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permit by subtracting the other stormwater or NPDES waste load allocations, air deposition and the margin of safety from the total loading capacity. Concentration-based WLAs are assigned for the other point sources including but not limited to General Construction, General Industrial, Power Generating stations, minor permits and irregular dischargers, and other NPDES dischargers.

Mass-based Dominguez Channel Wet-weather Final Allocations

	Total Copper (g/day)	Total Lead (g/day)	Total Zinc (g/day)
TMDL	1,485.1	6,548.8	10,685.5
Waste Load Allocations:			
MS4 – LA County Permittees	1,300.3	5,733.7	9,355.5
MS4 - Caltrans	32.3	142.6	232.6
Load Allocations:			
Air Deposition	4.0	17.7	28.9
Margin of Safety			
MOS (10%)	148.5	654.9	1,069.6

Based on total recoverable metal targets, a hardness of 50 mg/L, and 90th percentile of annual flow rates (62.7 cfs) in Dominguez Channel. Recalculated mass-based allocations using ambient hardness and flow rate at the time of sampling are considered consistent with the assumptions and requirements of these waste load allocations. In addition to the wasteload allocations above, samples collected during flow conditions less than the 90th percentile of annual flow rates must demonstrate that the acute and chronic hardness dependent water quality criteria provided in the CTR are achieved.

Concentration-based Dominguez Channel Wet-weather Final Allocations (µg/L)

	Total **Copper**	Total **Lead**	Total **Zinc**
Other stormwater/NPDES	**9.7**	**42.7**	**69.7**

Based on hardness = 50 mg/L. Recalculated concentration-based allocations using ambient hardness at the time of sampling are considered consistent with the assumptions and requirements of these waste load allocations. In addition to the wasteload allocations above, samples collected during flow conditions less than the 90th percentile of annual flow rates must demonstrate that the acute and chronic hardness dependent water quality criteria provided in the CTR are achieved.

2. Torrance Lateral Freshwater and Sediment Allocations

Torrance Lateral is a subwatershed that flows directly into Dominguez Channel Estuary. Allocations are assigned to the ExxonMobil Torrance Refinery and all other dischargers. Mass-based sediment allocations are assigned to the ExxonMobil Torrance Refinery. This allocation has been developed based on an average discharge frequency of once every 7 years. If, at the end of Phase I of implementation, due to an increase in discharge frequency or volumes, it appears that the allocations are not supportive of the TMDL, these allocations may be revised. Sediment waste load allocations are assigned to all other dischargers to Torrance Lateral equal to the concentration-based sediment targets.

Torrance Lateral Wet-weather Waste Load Allocations and Sediment Waste Load Allocations, concentration-based

Media	Total Copper	Total Lead	Total Zinc
Water (unfiltered) (µg/L)	9.7	42.7	69.7
Sediment (mg/kg dry)	31.6	35.8	121

Hardness = 50 mg/L. Recalculated concentration-based allocations using ambient hardness at the time of sampling are considered consistent with the assumptions and requirements of these

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waste load allocations. In addition to the wasteload allocations above, samples collected during flow conditions less than the 90th percentile of annual flow rates must demonstrate that the acute and chronic hardness dependent water quality criteria provided in the CTR are achieved.

Waste Load Allocations for ExxonMobil Torrance Refinery into Torrance Lateral, mass-based

Media	Total Copper	Total Lead	Total Zinc
Water (unfiltered) (kg/yr)	1.36	5.98	9.75

Based on Q = 3.7 MGD for 7 days/year; and total metals targets
No allocation for PAHs is assigned to ExxonMobil; however, discharges should not exceed existing water quality criteria for those compounds and monitoring shall continue.

Compliance with the freshwater metals allocations for Dominguez Channel and Torrance Lateral may be demonstrated via any one of three different means:
a. Final allocations are met.
b. CTR total metals criteria are met instream.
c. CTR total metals criteria are met in the discharge.

Dominguez Channel Estuary and Greater Harbor Waters Allocations

Concentration-based WLAs for point sources in Dominguez Channel Estuary and Greater Harbor Waters (including refineries) for metals, PAHs, and bioaccumulative compounds in water.

Non-MS4 point sources such as General Construction, General Industrial, individual industrial permittees, including power generating stations, minor permits and irregular dischargers into Dominguez Channel Estuary and Greater Harbor Waters are assigned concentration-based allocations. Mass-based WLA for other refineries based on appropriate data maybe considered during the TMDL reconsideration. (Refineries which have provided discharge flow data along with monitoring results are assigned mass-based allocations, whereas other refineries are assigned concentration-based allocations because no discharge flow data has been provided.) Any future minor NPDES permits or enrollees under a general NPDES permit are also assigned the concentration-based waste load allocations. The allocations are set equal to the saltwater targets for metals and equal to the human health targets for the organic compounds in CTR. The averaging period for the concentration-based WLAs shall be consistent with that specified in the regulation establishing the criterion or objective or relevant implementation guidance published by the establishing agency.

Receiving (salt) Water Column Concentration-Based Waste Load Allocations

Constituents	Copper* (µg/L)	Lead* (µg/L)	Zinc* (µg/L)	PAHs (µg/L)	Chlordane (µg/L)	4,4'-DDT (µg/L)	Dieldrin (µg/L)	Total PCBs (µg/L)
Dominguez Channel Estuary	3.73	8.52	85.6	0.049**	0.00059	0.00059	0.00014	0.00017
Greater Harbor Waters	3.73	8.52	85.6			0.00059		0.00017

* Total Concentration-based WLAs for metals are converted from saltwater dissolved CTR criteria using CTR saltwater default translators.
** CTR human health criteria were not established for total PAHs. Therefore, the CTR criterion for individual PAHs of 0.049 µg/L is applied individually to benzo(a)anthracene, benzo(a)pyrene, and chrysene. The CTR criterion for

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	Pyrene of 11,000 µg/L is assigned as an individual WLA to Pyrene. Other PAH compounds in the CTR shall be screened as part of the TMDL monitoring. A. **Mass-based allocations for metals and PAHs compounds** Mass-based WLAs are assigned to the Terminal Island Water Reclamation Plant (TIWRP) (based on current discharge volume) and other point sources that have sufficient discharge flow data. Municipal stormwater sources, including the Los Angeles, Long Beach, Caltrans and other MS4 co-permittees, are assigned a mass-based allocation for each permit in place at the time of TMDL adoption, depending on the waterbody. Discharges from the Port of Los Angeles (POLA) and Port of Long Beach (POLB) are grouped with the MS4 dischargers. Mass-based WLAs are applied as annual limits. Individual mass-based WLAs for an individual MS4 Permittee will be calculated based on its share, on an area basis, of the mass-based WLA or other approved approach available at the time final mass-based WLAs are in effect and incorporated into the permit. TMDLs and allocations were developed based on existing sediment concentrations in the active sediment layer defined herein as the top 5 cm of bed sediment concentrations. Load Allocations are assigned to existing sediments and direct air deposition. All allocations assigned to point sources and non-point sources are subtracted from the loading capacity and the remaining allocatable amount is assigned to the bed sediments. Direct air deposition allocations have been set equal to existing load estimates for Cu, Zn and PAHs based on atmospheric monitoring results collected in 2006. The Pb air deposition allocation has been developed by using the SCAQMD air quality Pb criteria (2010) multiplied by the surface area of each waterbody to produce direct air deposition allocations. Future changes to Cu, Zn and PAH air quality criteria, other regulation such as brake pad requirements, or other improvement in air quality may allow for re-calculations of air deposition allocations in future revisions to the TMDL. If, at some point in the future, a nonpoint source is considered subject to NPDES or WDR regulations, then the corresponding load allocation established herein may be considered a waste load allocation for purposes of implementation and enforcement through a permit or other Board order. Air deposition allocations for copper and zinc are based on existing loads; by assuming no direct deposition reductions, this consumes or partially consumes the available loading capacity. As a result, copper and zinc load allocations for bed sediments are negative values, in Inner and Outer Harbor, indicating that copper and zinc loads must be reduced. (Each negative copper and zinc bed sediment allocation may alternatively be interpreted as zero, or not adversely affecting benthic organisms.) The amount of copper and zinc load reduction may be revised based on future monitoring results. If future air deposition studies show lower existing air deposition copper and zinc loads, or if future copper and zinc sediment characterization studies show lower bed sediment copper and zinc loads, then copper and zinc allocations may be adjusted. The bed sediment LA is assigned to the City of Los Angeles (including the Port of Los Angeles), the City of Long Beach (including the Port of Long Beach) and the State Lands Commission. After remediation activities that address existing sediment contamination are complete and when LAs are attained, if bed sediments are recontaminated as a result of continued polluted discharge from the surrounding watersheds, the WLA compliance monitoring data will be used, along with other available information, to assess the relative contribution of watershed dischargers and determine their responsibility and allocations for secondary remediation activities.

