sources.</u></p>

Attachment A to Resolution No. R13-XXX

Element	Key Findings and Regulatory Provisions
	<p>Special Studies</p> <p>Special studies are necessary to refine source assessments, to provide better estimates of loading capacity, and to optimize implementation efforts. The Regional Board will re-consider the TMDL in the sixth year after the effective date in light of the findings of these studies.</p> <p>Studies required for this TMDL include:</p> <ul style="list-style-type: none"> • Evaluate partitioning coefficients between water column and sediment to assess the contribution of water column discharges to sediment concentrations in the harbor, and • Evaluate the use of low detection level techniques to determine water quality concentrations for those contaminants where standard detection limits cannot be used to assess compliance for CTR standards or are not sufficient for estimating source loadings from tributaries and storm water. <p>Studies recommended for this TMDL include:</p> <ul style="list-style-type: none"> • Develop and implement a monitoring program to collect the data necessary to apply a multiple lines of evidence approach; • Refine the relationship between pollutants and suspended solids aimed at better understanding of the delivery of pollutants to the watershed, and • Evaluate the effectiveness of BMPs to address pollutants and/or sediments.

Attachment A to Resolution No. R13-XXX

Table 7-18.2. Marina del Rey Harbor Toxic Pollutants TMDL: Implementation Schedule

Date	Action
Effective date of the TMDL <u>March 22, 2006</u>	Regional Board permit writers shall incorporate the waste load allocations for sediment into the NPDES permits. Effluent limitations consistent with the assumptions and requirements of Waste <u>waste</u> load allocations will be implemented through NPDES permits limits in accordance with the implementation schedule contained herein, at the time of permit issuance, renewal or re-opener.
<u>March 22, 2024</u>	<u>The LAs for discharges of dissolved copper from boats shall be attained.</u>
<u>March 22, 2029</u>	<u>The LAs for in-harbor sediments shall be attained.</u>
On-going	The Executive Officer shall promptly issue appropriate investigatory and clean-up and abatement orders to address any toxicity hotspots within sediments identified as a result of data submitted pursuant to this TMDL, any U.S. Army Corps of Engineer dredging activity, or any other investigation.
Within 6 months after the effective date of the State Board adopted sediment quality objectives and implementation policy	The Regional Board will re-assess the numeric targets and waste load allocations for consistency with the State Board adopted sediment quality objectives.
5 years after effective date of the TMDL	Responsible jurisdictions and agencies shall provide to the Regional Board result of any special studies.
6 years after effective date of the TMDL	The Regional Board shall reconsider this TMDL to re-evaluate the waste load allocations and the implementation schedule.
MINOR NPDES PERMITS AND GENERAL NON-STORM WATER NPDES PERMITS	
7 years after effective date of the TMDL <u>March 22, 2013</u>	The non-storm water NPDES permits shall achieve the concentration-based waste load allocations for sediment per provisions allowed for in NPDES permits.
GENERAL INDUSTRIAL STORM WATER PERMIT	
Up to March 22, 2016 <u>7 years after effective date of the TMDL</u>	The general industrial storm water permits shall achieve the mass-based waste load allocations for sediment per provisions allowed for in NPDES permits. Permits shall allow an iterative BMP process including BMP effectiveness monitoring to achieve compliance with permit requirements.

Attachment A to Resolution No. R13-XXX

Date	Action
GENERAL CONSTRUCTION STORM WATER PERMIT	
7 years from the effective date of the TMDL	The construction industry will submit the results of the BMP effectiveness studies to the Regional Board for consideration. In the event that no effectiveness studies are conducted and no BMPs are approved, permittees shall be subject to site specific BMPs and monitoring to demonstrate BMP effectiveness.
8 years from the effective date of the TMDL	The Regional Board will consider results of the BMP effectiveness studies and consider approval of BMPs no later than eight years from the effective date of the TMDL.
9 years from the effective date of the TMDL Up to March 22, 2016	The general construction storm water permits shall achieve the mass-based waste load allocations for sediment per provisions allowed for in NPDES permits. All general construction storm water permittees shall implement Regional Board approved BMPs.
MS4 AND CALTRANS STORM WATER PERMITS	
12 months after the effective date of the TMDL <u>March 22, 2007</u>	In response to an order issued by the Executive Officer, the MS4 and Caltrans storm water NPDES permittees must submit a coordinated monitoring plan, to be approved by the Executive Officer, which includes both ambient monitoring and TMDL effectiveness monitoring. Once the coordinated monitoring plan is approved by the Executive Officer, monitoring shall commence within 6 months. The draft monitoring report shall be made available for public comment and the Executive Officer shall accept public comments for at least 30 days.
5 years after effective date of TMDL <u>March 22, 2011 (Draft Report)</u> 5 ½ years after effective date of TMDL <u>August 22, 2011 (Final Report)</u>	The MS4 and Caltrans storm water NPDES permittees shall provide a written report to the Regional Board outlining how they will achieve the waste load allocations for sediment to Marina del Rey Harbor. The report shall include implementation methods, an implementation schedule, proposed milestones, and any applicable revisions to the TMDL effectiveness monitoring plan. The draft report shall be made available for public comment and the Executive Officer shall accept public comments for at least 30 days.
<u>June 22, 2015</u>	<u>The MS4 and Caltrans storm water NPDES permittees shall submit a revised coordinated monitoring plan, reflecting the revised requirements of this TMDL as amended by Resolution No. R13-XXX.</u>
<u>December 15, 2016</u>	<u>The MS4 and Caltrans storm water NPDES permittees shall conduct a stressor identification in Marina del Rey Harbor and submit a report detailing the results to the Regional Board.</u>
<u>Schedule for MS4 and Caltrans Permittees if Pursuing a TMDL Specific Implementation Plan</u>	

