D. TMDLs in Los Angeles River Watershed Management Area

1. Los Angeles River Watershed Trash TMDL

a) Permittees subject to the provisions below are identified in Table D.

b) Permittees shall comply with the final water quality-based effluent limitation of zero trash discharged to the Los Angeles River no later than September 30, 2016 and every year thereafter.

c) Permittees shall comply with interim and final water quality-based effluent limitations for trash discharged to the Los Angeles River, per the schedule below:

Los Angeles River Watershed Trash Effluent Limitations[1] per Storm Year[2] (gallons of uncompressed trash)

Permittees	2012 (30%)	2013 (20%)	2014 (10%)	2015 (3.3%)	2016[3] (0%)
Alhambra	11971	7981	3990	1317	0
Arcadia	15032	10022	5011	1654	0
Bell	4808	3205	1603	529	0
Bell Gardens	4050	2700	1350	446	0
Bradbury	1283	855	428	141	0
Burbank	27777	18518	9259	3055	0
Calabasas	6752	4501	2251	743	0
Carson	2050	1366	683	225	0
Commerce	17620	11747	5873	1938	0
Compton	15957	10638	5319	1755	0
Cudahy	1781	1187	594	196	0
Downey	11719	7813	3906	1289	0
Duarte	3663	2442	1221	403	0
El Monte	12662	8442	4221	1393	0
Glendale	42094	28063	14031	4630	0
Hidden Hills	1099	733	366	121	0
Huntington Park	5748	3832	1916	632	0
Irwindale	3706	2470	1235	408	0
La Cañada Flintridge	10049	6699	3350	1105	0
Los Angeles	412454	274969	137485	45370	0
Los Angeles County	93067	62045	31022	10237	0
Lynwood	8460	5640	2820	931	0
Maywood	1839	1226	613	202	0
Monrovia	14006	9337	4669	1541	0
Montebello	15111	10074	5037	1662	0
Monterey Park	11670	7780	3890	1284	0
Paramount	8236	5490	2745	906	0
Pasadena	33599	22400	11200	3696	0
Pico Rivera	4186	2791	1395	460	0
Rosemead	8192	5461	2731	901	0
San Fernando	4184	2789	1395	460	0
San Gabriel	6103	4069	2034	671	0
San Marino	4317	2878	1439	475	0
Santa Clarita	270	180	90	30	0

[1] Effluent limitations are expressed as allowable trash discharge relative to baseline Waste Load Allocations specified in Table 7-2.2 of the Basin Plan.
[2] Storm year is defined as October 1 to September 30 herein.
[3] Permittees shall achieve their final effluent limitation of zero trash discharge for the 2015-2016 storm year and every year thereafter.

Permittees	2012 (30%)	2013 (20%)	2014 (10%)	2015 (3.3%)	2016[3] (0%)
Sierra Madre	3483	2322	1161	383	0
Signal Hill	2830	1887	943	311	0
Simi Valley	41	27	14	5	0
South El Monte	4800	3200	1600	528	0
South Gate	13171	8781	4390	1449	0
South Pasadena	4472	2981	1491	492	0
Temple City	5272	3514	1757	580	0
Vernon	14161	9441	4720	1558	0

Los Angeles River Watershed Trash Effluent Limitations[4] per Storm Year[5] (pounds of drip-dry trash)

Permittees	2012 (30%)	2013 (20%)	2014 (10%)	2015 (3.3%)	2016[6] (0%)
Alhambra	20628	13752	6876	2269	0
Arcadia	27911	18607	9304	3070	0
Bell	7601	5067	2534	836	0
Bell Gardens	7011	4674	2337	771	0
Bradbury	3648	2432	1216	401	0
Burbank	51117	34078	17039	5623	0
Calabasas	15669	10446	5223	1724	0
Carson	3062	2042	1021	337	0
Commerce	25644	17096	8548	2821	0
Compton	25907	17271	8636	2850	0
Cudahy	3018	2012	1006	332	0
Downey	20552	13701	6851	2261	0
Duarte	7106	4737	2369	782	0
El Monte	20480	13653	6827	2253	0
Glendale	88049	58700	29350	9685	0
Hidden Hills	3246	2164	1082	357	0
Huntington Park	9279	6186	3093	1021	0
Irwindale	5373	3582	1791	591	0
La Cañada Flintridge	22124	14749	7375	2434	0
Los Angeles	771750	514500	257250	84893	0
Los Angeles County	195542	130361	65181	21510	0
Lynwood	13940	9293	4647	1533	0
Maywood	3165	2110	1055	348	0
Monrovia	30296	20198	10099	3333	0
Montebello	25112	16741	8371	2762	0
Monterey Park	21137	14091	7046	2325	0
Paramount	13347	8898	4449	1468	0
Pasadena	62254	41503	20751	6848	0
Pico Rivera	6765	4510	2255	744	0
Rosemead	14213	9476	4738	1563	0
San Fernando	6923	4615	2308	762	0
San Gabriel	10931	7287	3644	1202	0
San Marino	8744	5829	2915	962	0
Santa Clarita	698	465	233	77	0
Sierra Madre	7558	5038	2519	831	0
Signal Hill	4266	2844	1422	469	0