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Final, mass-based TMDLs and Allocations for metals and PAHs (Kg/year)

Waterbody/source	*Total Cu*	*Total Pb*	*Total Zn*	*Total PAHs*
DomCh Estuary - TMDL	84	115.4	370.5	9.94
WLAs				
MS4- LA County et al.	22.4	54.2	271.8	0.134
MS4- City of Long Beach	0.6	1.52	7.6	0.0038
MS4- CalTrans	0.384	0.93	4.7	0.0023
LAs				
Air deposition	4.6	0.031	33.2	0.051
Bed sediments	56.0	58.7	53.3	9.7
Current Load	327.6	457.9	1799.0	28.1
Overall reduction	74%	75%	79%	65%
Consolidated Slip - TMDL	12.1	16.6	53.3	1.43
WLAs				
MS4- LA County et al.	2.73	3.63	28.7	0.0058
MS4 CalTrans	0.043	0.058	0.5	0.00009
LAs				
Air deposition	1.2	0.008	8.6	0.013
Bed sediments	8.13	12.9	15.57	1.41
Current Load	92.1	127.3	398.9	11.5
Overall reduction	*87%*	*87%*	*87%*	*88%*
Inner Harbor - TMDL	76.7	105.3	338.3	9.1
WLAs				
MS4- LA County et al.	1.7	34.0	115.9	0.088
MS4 City of Long Beach	0.463	9.31	31.71	0.024
MS4 CalTrans	0.032	0.641	2.18	0.0017
LAs				
Air deposition	97.6	0.67	710	1.08
Bed sediments	(23.1)	60.7	(521.3)	7.88
Current Load	178.4	105.9	542.1	3.524
Overall reduction	57%	1%	38%	0%
Outer Harbor - TMDL	81.6	112.1	360.1	9.7
WLAs				
MS4- LA County et al.	0.91	26.1	81.5	0.105
MS4 City of Long Beach	0.63	18.1	56.4	0.073
MS4 CalTrans	0.0018	0.052	0.162	0.00021
TIWRP = POTW	80.4	183.6	1845	1.056

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	*(CTR & MGD***)*				
	LAs				
	Air deposition *Bed sediments*	17.9 (18.2)	0.9 (116)	108.1 (1731)	1.5 6.964
	Current Load	119.0	66.7	403.4	0.626
	Overall reduction	31%	0%	11%	0%
	Fish Harbor - TMDL	1.04	1.43	4.59	0.123
	WLAs				
	MS4- LA County et al. (POLA)	0.00017	0.54	1.62	0.007
	MS4 CalTrans	0.0000005	0.00175	0.0053	0.000021
	LAs				
	Air deposition *Bed sediments*	0.4 0.636	0.02 0.87	2.4 0.5	0.033 0.084
	Current Load	1.43	0.60	4.2	0.003
	Overall reduction	27%	0%	0%	0%
	Cabrillo Marina -TMDL	1.32	1.81	5.8	0.156
	WLAs				
	MS4- LA County et al. (POLA)	0.0196	0.289	0.74	0.00016
	MS4 CalTrans	0.00019	0.0028	0.007	0.0000016
	LAs				
	Air deposition *Bed sediments*	0.34 1.0	0.017 1.506	2.05 3.03	0.028 0.1285
	Current Load	9.2	2.3	9.14	0.236
	Overall reduction	86%	21%	36%	34%
	San Pedro Bay - TMDL	648	890	2858	76.6
	WLAs				
	MS4- LA County et al.	20.3	54.7	213.1	1.76
	MS4 City of Long Beach	137.9	372.2	1449.7	12.0
	MS4 CalTrans	0.88	2.39	9.29	0.077
	*MS4 Orange County***	9.8	26.4	102.9	0.85
	LAs				
	Air deposition *Bed sediments*	36 442.9	1.8 432	219 865	2.9 59.0
	Current Load	1251	1737	8167	3.63
	Overall reduction	48%	49%	65%	0%
	LA River Estuary - TMDL	735	1009	3242	86.9
	WLAs				
	*LAR Estuary dischargers**	[Cu SQV]	[Pb SQV]	[Zn SQV]	[PAH SQV]

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MS4- LA County et al.	35.3	65.7	242.0	2.31
MS4 City of Long Beach	375.8	698.9	2572.7	24.56
MS4 CalTrans	5.1	9.5	34.8	0.333
LAs				
Air deposition	6.7	0.046	48.9	0.075
Bed sediments	311.8	235.0	343.0	59.6
Current Load	1612	2641	20096	8.72
Overall reduction	54%	62%	84%	0%

Note: Cu and Zn air deposition load allocations are set equal to existing load with no reductions anticipated. Negative (values) for bed sediments indicate that bed sediment loads are expected to be reduced; the amount of reduction may be revised with additional monitoring results.

*SQVs are currently set at ERLs
**Orange County MS4 Permit is issued by the Santa Ana Regional Board. The allocations included, here, for the Seal Beach nearshore area, are for TMDL calculation purposes only, and an allocation is not assigned.
***For TIWRP, the discharge volume at the time of permit modification or reissuance shall be used to calculate the mass-based effluent limitations consistent with the assumptions and requirements of these WLAs. Studies may be conducted to determine the portion of the discharged pollutants that is deposited on bed sediment. The results of any such Executive Officer approved studies shall be evaluated at the TMDL reconsideration to modify these WLAs as appropriate.

Consolidated Slip and Fish Harbor are impaired for mercury in sediments and the average sediment concentration (1.1 mg/kg dry) is significantly higher than the target concentration (0.15 mg/kg dry). Consolidated Slip and Dominguez Channel Estuary are impaired for cadmium in sediments, and Consolidated Slip is also impaired for chromium in sediments.

Final Concentration-Based Sediment WLAs for metals in Dominguez Channel Estuary, Consolidated Slip and Fish Harbor

Concentration-based Sediment WLAs (mg/kg dry sediment)		
Cadmium	Chromium	Mercury
1.2	81	0.15

Mercury applies to both Consolidated Slip and Fish Harbor; Cd applies to Dominguez Channel Estuary and Consolidated Slip, and Cr applies to Consolidated Slip only.

Compliance with these sediment TMDLs for Cu, Pb, Zn, Cd, Cr, Hg and total PAHs may be demonstrated via any one of three different means:

a. Final sediment allocations, as presented above, are met.
b. The qualitative sediment condition of **Unimpacted** or **Likely Unimpacted** via the interpretation and integration of multiple lines of evidence as defined in the SQO Part 1, is met, with the exception of Cr, which is not included in the SQO Part 1.
c. Sediment numeric targets are met in bed sediments over a three-year averaging period.

Compliance with mass-based WLAs shall be measured at designated discharge points. Compliance with concentration-based WLAs for existing sediment shall be determined by pollutant concentrations in ambient sediment in each waterbody. The average ambient bulk sediment level within a waterbody at or below the sediment quality target is considered compliance with these TMDLs.