Attachment A to Resolution No. R13-XXX

Date	Action
<u>Schedule for MS4 and Caltrans Permittees for Marina del Rey Harbor Back Basins (Basins D, E, and F)</u>	
<p>8 years after effective date of the TMDL <u>March 22, 2016</u></p>	<p><u>Compliance with the interim sediment allocations for Cu, Pb, Zn, chlordane, p’p-DDE, and total DDTs may be demonstrated via any one of three different means:</u></p> <ol style="list-style-type: none"> <u>1. Demonstrate that the sediment quality condition of Unimpacted or Likely Unimpacted via the interpretation and integration of multiple lines of evidence as defined in the EBE Plan Part 1, is met; or</u> <u>2. Sediment numeric targets are met in bed sediments over a three-year averaging period; or</u> <u>3. Interim allocations in the discharge are met as described below:</u> <p>The MS4 and Caltrans storm water NPDES permittees shall demonstrate that 50% of the total drainage area served by the MS4 is effectively meeting the waste load allocations for sediment.</p> <p><u>Alternatively, permittees shall attain a 50% reduction in the difference between the current loadings and WLAs, as measured at the relevant existing MS4 permit monitoring location and/or at relevant MS4 monitoring stations identified in an approved coordinated monitoring plan.</u></p> <p><u>Compliance with the interim sediment allocations for total PCBs may be demonstrated via any of four different means:</u></p> <ol style="list-style-type: none"> <u>1. Fish tissue targets are met in species resident to Marina del Rey Harbor; or</u> <u>2. Demonstrate that the sediment quality condition protective of fish tissue is achieved per the Statewide Enclosed Bays and Estuaries Plan, as amended to address contaminants in resident finfish and wildlife; or</u> <u>3. Sediment numeric targets are met in bed sediments over a three-year averaging period; or</u> <u>4. Final allocations in the discharge are met as described below:</u> <p><u>The MS4 and Caltrans storm water NPDES permittees shall demonstrate that 50% of the total drainage area served by the MS4 is effectively meeting the waste load allocations for sediment.</u></p> <p><u>Alternatively, permittees shall attain a 50% reduction in the difference between the current loadings and WLAs, as measured at the relevant existing MS4 permit monitoring location and/or at relevant MS4 monitoring stations identified in an approved coordinated monitoring plan.</u></p>
<p>10 years after effective date of the</p>	<p><u>Compliance with the sediment TMDLs for Cu, Pb, Zn, chlordane,</u></p>

Attachment A to Resolution No. R13-XXX

Date	Action
<p><u>TMDL March 22, 2018</u></p>	<p><u>p’p-DDE and total DDTs may be demonstrated via any one of three different means:</u></p> <ol style="list-style-type: none"> <u>1. Demonstrate that the sediment quality condition of Unimpacted or Likely Unimpacted via the interpretation and integration of multiple lines of evidence as defined in the EBE Plan Part 1, is met; or</u> <u>2. Sediment numeric targets are met in bed sediments over a three-year averaging period; or</u> <u>3. Final allocations in the discharge are met as described below:</u> The MS4 and Caltrans storm water NPDES permittees shall demonstrate that 100% of the total drainage area served by the MS4 system is effectively meeting the waste load allocations for sediment. <p><u>Compliance with the sediment TMDL for total PCBs may be demonstrated via any of four different means:</u></p> <ol style="list-style-type: none"> <u>1. Fish tissue targets are met in species resident to Marina del Rey Harbor; or</u> <u>2. Demonstrate that the sediment quality condition protective of fish tissue is achieved per the Statewide Enclosed Bays and Estuaries Plan, as amended to address contaminants in resident finfish and wildlife; or</u> <u>3. Sediment numeric targets are met in bed sediments over a three-year averaging period; or</u> <u>4. Final allocations in the discharge are met as described below:</u> The MS4 and Caltrans storm water NPDES permittees shall demonstrate that 100% of the total drainage area served by the MS4 is effectively meeting the waste load allocations for sediment.
<p><u>Schedule for MS4 and Caltrans Permittees for Marina del Rey Harbor Front Basins (Basins A, B, C, G, and H)</u></p>	
<p><u>March 22, 2019</u></p>	<p><u>Compliance with the interim sediment allocations for Cu, Pb, Zn, chlordane, p’p-DDE, and total DDTs may be demonstrated via any one of three different means:</u></p> <ol style="list-style-type: none"> <u>1. Demonstrate that the sediment quality condition of Unimpacted or Likely Unimpacted via the interpretation and integration of multiple lines of evidence as defined in the EBE Plan Part 1, is met; or</u> <u>2. Sediment numeric targets are met in bed sediments over a three-year averaging period; or</u>