[4] Effluent limitations are expressed as allowable trash discharge relative to baseline Waste Load Allocations specified in Table 7-2.2 of the Basin Plan.
[5] Storm year is defined as October 1 to September 30 herein.
[6] Permittees shall achieve their final effluent limitation of zero trash discharge for the 2015-2016 storm year and every year thereafter.

Permittees	2012 (30%)	2013 (20%)	2014 (10%)	2015 (3.3%)	2016[6] (0%)
Simi Valley	103	69	34	11	0
South El Monte	7296	4864	2432	803	0
South Gate	21700	14467	7233	2387	0
South Pasadena	8507	5671	2836	936	0
Temple City	9546	6364	3182	1050	0
Vernon	20044	13363	6681	2205	0

d) Permittees shall comply with the interim and final water quality-based effluent limitations for trash in 3(b) and 3(c) above per the provisions in Part 7.X [*Permit Provisions to Implement Trash TMDLs*].

2. Los Angeles River Nitrogen Compounds and Related Effects TMDL

a) Permittees subject to the provisions below are identified in Table D.

b) Permittees shall comply with the following water quality-based effluent limitations as of the effective date of this Order:

Water Body	NH_3-N (mg/L)		NO_3-N (mg/L)	NO_2-N (mg/L)	NO_3-N+NO_2-N (mg/L)
	One-hour Average	Thirty-day Average	Thirty-day Average	Thirty-day Average	Thirty-day Average
Los Angeles River above Los Angeles-Glendale WRP (LAG)	4.7	1.6	8.0	1.0	8.0
Los Angeles River below LAG	8.7	2.4	8.0	1.0	8.0
Los Angeles Tributaries	10.1	2.3	8.0	1.0	8.0

3. Los Angeles River and Tributaries Metals TMDL

a) Permittees subject to the provisions below are identified in Table D.

b) Final Water Quality-Based Effluent Limitations

(1) Permittees shall comply with the following grouped[7] dry weather[8] water quality-based effluent limitations no later than January 11, 2024, expressed as total recoverable metals.

Waterbody	Effluent Limitations Daily Maximum (kg/day)		
	Copper	Lead	Zinc
LA River Reach 6	0.53	0.33	---
LA River Reach 5	0.05	0.03	---
LA River Reach 4	0.32	0.12	---
LA River Reach 3	0.06	0.03	---
LA River Reach 2	0.13	0.07	---
LA River Reach 1	0.14	0.07	---

[7] The dry weather water quality-based effluent limitations are grouped-based and shared by the MS4 Permittees, which includes LA MS4 Permittees, Long Beach MS4 Permittee and Caltrans.
[8] Dry weather is defined as any day when the maximum daily flow in the Los Angeles River is less than 500 cfs measured at the Wardlow gage station.

Bell Creek	0.06	0.04	---
Tujunga Wash	0.001	0.0002	---
Burbank Channel	0.15	0.07	---
Verdugo Wash	0.18	0.10	---
Arroyo Seco	0.01	0.01	---
Rio Hondo Reach 1	0.01	0.006	0.16
Compton Creek	0.04	0.02	---

(2) In lieu of calculating loads, Permittees may demonstrate compliance with the following concentration-based water quality-based effluent limitations during dry weather no later than January 11, 2024, expressed as total recoverable metals:

Waterbody	**Effluent Limitations Daily Maximum (µg total recoverable metals/L)**		
	Copper	**Lead**	**Zinc**
LA River Reach 5, 6 and Bell Creek	30	19	---
LA River Reach 4	26	10	---
LA River Reach 3 above LA-Glendale WRP and Verdugo Wash	23	12	---
LA River Reach 3 below LA-Glendale WRP	26	12	---
Burbank Western Channel (above WRP)	26	14	---
Burbank Western Channel (below WRP)	19	9.1	---
LA River Reach 2 and Arroyo Seco	22	11	---
LA River Reach 1	23	12	---
Compton Creek	19	8.9	---
Rio Hondo Reach 1	13	5.0	131

(3) Permittees shall comply with the following grouped[9] wet weather[10] water quality-based effluent limitations no later than January 11, 2028, expressed as total recoverable metals discharged to all reaches of the Los Angeles River and its tributaries:

Constituent	**Effluent Limitation Daily Maximum (kg/day)**

[9] The wet weather water quality-based effluent limitations are grouped-based and shared by the MS4 Permittees, which includes LA MS4 Permittees, and Long Beach MS4 Permittee.
[10] Wet weather is defined as any day when the maximum daily flow in the Los Angeles River is equal to or greater than 500 cfs measured at the Wardlow gage station.