B. **Mass-based Allocations for Bioaccumulative Compounds**

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	Fish tissue levels of certain bioaccumulative compounds are above desired numeric targets. These TMDLs are designed to reduce contaminated sediment levels, which will result in lower corresponding pollutant levels in fish tissue. These sediment allocations have been derived to support lowering fish tissue levels using biota-sediment accumulation factors (BSAFs) or ERLs, whichever is more protective. For chlordane and dieldrin, the ERL values are lower and more protective than BSAF values. The DDT sediment values are comparable (ERL = 1.58, BSAF = 1.9); the more stringent one was used for calculation. The PCBs sediment value associated with fish tissue is more stringent than the ERL sediment value for PCBs. Mass-based WLAs are assigned for TIWRP and other point sources that have sufficient discharge flow data. Municipal stormwater sources, including the Los Angeles, Long Beach, Caltrans and other MS4 co-permittees, are assigned a single, mass-based allocation by permit, depending on the waterbody. Discharges from the Port of Los Angeles (POLA) and Port of Long Beach (POLB) are grouped with the MS4 dischargers. Mass-based WLAs are applied as annual limits. Individual mass-based WLAs for an individual MS4 Permittee will be calculated based on its share, on an area basis, of the mass based WLA or other approved approach available at the time final mass-based WLAs are in effect and incorporated into the permit. Mass-based LAs are identified for bed sediments and direct air deposition. Direct air deposition allocations for total DDT are based on estimates of existing loads using atmospheric monitoring results collected close to Los Angeles/Long Beach Harbor at SCAQMD Wilmington Station in 2006. Pollutant-specific air deposition values (DDT = 29 ng/m2/day) were multiplied by the surface area of each waterbody to produce direct deposition allocations. Direct deposition allocations for PCBs are not included since air deposition has been measured to be less than water-to-air fluxes. DDT load allocations for bed sediments are negative values, with the exception of those for the Los Angeles River Estuary, indicating that DDT loads must be reduced. (Each negative DDT bed sediment allocation may alternatively be interpreted as zero, or interpreted as minimal bioaccumulation into the food web.) The amount of DDT load reduction may be revised based on future monitoring results. If future air deposition studies show lower existing air deposition DDT loads, or if future DDT sediment characterization studies show lower bed sediment DDT loads, then DDT load allocations may be adjusted. The Greater Harbor Waters (excluding LA River Estuary and Consolidated Slip) bed sediment LA is assigned to the City of Los Angeles (including the Port of Los Angeles), the City of Long Beach (including the Port of Long Beach) and the State Lands Commission. After remediation activities that address existing sediment contamination are complete and when LAs are attained, if bed sediments are recontaminated as a result of continued polluted discharge from the surrounding watersheds, the WLA compliance monitoring data will be used, along with other available information, to assess the relative contribution of watershed dischargers and determine their responsibility and allocations for secondary remediation activities. DDT and PCBs (total) TMDLs apply to all estuarine and marine waters in Greater Harbor area, including Inner Cabrillo Beach, Los Angeles River Estuary and Eastern San Pedro Bay.

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Final mass-based TMDLs and Allocations for total DDT and total PCBs (g/yr)

Waterbody/source	*DDT total*	*PCBs total*
DomCh Estuary – TMDL	3.90	7.90
WLAs		
MS4- LA County et al	0.250	0.207
MS4 City of Long Beach	0.007	0.006
MS4 CalTrans	0.004	0.004
LAs		
Air deposition *Bed sediments*	6.01 (2.4)	n/a 7.7
Current Load	54.0	57.5
Overall reduction	93%	86%
Consolidated Slip - TMDL	0.56	1.14
WLAs		
MS4- LA County et al	0.009	0.004
MS4 CalTrans	0.00014	0.00006
LAs		
Air deposition *Bed sediments*	1.56 (1.00)	n/a 1.13
Current Load	49.0	83.9
Overall reduction	99%	99%
Inner Harbor - TMDL	3.56	7.22
WLAs		
MS4- LA County et al	0.051	0.059
MS4 City of Long Beach	0.014	0.016
MS4 CalTrans	0.0010	0.0011
LAs		
Air deposition *Bed sediments*	129 (125)	n/a 7.14
Current Load	21.67	29.51
Overall reduction	84%	76%
Outer Harbor - TMDL	3.79	7.68
WLAs		
MS4- LA County et al	0.005	0.020
MS4 City of Long Beach	0.004	0.014
MS4 CalTrans	0.000010	0.00004
*TIWRP = POTW (CTR & MGD***)*	12.7	0.37

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	LAs		
	Air deposition *Bed sediments*	173 (182)	n/a 7.28
	Current Load	30.8	34.7
	Overall reduction	88%	78%
	Fish Harbor - TMDL	0.048	0.098
	WLAs		
	MS4- LA County et al	0.0003	0.0019
	MS4 CalTrans	0.0000010	0.000006
	LAs		
	Air deposition *Bed sediments*	3.9 (3.85)	n/a 0.10
	Current Load	0.168	0.075
	Overall reduction	71%	0%
	Cabrillo Marina -TMDL	0.061	0.124
	WLAs		
	MS4- LA County et al	0.000028	0.000025
	MS4 CalTrans	0.00000028	0.00000024
	LAs		
	Air deposition *Bed sediments*	3.3 (3.22)	n/a 0.12
	Current Load	1.66	1.06
	Overall reduction	96%	88%
	Inner Cabrillo Beach - TMDL	0.04	0.09
	WLAs		
	MS4- LA County et al	0.0001	0.0003
	LAs		
	Air deposition *Bed sediments*	3.5 (3.5)	n/a 0.09
	Current Load	0.98	0.31
	Overall reduction	96%	72%
	San Pedro Bay - TMDL	30.1	61.0
	WLAs		
	MS4- LA County et al	0.049	0.44
	MS4 City of Long Beach	0.333	3.01
	MS4 CalTrans	0.002	0.019
	*MS4 Orange County***	0.024	0.213
	LAs		

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Air deposition *Bed sediments*	350 (320)	n/a 57.3
Current Load	205.2	110.7
Overall reduction	85%	45%
LA River Estuary - TMDL	34.1	69.2
WLAs		
MS4- LA County et al	0.100	0.324
MS4 City of Long Beach	1.067	3.441
MS4 CalTrans	0.014	0.047
LAR Estuary dischargers	[DDT SQV]	[PCBs SQV]
LAs		
Air deposition *Bed sediments*	8.9 24.09	n/a 65.3
Current Load	231.6	402.2
Overall reduction	85%	83%

Note: DDT air deposition load allocation is set equal to existing load with no reductions anticipated. Negative values for bed sediments indicate that DDT bed sediment loads are expected to be reduced; the amount of reduction may be revised with additional monitoring results.
*SQVs are currently set at the more protective of ERLs or fish tissue associated sediment targets.
**Orange County MS4 Permit is issued by the Santa Ana Regional Board. The allocations included, here, for the Seal Beach nearshore area, are for TMDL calculation purposes only, and an allocation is not assigned.
***For TIWRP, the discharge volume at the time of permit modification or reissuance shall be used to calculate the mass-based effluent limitations consistent with the assumptions and requirements of these WLAs. Studies may be conducted to determine the portion of the discharged pollutants that is deposited on bed sediment. The results of any such Executive Officer approved studies shall be evaluated at the TMDL reconsideration to modify these WLAs as appropriate.

In addition, bed sediment concentration-based allocations are assigned for chlordane in Dominguez Channel Estuary, Consolidated Slip, Fish Harbor, Los Angeles River Estuary and Eastern San Pedro Bay. Bed sediment concentration-based allocations are also assigned for dieldrin in Dominguez Channel Estuary and Consolidated Slip. Bed sediment concentration allocations are also assigned for toxaphene in Consolidated Slip. The TMDLs and allocations are set at target sediment concentrations: chlordane = 0.5, dieldrin = 0.02, toxaphene = 0.10 µg/kg dry sediment.

Compliance with these bioaccumulative TMDLs may be demonstrated via any of four different means:

a. Fish tissue targets are met in species resident to the TMDL waterbodies[3].
b. Final sediment allocations, as presented above, are met.
c. Sediment numeric targets to protect fish tissue are met in bed sediments over a three-year averaging period.
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.

[3] A site-specific study to determine resident species shall be submitted to the Executive Officer for approval.