Attachment A to Resolution No. R13-XXX

Date	Action
	<p><u>3. Interim allocations in the discharge are met as described below:</u></p> <p><u>The MS4 and Caltrans storm water NPDES permittees shall demonstrate that 50% of the total drainage area served by the MS4 is effectively meeting the waste load allocations for sediment.</u></p> <p><u>Alternatively, permittees shall attain a 50% reduction in the difference between the current loadings and WLAs, as measured at the relevant existing MS4 permit monitoring location and/or at relevant MS4 monitoring stations identified in an approved coordinated monitoring plan.</u></p> <p><u>Compliance with the interim sediment allocations for total PCBs may be demonstrated via any of four different means:</u></p> <ol style="list-style-type: none"> <u>1. Fish tissue targets are met in species resident to Marina del Rey Harbor; or</u> <u>2. Demonstrate that the sediment quality condition protective of fish tissue is achieved per the Statewide Enclosed Bays and Estuaries Plan, as amended to address contaminants in resident finfish and wildlife; or</u> <u>3. Sediment numeric targets are met in bed sediments over a three-year averaging period; or</u> <u>4. Final allocations in the discharge are met as described below:</u> <p><u>The MS4 and Caltrans storm water NPDES permittees shall demonstrate that 50% of the total drainage area served by the MS4 is effectively meeting the waste load allocations for sediment.</u></p> <p><u>Alternatively, permittees shall attain a 50% reduction in the difference between the current loadings and WLAs, as measured at the relevant existing MS4 permit monitoring location and/or at relevant MS4 monitoring stations identified in an approved coordinated monitoring plan.</u></p>
<p><u>March 22, 2021</u></p>	<p><u>Compliance with the sediment TMDLs for Cu, Pb, Zn, chlordane, p'p-DDE and total DDTs may be demonstrated via any one of three different means:</u></p> <ol style="list-style-type: none"> <u>1. Demonstrate that the sediment quality condition of Unimpacted or Likely Unimpacted via the interpretation and integration of multiple lines of evidence as defined in the EBE Plan Part 1, is met; or</u> <u>2. Sediment numeric targets are met in bed sediments over a three-year averaging period; or</u> <u>3. Final allocations in the discharge are met as described below:</u> <p><u>The MS4 and Caltrans storm water NPDES permittees shall</u></p>

Attachment A to Resolution No. R13-XXX

Date	Action
	<p><u>demonstrate that 100% of the total drainage area served by the MS4 is effectively meeting the waste load allocations for sediment.</u></p> <p><u>Compliance with the sediment TMDL for total PCBs may be demonstrated via any of four different means:</u></p> <ol style="list-style-type: none"> <u>1. Fish tissue targets are met in species resident to Marina del Rey Harbor; or</u> <u>2. Demonstrate that the sediment quality condition protective of fish tissue is achieved per the Statewide Enclosed Bays and Estuaries Plan, as amended to address contaminants in resident finfish and wildlife; or</u> <u>3. Sediment numeric targets are met in bed sediments over a three-year averaging period; or</u> <u>4. Final allocations in the discharge are met as described below:</u> <p><u>The MS4 and Caltrans storm water NPDES permittees shall demonstrate that 100% of the total drainage area served by the MS4 is effectively meeting the waste load allocations for sediment.</u></p>
<p>Schedule for MS4 and Caltrans Permittees if Pursuing an Integrated Resources Approach, per Regional Board Approval</p>	
<p>7 years after effective date of the TMDL</p>	<p>The MS4 and Caltrans storm water NPDES permittees shall demonstrate that 25% of the total drainage area served by the MS4 system is effectively meeting the waste load allocations for sediment.</p>
<p>9 years after effective date of the TMDL</p>	<p>The MS4 and Caltrans storm water NPDES permittees shall demonstrate that 50% of the total drainage area served by the MS4 system is effectively meeting the waste load allocations for sediment.</p>
<p>11 years after effective date of the TMDL</p>	<p>The MS4 and Caltrans storm water NPDES permittees shall demonstrate that 75% of the total drainage area served by the MS4 system is effectively meeting the waste load allocations for sediment.</p>
<p>15 years after effective date of the TMDL</p>	<p>The MS4 and Caltrans storm water NPDES permittees shall demonstrate that 100% of the total drainage area served by the MS4 system is effectively meeting the waste load allocations for sediment.</p>