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	3. <u>Diazinon</u> Los Angeles County monitoring data in Dominguez Channel freshwaters show diazinon exceedences from 2002-2005, but none from 2006-2010. This timing is concurrent with EPA's ban on urban use of diazinon, effective Dec. 31, 2005. Based these results, no diazinon TMDLs are developed at this time.
Margin of Safety	The Dominguez Channel freshwater allocations included an explicit margin of safety (MOS) equal to 10% of the loading capacity or existing load to account for any additional uncertainty in the wet-weather TMDLs. The 10% MOS was subtracted from the loading capacity or existing load, whichever was smaller. Applying an explicit margin of safety is reasonable because a number of uncertain estimates are offset by the explicit margin of safety. While the observed dissolved-to-total metals ratios are not similar to CTR default conversion values, there appears to be very poor correlation between the fraction of particulate metals and TSS. Also, there is added uncertainty regarding stream flow rates during wet weather conditions, when the highest metal loads occur, thus an explicit margin of safety is justified. An implicit margin of safety exists in the final allocations to Dominguez Channel Estuary and Greater Harbor waters. The implicit margin of safety is based on the selection of multiple numeric targets, including targets for water, fish tissue and sediment among other conservative modeling assumptions. An additional explicit margin of safety must be considered and may be applied if any chemical-specific sediment quality target is revised or updated contingent on future sediment quality studies. That is, there may be uncertainty associated with revised sediment quality values, which may warrant including an additional explicit margin of safety.
Seasonal Variations and Critical Conditions	Wet weather events may produce extensive sediment redistribution and transport sediments to the harbors and the CTR-based water column targets are protective of this condition. This would be considered the critical condition for loading. No correlation with flow or seasonality (wet vs. dry season) was found to exist in sediment or tissue data. Given that allocations for this TMDL are expressed in terms pesticides, PCBs, PAHs, and metals concentrations in sediment, a critical condition is not identified based upon flow or seasonality. Because the adverse effects of pesticides, PCBs, PAHs, and metals are related to sediment accumulation and bioaccumulation in the food chain over long periods of time, short term variations in concentrations are less likely to cause significant impacts upon beneficial uses.
Monitoring Plan	Monitoring by assigned responsible parties is required in three waterbody areas: 1. Dominguez Channel, Torrance Lateral, and Dominguez Channel Estuary 2. Greater Los Angeles and Long Beach Harbor Waters (including Consolidated Slip) 3. Los Angeles River and San Gabriel River Monitoring shall be conducted under technically appropriate Monitoring and Reporting Plans (MRPs) and Quality Assurance Project Plans (QAPPs). The MRPs shall include a requirement that the responsible parties report compliance and non-compliance with waste load and load allocations as part of annual reports submitted to the Regional Board. The QAPPs shall include protocols for sample collection, standard analytical procedures, and laboratory certification. All samples shall be collected in accordance with SWAMP protocols. Monitoring Plans shall be submitted twenty (20) months after the effective date of the TMDL for public review and,

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	subsequently, Executive Officer approval. Monitoring shall begin six months after the monitoring plan is approved by the Executive Officer. Responsible parties assigned both WLAs and LAs may submit one document that addresses the monitoring requirements (as described below) and implementation activities for both WLAs and LAs. Responsible parties shall submit annual monitoring reports. The Regional Board Executive Officer may reduce, increase, or modify monitoring and reporting requirements, as necessary, based on the results of the TMDL monitoring program. 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 MRP and QAPP. 1. Dominguez Channel, Torrance Lateral, and Dominguez Channel Estuary Compliance Monitoring Program For Dominguez Channel, Dominguez Channel Estuary, and Torrance Lateral, water and total suspended solids samples shall be collected at the outlet of the storm drains discharging to the channel and the estuary. Fish tissue samples shall be collected in receiving waters of the Dominguez Channel Estuary. Sediment samples shall also be collected in the estuary. • Water Column Monitoring Water samples and total suspended solids samples shall be collected during two wet weather events and one dry weather event each year. The first large storm event of the season shall be included as one of the wet weather monitoring events. Water samples and total suspended solid samples shall be analyzed for a suite of compounds including, at a minimum, metals, including lead, zinc, and copper, DDT, PCBs, Benzo[a] anthrancene, Benzo[a]pyrene, Chrysene, Phenanthrene, and Pyrene. Sampling shall be designed to collected sufficient volumes of suspended solids to allow for analysis of the pollutants in the bulk sediment. In addition to TMDL constituents, general water chemistry (temperature, dissolved oxygen, pH, and electrical conductivity) and a flow measurement will be required at each sampling event. General chemistry measurements may be taken in the laboratory immediately following sample collection, if auto samplers are used for sample collection or if weather conditions are unsuitable for field measurements. In addition, toxicity shall be tested for in the freshwater portion of Dominguez Channel. • Sediment Monitoring A sediment monitoring program shall be developed consistent with the selected method for compliance and all samples shall be collected in accordance with SWAMP protocols. a) If compliance will be determined based on achieving sediment quality targets, sediment chemistry samples shall be collected every two years for analysis of general sediment quality constituents and the full chemical suite as specified in SQO Part 1. In addition, benthic community effects shall be assessed in the Dominguez Channel Estuary.

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TMDL Element	Regulatory Provisions
	b) If compliance will be determined based on the SQO compliance method, sediment chemistry samples shall also be collected every five years (in addition to, and in between, the sediment triad sampling events as described below), beginning after the first sediment triad event, to evaluate trends in general sediment quality constituents and listed constituents relative to sediment quality targets. Chemistry data without accompanying sediment triad data shall be used to assess sediment chemistry trends and shall not be used to determine compliance. Sediment quality objective evaluation as detailed in the SQO Part 1 (sediment triad sampling) shall be performed every five years in coordination with the Biological Baseline and Bight regional monitoring programs, if possible. Sampling and analysis for the full chemical suite, two toxicity tests and four benthic indices as specified in SQO Part 1 shall be conducted and evaluated. If moderate toxicity as defined in the SQO Part 1 is observed, results shall be highlighted in annual reports and further analysis and evaluation to determine causes and remedies shall be required in accordance with the EO approved monitoring plan. Locations for sediment triad assessment and the methodology for combining results from sampling locations to determine sediment conditions shall be specified in the MRP to be approved by the Executive Officer. The sampling design shall be in compliance with the SQO Part 1 Sediment Monitoring section (VII.E.). • Fish Tissue Monitoring Fish tissue samples shall be collected every two years from the Dominguez Channel Estuary and analyzed for chlordane, dieldrin, toxaphene, DDT, and PCBs. The target species in the Dominguez Channel Estuary shall be selected based on residency, local abundance and fish size at the time of field collection. Tissues analyzed shall be based on the most common preparation for the selected fish species. The Dominguez Channel responsible parties are each individually responsible for conducting water, sediment, and fish tissue monitoring. However, they are encouraged to collaborate or coordinate their efforts to avoid duplication and reduce associated costs. Dischargers interested in coordinated monitoring shall submit a coordinated MRP that identifies monitoring to be implemented by the responsible parties. Under the coordinated monitoring option, the compliance point for the stormwater WLAs shall be storm drain outfalls or a point(s) in the receiving water that suitably represents the combined discharge of cooperating parties. The details of the monitoring program including sampling locations and all methods shall be specified in the MRP to be approved by the Executive Officer. 2. Greater Los Angeles and Long Beach Harbor Waters Compliance Monitoring Program At a minimum, compliance monitoring shall be conducted at the locations and for the constituents listed in the table below for water column, total suspended solids, and sediment. The exact locations of monitoring sites shall be specified in the MRP to be approved by the Executive Officer. During aspects of the remedial action(s) for the Montrose Superfund Site that may mobilize sediments and associated pollutants from the on- or near-property soils or "Neighborhood Areas", it is recommended that US EPA, as the regulatory oversight agency, require that Potentially Responsible Parties (PRP) implement monitoring to evaluate pollutant loads and concentrations leaving the site and surrounding area, as well as pollutant

TMDL Element	Regulatory Provisions

concentrations in the bed sediments of Dominguez Channel Estuary and Consolidated Slip and coordinate such monitoring with other TMDL compliance monitoring.

- Water Column Monitoring

Water samples and total suspended solids samples shall be collected during two wet weather events and one dry weather event each year. TSS shall be collected at several depths during wet weather events. The first large storm event of the season shall be included as one of the wet weather monitoring events. General water chemistry (temperature, dissolved oxygen, pH, and salinity) and a flow measurement shall be required at each sampling event.

- Sediment Monitoring

Sediment chemistry samples shall be collected every five years (in addition to, and in between, the sediment triad sampling events as described below), beginning after the first sediment triad event, to evaluate trends in general sediment quality constituents and listed constituents relative to sediment quality targets. Chemistry data without accompanying sediment triad data shall be used to assess sediment chemistry trends and shall not be used to determine compliance.

Sediment chemistry monitoring requirements

Water Body Name	Station Id	Station Location	Sample Media	
			WATER/TSS	SEDIMENT
Consolidated Slip	01	Center of Consolidated Slip	Metals, PCBs, DDT	Metals, Chlordane, DDT PCBs, PAHs
Los Angeles Inner Harbor	02	East Turning Basin	Metals, PCBs, DDT	Metals, Toxicity, Benthic Community Effect
	03	Center of the POLA West Basin	Metals, PCBs, DDT	
	04	Main Turning Basin north of Vincent Thomas Bridge	Metals, PCBs, DDT	
	05	Between Pier 300 and Pier 400	Metals, PCBs, DDT	Metals, Toxicity, Benthic Community Effect
	06	Main Channel south of Port O'Call	Metals, PCBs, DDT	Metals, Toxicity, Benthic Community Effect
Fish Harbor	07	Center of inner portion of Fish Harbor	Metals, PCBs, DDT	Metals, Toxicity, PCBs, DDT, Chlordane, PAHs
Los Angeles Outer Harbor	08	Los Angeles Outer Harbor between Pier 400 and middle breakwater	Metals, PCBs, DDT	Toxicity
	09	Los Angeles Outer Harbor between the southern end of the reservation point and the San Pedro breakwater	Metals, PCBs, DDT	Toxicity
Cabrillo Marina	10	Center of west Channel	Metals, PCBs, DDT	
Inner Cabrillo	11	Center of Inner	Metals, PCBs,	Metals

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Beach		Cabrillo Beach	DDT	
Long Beach Inner Harbor	12	Cerritos Channel between the Heim Bridge and the Turning Basin	Metals, PCBs, DDT	Metals, Toxicity, Benthic Community Effect
	13	Back Channel between Turning Basin and West Basin	Metals, PCBs, DDT	Metals, Toxicity, Benthic Community Effect
	14	Center of West Basin	Metals, PCBs, DDT	Metals, Toxicity, Benthic Community Effect
	15	Center of Southeast Basin	Metals, PCBs, DDT	Metals, Toxicity, Benthic Community Effect
Long Beach Outer Harbor	16	Center of Long Beach Outer Harbor	Metals, PCBs, DDT	Toxicity
	17	Between the southern end of Pier J and the Queens Gate	Metals, PCBs, DDT	Toxicity
San Pedro Bay	18	Northwest of San Pedro Bay near Los Angeles River Estuary	Metals, PCBs, DDT	Metals, Chlordane, PAHs, Toxicity
	19	East of San Pedro Bay	Metals, PCBs, DDT	Metals, Chlordane, PAHs, Toxicity
	20	South of San Pedro Bay inside breakwater	Metals, PCBs, DDT	Metals, Chlordane, PAHs, Toxicity
Los Angeles River Estuary	21	Los Angeles River Estuary Queensway Bay	Metals, PCBs, DDT	Metals, Chlordane, DDT, PCBs
	22	Los Angeles River Estuary	Metals, PCBs, DDT	Metals, Chlordane, DDT, PCBs

Sediment quality objective evaluation as detailed in the SQO Part 1 (sediment triad sampling) shall be performed every five years in coordination with the Biological Baseline and Bight regional monitoring programs, if possible. Sampling and analysis for the full chemical suite, two toxicity tests and four benthic indices as specified in SQO Part 1 shall be conducted and evaluated. If moderate toxicity as defined in the SQO Part 1 is observed, results shall be highlighted in annual reports and further analysis and evaluation to determine causes and remedies shall be required in accordance with the EO approved monitoring plan. Locations for sediment triad assessment and the methodology for combining results from sampling locations to determine sediment conditions shall be specified in the MRP to be approved by the Executive Officer. The sampling design shall be in compliance with the SQO Part 1 Sediment Monitoring section (VII.E.).

- Fish Tissue Monitoring
  Fish tissue samples shall be collected every two years in San Pedro Bay, Los Angeles Harbor, and Long Beach Harbor, and analyzed for chlordane, dieldrin, toxaphene, DDT, and PCBs. At a minimum, three species shall be collected, including white croaker, a sport

TMDL Element	Regulatory Provisions
	fish, and a prey fish. The Greater Los Angeles and Long Beach Harbors[3] responsible parties are each individually responsible for conducting water, sediment, and fish tissue monitoring. However, they are encouraged to collaborate or coordinate their efforts to avoid duplication and reduce associated costs. Dischargers interested in coordinated compliance monitoring shall submit a coordinated MRP that identifies monitoring to be conducted by the responsible parties. Under the coordinated compliance monitoring option, the compliance point for the stormwater WLAs shall be storm drain outfalls or a point(s) in the receiving water that suitably represents the combined discharge of cooperating parties. The Consolidated Slip sub-group responsible parties are responsible for conducting water, sediment, and fish tissue monitoring in Consolidated Slip. The details of the monitoring program including sampling locations and all methods shall be specified in the MRP to be approved by the Executive Officer. 3. Los Angeles River and San Gabriel River Compliance Monitoring Program Los Angeles River Watershed and San Gabriel River Watershed responsible parties identified in effective metals TMDLs for Los Angeles River and San Gabriel River are responsible for conducting water and sediment monitoring above the Los Angeles River Estuary and at the mouth of the San Gabriel River, respectively, to determine the Rivers' contribution to the impairments in the Greater Harbor waters. • Water Column Monitoring Water samples and total suspended solids samples shall be collected at, at least one site during two wet weather events and one dry weather event each year. The first large storm event of the season shall be included as one of the wet weather monitoring events. Water samples and total suspended solid samples shall be analyzed for metals, DDT, PCBs, and PAHs. Sampling shall be designed to collect sufficient volumes of suspended solids to allow for analysis of the listed pollutants in the bulk sediment. General water chemistry (temperature, dissolved oxygen, pH, and electrical conductivity) and a flow measurement shall be required at each sampling event. General chemistry measurements may be taken in the laboratory immediately following sample collection if auto samplers are used for sample collection or if weather conditions are unsuitable for field measurements. • Sediment Monitoring For sediment chemistry, sediment samples shall be collected at, at least one site every two years for analysis of general sediment quality constituents and the full chemical suite as specified in SQO Part 1. All samples shall be collected in accordance with SWAMP protocols. The details of the monitoring program including sampling locations and all methods shall be specified in the MRP to be approved by the Executive Officer.

Implementation Plan	The regulatory mechanisms to implement the TMDL include, but are not limited to, general NPDES permits, individual NPDES permits, MS4 Permits covering jurisdictions and flood control districts within these waters, the Statewide Industrial Storm Water General Permit, the Statewide Construction Activity Storm Water General Permit, the Statewide Stormwater Permit for Caltrans Activities, and the authority contained in Sections 13263, 13267 and 13383 of the Cal. Water Code. For each discharger assigned a WLA, the appropriate Regional Board Order shall be reopened or amended when the order is reissued, in accordance with applicable laws, to incorporate the applicable WLA(s) as a permit requirement consistent with federal regulation and related guidance (40 CFR 144.22(d)(1)(vii)(B); US EPA Memorandum "Revisions to the November 22, 2002 Memorandum 'Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs'" (November 12, 2010)). LAs will be implemented in a manner consistent with federal and state laws, regulations and policies, including the Nonpoint Source Implementation and Enforcement Policy. Implementation by assigned responsible parties is required in three waterbody areas: 1. Dominguez Channel, Torrance Lateral, and Dominguez Channel Estuary 2. Greater Los Angeles and Long Beach Harbor waters (including Consolidated Slip) 3. Los Angeles River and San Gabriel River Actions to achieve WLA and LA may be implemented in phases with information from each phase being used to inform the implementation of the next phase. These sediment targets are not intended to be used as 'clean-up standards' for navigational, capital or maintenance dredging or capping activities; rather they are long-term sediment concentrations that should be attained after reduction of external loads, targeted actions addressing internal reservoirs of contaminants, and environmental decay of contaminants in sediment. The implementation may be adjusted, as necessary, based on information gained during each phase. Table 7-40.2 contains the schedule for responsible parties to develop and implement TMDL implementation plans and sediment management plans to comply with the TMDL. 1. ***Dominguez Channel, Torrance Lateral, and Dominguez Channel Estuary*** Responsible parties can implement a variety of implementation strategies to meet the required WLAs and LAs, such as non-structural and structural BMPs, diversion and treatment to reduce sediment transport from the watershed to Dominguez Channel and Greater Harbor waters, and sediment removal activities. Nonpoint source elements include legacy sediments and air deposition across Dominguez Channel and Harbor waters. The responsible parties identified in the Allocation section and in part 6. *Application of Allocations to Responsible Parties* of this section are assigned sediment load allocations and responsibility for remediation of the contaminated sediments to attain the load allocations. ▪ Phase I The purpose of the Phase I implementation is to reduce the amount of sediment transport from point sources that directly or indirectly discharge to Dominguez Channel and the Harbor waters. Phase I should include watershed-wide implementation actions. Important components of Phase I should be to secure the relationships and agreements between cooperating parties and to develop a detailed scope of work with priorities.

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Potential watershed-wide non-structural BMPs include more frequent and appropriately timed storm drain catch basin cleaning, improved street cleaning by upgrading to vacuum type sweepers, and educating residents and industries about good housekeeping practices. Structural BMPs may include the placement of stormwater treatment devices designed to reduce sediment loading, such as infiltration trenches, vegetated swales, and/or filter strips at critical points in the watershed. Structural BMPs may also include diversion and treatment facilities to divert runoff directly, or provide capture and storage of runoff and then diversion to a location for treatment. Treatment options to reduce sediment could include sand or media filters.

The Los Angeles County Flood Control District (District) owns and operates Dominguez Channel; therefore, the District and the cities that discharge to Dominguez Channel shall each be responsible for conducting implementation actions to address contaminated sediments in Dominguez Channel. Responsible parties in Dominguez Channel shall develop a Sediment Management Plan to address contaminated sediment in Dominguez Channel and Dominguez Channel Estuary.

Sediment conditions shall be evaluated through the Sediment Quality Objective (SQO) process detailed in the SQO Part 1. If chemicals within sediments are contributing to an impaired benthic community or toxicity, then causative agent(s) shall be determined using SQO recommended procedures, SQO Part 1 (VII.F.). Impacted sediments shall be included in the list of sites to be managed.

- Phase II

Phase II should include the implementation of additional BMPs and site remedial actions, as determined to be effective based on the success of upstream source control, evaluation of TMDL monitoring data collected during Phase I, and targeted source reduction activities as identified in Phase I. Regional responsible parties should develop, prioritize, and implement Phase II elements based on data from the TMDL monitoring program and other available information from special studies. Possible actions include implementation of additional structural and non-structural BMPs throughout the watershed by municipalities, LA County, Caltrans, and others. Phase II should include the implementation of site-specific cleanup actions for areas identified as high priority in the Dominguez Channel Estuary and in accordance with the Sediment Management Plan.

- As management actions are planned for a contaminated site, site-specific cleanup criteria should be determined following protocols that are consistent with state and national guidance. The site improvements should be confirmed through a sediment monitoring program.
- There are two Superfund sites located within Dominguez Channel Watershed: the Montrose Superfund Site and the Del Amo Superfund Site. The US EPA has not yet reached a final remedial decision with respect to certain of the Montrose Superfund Site Operable Units (OUs) that remain contaminated with DDT, including the on- and near-property soils (OU1), the current storm water pathway (OU2), and the "Neighborhood Areas" (OU4 and OU6). The TMDL, its waste load and load allocations, and other regulatory provisions of this TMDL may be applicable or relevant and appropriate requirements (ARARs) as set forth in Section 121(d) of the Comprehensive Environmental Response, Compensation, and Liability Act (42 U.S.C. §§ 9621(d)) for those OUs. Whether provisions within the TMDL are ARARs will be determined in accordance with CERCLA

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when US EPA develops Records of Decision for the Superfund sites. The TMDL for DDT should be taken into account in the course of the remedial decision-making process. The City of Los Angeles and/or Los Angeles County, should they decide to take action that impacts one of the OUs, shall consult with US EPA's Superfund Division in advance of such action. Detection of DDT compounds in water or sediment samples collected within Torrance Lateral shall trigger additional monitoring, by parties to be determined by the Executive Officer, in coordination with EPA, to evaluate potential contribution from contaminated soils related to upstream Montrose operable units discharging via the Kenwood storm drain. Upon reconsideration of the TMDL, all monitoring results for DDT compounds collected by responsible parties or other entities shall be considered as part of source analysis and to determine potential future allocation(s) that may be necessary to minimize impacts to downstream waters and restore beneficial uses in TMDL waterbodies.

- Phase III

Phase III should include implementation of secondary and additional remediation actions as necessary to be in compliance with final allocations by the end of the implementation period. TMDLs to allocate additional contaminant loads between dischargers in the Dominguez Channel, Torrance Lateral and Dominguez Channel Estuary subwatersheds may also be developed, if necessary.

2. ***Greater Los Angeles and Long Beach Harbor Waters (including Consolidated Slip)***

Responsible parties can implement a variety of implementation strategies to meet the required WLAs, such as non-structural and structural BMPs, and/or diversion and treatment to reduce sediment transport from the nearshore watershed to the Greater Harbor waters.

- Phase I

The purpose of Phase I implementation is to reduce the amount of sediment transport from point sources that directly or indirectly discharge to the Harbor waters. Phase I should include actions to be implemented throughout the nearshore watershed and specific implementation actions at the Ports. Important components of Phase I should be to secure the relationships and agreements between cooperating parties and to develop a detailed scope of work with priorities.

Potential watershed-wide non-structural BMPs include more frequent and appropriately timed storm drain catch basin cleaning, improved street cleaning by upgrading to vacuum type sweepers, and educating residents and industries about good housekeeping practices. Structural BMPs may include the placement of stormwater treatment devices designed to reduce sediment loading, such as infiltration trenches, vegetated swales, and/or filter strips at critical points in the watershed. Structural BMPs may also include diversion and treatment facilities to divert runoff directly, or provide capture and storage of runoff and then diversion to a location for treatment. Treatment options to reduce sediment could include sand or media filters.

Implementation actions at the Ports should be developed to address different sources that contribute loading to the Harbors such as Port-wide activities and associated control measures for water and sediment, control measures to reduce the discharges from various

	land uses in the Harbors, nearshore discharges, and on-water discharges. The implementation actions described in the *Water Resources Action Plan* (WRAP) adopted by the Port of Los Angeles and the Port of Long Beach represent a range of activities that could be conducted to control discharges of polluted stormwater and contaminated sediments to the Harbors. To meet necessary reductions in sediment bed loads, a Sediment Management Plan shall be developed by the dischargers assigned a sediment bed load LA, the Cities of Los Angeles and Long Beach and the State Lands Commission. Phase I implementation elements for the improvement of the Harbors' sediment quality should be conducted through the continuation of source reduction, source control, and sediment management. Below are proposed implementations actions that may be implemented in Phase I to improve sediment quality at the ports: - *Removal of Contaminated Sediment within Areas of Known Concern.* Planned removal programs are in place for IR Site 7 (former Navy facility in the Port of Long Beach) and Berth 240 (former Southwest Marine facility in the Port of Los Angeles). Contaminated sediment will be removed by Port of Long Beach and Port of Los Angeles. - *Sediment Management Plan, Prioritization Assessment for Contaminated Sediment Management.* Sediment will be evaluated through the Sediment Quality Objective (SQO) process detailed in the Enclosed Bays and Estuaries Plan (i.e., SQO Part 1 as amended). If chemicals within sediments are contributing to an impaired benthic community or toxicity, or fish tissue, then causative agent(s) will be determined using SQO recommended procedures, including SQO Part I (VII. F.). Impacted sediments will be included in the list of sites to be managed. The sites to be managed by the responsible parties will be prioritized for management and coupled with other planned projects when feasible. Prioritized sites shall include known hot spots, including but not limited to Consolidated Slip and Fish Harbor. For these prioritized sites, the sediment management plan shall include concrete actions and milestones, including numeric estimates of load reductions or removal, to remediate these priority areas and shall demonstrate that actions to address prioritized hot spots will be initiated and completed as early as possible during the 20-year TMDL implementation period. This process will prioritize management efforts on sites that have the greatest impact to the overall health of the benthic community and fish tissue, and allow sites with lower risks to be addressed in later phases when opportunities can be coupled to capital projects. As management actions are planned for a contaminated site, site-specific cleanup criteria will be determined following established protocols that are consistent with state and national policy and guidance. The site will then be managed and the improvements confirmed through a sediment monitoring program. - *Superfund Sites.* Two Superfund sites are located in Dominguez Channel Watershed: the Montrose Superfund Site (DDT) and the Del Amo Superfund Site (benzene). Montrose Superfund Site includes multiple operable units (OUs), which are identified as investigation areas potentially containing site-related contamination. These Superfund Sites are located in a community known as Harbor Gateway, which is situated mostly in the City of Los Angeles and partially in unincorporated land in Los Angeles County. Harbor Gateway lies within the Kenwood Drain subwatershed, which discharges stormwater into Torrance Lateral which flows downstream into saline waters of Dominguez Channel Estuary and Consolidated Slip. The Torrance Lateral,

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	Dominguez Channel Estuary and Consolidated Slip (OU2) contain sediments contaminated with multiple pollutants including DDT (potentially from various sources). The US Environmental Protection Agency (US EPA) has been working with other government agencies and local agencies including the City of Los Angeles and Los Angeles County to ensure the protection of both the environment and public health in the areas surrounding these Superfund sites. In August 1999, USEPA and the State of California, which includes the Regional Board, entered into a consent decree concerning the Montrose Superfund site in a case entitled *United States of America and State of California versus Montrose Chemical Corporation of California, et al.*, United States District Court Central District of California, Case No. CV 90-3122-AAH (JRx). The US EPA has not yet reached a final remedial decision with respect to certain of the Montrose Superfund Site Operable Units (OUs) that remain contaminated with DDT, including the on- and near-property soils (OU1), the current storm water pathway (OU2), and the "Neighborhood Areas" (OU4 and OU6). The TMDL, its waste load and load allocations, and other regulatory provisions of this TMDL may be applicable or relevant and appropriate requirements (ARARs) as set forth in Section 121(d) of the Comprehensive Environmental Response, Compensation, and Liability Act (42 U.S.C. §§ 9621(d)) for those OUs. Whether provisions within the TMDL are ARARs will be determined in accordance with CERCLA when USEPA develops Records of Decision for the Superfund sites. The TMDL for DDT should be taken into account in the course of the remedial decision-making process. US EPA Superfund does not need to make a remedial decision prior to individual or collective action (by City of LA and/or County of LA) to clean up sediments within the OU2 pathway. The City of Los Angeles and/or Los Angeles County, should they decide to take action that impacts one of the OUs, shall consult with US EPA's Superfund Division in advance of such action. The goal of consultation is to ensure the proposed sediment cleanup will not aggravate the situation or further interfere with the OU2 site. Detection of DDT compounds in water or sediment samples collected within Torrance Lateral shall trigger additional monitoring, by parties to be determined by the Executive Officer, in coordination with EPA, to evaluate potential contribution from contaminated soils related to upstream Montrose operable units discharging via the Kenwood storm drain. Upon reconsideration of the TMDL, all monitoring results for DDT compounds collected by responsible parties or other entities shall be considered as part of source analysis and to determine potential future allocation(s) that may be necessary to minimize impacts to downstream waters and restore beneficial uses in TMDL waterbodies. ▪ Phase II Phase II should include the implementation of additional BMPs and site remedial actions in the nearshore watershed and in the Harbors, as determined to be effective based on the success of upstream source control, TMDL monitoring data evaluations, WRAP activities implemented during Phase I, and targeted source reduction activities as identified in Phase I. Responsible parties should develop, prioritize, and implement Phase II elements based on data from the TMDL monitoring program and other available information from special studies. Possible actions include additional structural and non-structural BMPs throughout the watershed.

Phase II should include the implementation of site-specific cleanup actions for areas identified as high priority in the Harbor waters and per the Sediment Management Plan.

- Phase III

The purpose of Phase III is to implement secondary and additional remediation actions as necessary to be in compliance with final waste load and load allocations by the end of the TMDL implementation period.

3. Los Angeles River and San Gabriel River

Responsible parties in these watersheds are implementing other TMDLs, which will directly or indirectly support the goals of this TMDL.

- Phase I

Responsible parties for each watershed shall submit a Report of Implementation to describe how current activities support the downstream TMDL.

- Phases II and III

Implementation actions may be developed and required in Phases II and III as necessary to meet the targets in the Greater Harbor waters. TMDLs to allocate contaminant loads between dischargers in the Los Angeles and San Gabriel Rivers watersheds may also be developed, if necessary.

4. Special Studies and Reconsideration of TMDL Targets, Allocations, and Schedule

This TMDL recognizes that as work to understand these waters and the chemical, physical and biological processes, continues, the targets, allocations, and the flow threshold for wet-weather conditions and the implementation actions to reach those targets and allocations may need to be adjusted. Furthermore, if impairments are identified during flow conditions less than the 90th percentile flow in Dominguez Channel and/or Torrance Lateral, additional allocations for those flow conditions will be developed and applied at the TMDL reconsideration. In addition, it may be necessary to make adjustments to the TMDL to be responsive to new State policies including, but not limited to, SQO Part II; toxicity policy; possible changes to air quality criteria and other regulations affecting air quality.

Optional special studies, which could result in changes to these TMDLs, include but are not limited to: studies to further refine the site specific link between sediment pollutant concentrations, depth of bed sediment contamination and fish tissue concentrations; foraging ranges of targeted fish; additional data to refine watershed and hydrodynamic models, including that collected pursuant to this TMDL; additional data on contaminant contributions of the Los Angeles River or San Gabriel River to Greater Harbor waters; stressor identifications; and additional diazinon data. Completion of studies to further refine the site specific link between sediment pollutant concentrations and fish tissue pollutant concentrations and evaluate the range and habitat of specific fish populations will be used to evaluate changes in TMDL targets, WLAs and LAs, and to guide future implementation actions. In addition, further characterization of direct air deposition loadings for heavy metals and legacy pesticides is an optional special study. Allocations of certain pollutants in certain

waterbodies are confounded by the existing estimates of pollutant loading via direct air deposition onto the waterbodies. Additional monitoring of these pollutants at air sampling sites more closely resembling the respective waterbodies will help characterize these loadings. Limited data exist for dry deposition so this study could be extended over longer timeframes. Measurements of wet deposition for each pollutant may also be appropriate to estimate air deposition more completely. Study results could provide data to reconsider pollutant-specific allocations in this TMDL.

Detection of DDT compounds in water or sediment samples collected within Torrance Lateral shall trigger additional monitoring, by parties to be determined by the Executive Officer, in coordination with EPA, to evaluate potential contribution from contaminated soils related to upstream Montrose operable units discharging via the Kenwood storm drain. Upon reconsideration of the TMDL, all monitoring results for DDT compounds collected by responsible parties or other entities shall be considered as part of source analysis and to determine potential future allocation(s) that may be necessary to minimize impacts to downstream waters and restore beneficial uses in TMDL waterbodies.

As allocation-specific data are collected, interim targets for the end of Phase II may be identified.

The TMDL will be reconsidered by the Regional Board at the end of Phase I to consider completed special studies or policy changes.

5. Compliance with Allocations and Attainment of Numeric Targets

Compliance with the TMDL shall be determined through water, sediment, and fish tissue monitoring and comparison with the TMDL waste load and load allocations and numeric targets. Compliance with the sediment TMDL for metals and PAH compounds shall be based on achieving the loads and waste load allocations or, alternatively, demonstrating attainment of the SQO Part 1 through the sediment triad/multiple lines of evidence approach outlined therein. Compliance with the TMDLs for bioaccumulative compounds shall be based on achieving the assigned loads and waste load allocations or, alternatively, by meeting fish tissue targets. If at any point during the implementation plan, 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.

The compliance point for the stormwater WLAs shall be at the storm drain outfall of the permittee's drainage area. Alternatively, if stormwater dischargers select a coordinated compliance monitoring option, the compliance point for the stormwater WLA may be at storm drain outfalls or at a point in the receiving water, which suitably represents the combined discharge of cooperating parties discharging to Dominguez Channel and Greater Los Angeles and Long Beach Harbor waters. Depending on potential BMPs implemented, alternative stormwater compliance points may be proposed by responsible parties subject to approval by the Regional Board Executive Officer. The compliance point(s) for responsible parties receiving load allocations shall be in the receiving waters or the bed sediments of the Dominguez Channel and the Greater Los Angeles and Long Beach waters.

6. Application of Allocations to Responsible Parties

Responsible parties for monitoring and to attain LAs and WLAs for this TMDL include but are

	not limited to: 1. Dominguez Channel Responsible Parties • Dominguez Channel, Torrance Lateral, and Dominguez Channel Estuary MS4 Permittees ➢ Los Angeles County ➢ Los Angeles County Flood Control District ➢ Caltrans ➢ City of Carson ➢ City of Compton ➢ City of El Segundo ➢ City of Gardena ➢ City of Hawthorne ➢ City of Inglewood ➢ City of Lawndale ➢ City of Long Beach ➢ City of Los Angeles ➢ City of Manhattan Beach ➢ City of Redondo Beach ➢ City of Torrance • Individual and General Stormwater Permit Enrollees • Other Non-stormwater Permittees • Dominguez Channel Estuary Subgroup for bed sediment and fish: ➢ Los Angeles County ➢ Los Angeles County Flood Control District ➢ Caltrans ➢ City of Carson ➢ City of Compton ➢ City of Gardena ➢ City of Los Angeles ➢ City of Long Beach ➢ City of Torrance 2. Greater Los Angeles and Long Beach Harbor Waters Responsible Parties • Greater Los Angeles and Long Beach Harbor Waters MS4 Permittees ➢ Los Angeles County ➢ Los Angeles County Flood Control District ➢ Caltrans ➢ Bellflower ➢ City of Lakewood ➢ City of Long Beach ➢ City of Los Angeles ➢ City of Paramount ➢ City of Signal Hill ➢ City of Rolling Hills ➢ City of Rolling Hills Estates ➢ Rancho Palos Verdes • City of Los Angeles (including the Port of Los Angeles) • City of Long Beach (including the Port of Long Beach) • State Lands Commission

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	• Individual and General Stormwater Permit Enrollees
	• Other Non-stormwater Permittees, including City of Los Angeles (TIWRP)
	• <u>Los Angeles River Estuary Subgroup for bed sediment and fish:</u>
	  ➢ Los Angeles County
	  ➢ Los Angeles County Flood Control District
	  ➢ City of Long Beach
	  ➢ City of Los Angeles
	  ➢ City of Signal Hill
	  ➢ Caltrans
	• Consolidated Slip Responsible Parties subgroup[4]
	  ➢ Consolidated Slip MS4 Permittees
	  ▪ Los Angeles County
	  ▪ Los Angeles County Flood Control District
	  ▪ City of Los Angeles
	
	3. Los Angeles River and San Gabriel River Watershed TMDLs Responsible Parties
	  ➢ Los Angeles River and San Gabriel River metals TMDLs responsible parties (For list of responsible parties, see Chapter 7-13 herein and US EPA, "Total Maximum Daily Loads for Metals and Selenium: San Gabriel River and Impaired Tributaries", March 26, 2007.)

4 US EPA is the regulatory oversight agency pursuant to CERCLA with respect to the two Superfund sites within the Consolidated Slip subarea, but is not identified as a Responsible Party under the TMDL. As the regulatory oversight agency, US EPA is responsible for choosing an appropriate remedy for these sites. Furthermore, under CERCLA, US EPA is responsible for assuring that the CERCLA PRPs clean up the site in compliance with CERCLA and applicable or relevant and appropriate requirements (ARARs) (CERCLA section 121(d)).

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Table 7-40.2 Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants TMDL: Implementation Schedule

Task Number	Task	Responsible Party	Deadline
1	Interim allocations are achieved.	All Responsible Parties	Effective date of the TMDL
2	Submit a Monitoring Plan to the Los Angeles Regional Board for Executive Officer approval.	Dominguez Channel Responsible parties; Greater Harbors Responsible Parties; Consolidated Slip Responsible Parties subgroup; Los Angeles and San Gabriel River Responsible Parties	20 months after effective date of the TMDL
3	Implement Monitoring Plan	Dominguez Channel Responsible parties; Greater Harbors Responsible Parties; Consolidated Slip Responsible Parties subgroup; Los Angeles and San Gabriel River Responsible Parties	6 months after monitoring plan approved by Executive Officer.
4	Submit annual monitoring reports to the Los Angeles Regional Board.	All Responsible parties	15 months after monitoring starts and annually thereafter
5	Submit an Implementation Plan and Contaminated Sediment Management Plan (CSMP). The Implementation Plan and CSMP shall be circulated for public review for 30 days. The CSMP shall include concrete milestones with numeric estimates of load reductions or removal, including milestones for remediating hot spots, including but not limited to Dominguez Channel Estuary, Consolidated Slip and Fish Harbor, for Executive Officer approval. The Executive Officer shall consider the Consent Decree for the Montrose Superfund site in determining whether to approve the CSMPs.	Dominguez Channel Responsible parties; Greater Harbors Responsible Parties; Consolidated Slip Responsible Parties subgroup	2 years after effective date of the TMDL
6	Submit Report of Implementation to the Los Angeles Regional Board.	Los Angeles and San Gabriel River Responsible Parties	2 years after effective date of the TMDL
7	Submit annual implementation reports to the Los Angeles Regional Board. Report on implementation progress and demonstrate progress toward meeting the assigned LAs and WLAs.	All Responsible parties	3 years after effective date of the TMDL and annually thereafter
8	Complete Phase I of TMDL Implementation Plan and Sediment Management Plan.	Dominguez Channel Responsible parties; Greater Harbors Responsible Parties;	5 years after effective date of the TMDL

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Task Number	Task	Responsible Party	Deadline
		Consolidated Slip Responsible Parties subgroup	
9	Submit updated Implementation Plan and Contaminated Sediment Management Plan.	Dominguez Channel Responsible parties; Greater Harbors Responsible Parties; Consolidated Slip Responsible Parties subgroup	5 years after effective date of the TMDL
10	Regional Board will reconsider targets, WLAs, and LAs based on new policies, data or special studies. Regional Board will consider requirements for additional implementation or TMDLs for Los Angeles and San Gabriel Rivers and interim targets and allocations for the end of Phase II.	Regional Board	6 years after the effective date of the TMDL
11	Report on status of implementation and scope and schedule of remaining Phase II implementation actions to Regional Board.	All Responsible parties	10 years after the effective date of the TMDL
12	Complete Phase II of TMDL Implementation Plan and Sediment Management Plan.	Dominguez Channel Responsible parties; Greater Harbors Responsible Parties; Consolidated Slip Responsible Parties subgroup	15 years after effective date of the TMDL
13	Complete Phase III of TMDL Implementation Plan and Sediment Management Plan.	Dominguez Channel Responsible parties; Greater Harbors Responsible Parties; Consolidated Slip Responsible Parties subgroup	20 years after effective date of the TMDL
14	Demonstrate attainment of LAs and WLAs using the means identified under Waste Load and Load Allocations in Table 7-40.1	All Responsible parties	20 years after effective date of the TMDL

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