Cadmium	2.8×10^{-9} x daily volume (L) – 1.8
Copper	1.5×10^{-8} x daily volume (L) – 9.5
Lead	5.6×10^{-8} x daily volume (L) – 3.85
Zinc	1.4×10^{-7} x daily volume (L) – 83

c) Permittees shall comply with interim and final water quality-based effluent limitations for metals discharged to the Los Angeles River and its tributaries, per the schedule below:

Deadline	**Total Drainage Area Served by the MS4 required to meet the water quality-based effluent limitations (%)**	
	Dry weather	**Wet weather**
January 11, 2012	50	25
January 11, 2020	75	--
January 11, 2024	100	50
January 11, 2028	100	100

4. Los Angeles River Watershed Bacteria TMDL

a) Permittees subject to the provisions below are identified in Table D.

b) Permittees shall comply with the following final water quality-based effluent limitations for discharges to the Los Angeles River and its tributaries during dry weather according to the schedule in Table 1, and during wet weather no later than March 23, 2037:

Constituent	**Effluent Limitation (MPN or cfu)**	
	Daily Maximum	**Geometric Mean**
E. coli	235/100 mL	126/100 mL

c) Permittees shall comply with the following grouped[11] interim dry weather single sample bacteria water quality-based effluent limitations for specific river segments and tributaries as listed in the table, below, according to the schedule in Table 1:

River Segment or Tributary	**Daily Maximum *E. coli* Load (10^9 MPN/Day)**
Los Angeles River Segment A (Willow to Rosecrans)	301

[11] The interim dry weather water quality-based effluent limitations are group-based and shared among all MS4 Permittees, which includes LA MS4 Permittees, Long Beach MS4 Permittees, and Caltrans.

Los Angeles River Segment B (Rosecrans to Figueroa)	518
Los Angeles River Segment C (Figueroa to Tujunga)	463
Los Angeles River Segment D (Tujunga to Balboa)	454
Los Angeles River Segment E (Balboa to headwaters)	32
Aliso Canyon Wash	23
Arroyo Seco	24
Bell Creek	14
Bull Creek	9
Burbank Western Channel	86
Compton Creek	7
Dry Canyon	7
McCoy Canyon	7
Rio Hondo	2
Tujunga Wash	10
Verdugo Wash	51

d) Receiving Water Limitations

(1) Permittees shall comply with the following grouped[12] final single sample bacteria receiving water limitations for discharges to the Los Angeles River and its tributaries during dry weather according to the schedule in Table 1, and during wet weather no later than March 23, 2037:

Time Period	**Annual Allowable Exceedance Days of the Single Sample Objective (days)**	
	Daily Sampling	**Weekly Sampling**
Dry Weather	5	1
Non-HFS[13] Waterbodies Wet Weather	15	2
HFS Waterbodies Wet Weather	10 (not including HSF days)	2 (not including HSF days)

(2) Permittees shall comply with the following geometric mean receiving water limitation for discharges to the Los Angeles River and its tributaries

[12] The final receiving water limitations are group-based and shared among all MS4 Permittees, which includes LA MS4, Long Beach MS4, and Caltrans.
[13] HFS stands for high flow suspension as defined in Chapter 2 of the Basin Plan.

during dry weather according to the schedule in Table 1, and during wet weather no later than March 23, 2037:

Constituent	Geometric Mean (MPN or cfu)
E. coli	126/100 mL

Table 1: Los Angeles River Bacteria Implementation Schedule for Dry Weather
Italics in this Table refer to Permittees using an alternative compliance plan instead of an LRS.

Implementation Action	Responsible Parties	Deadline
SEGMENT B (upper and middle Reach 2 – Figueroa Street to Rosecrans Avenue)		
First phase – Segment B		
Submit a Load Reduction Strategy (LRS) for Segment B *(or submit an alternative compliance plan)*	MS4 Permittees discharging to Segment B	September 23, 2014
Complete implementation of LRS	MS4 Permittees discharging to Segment B, if using LRS	March 23, 2019
Achieve interim (or final) water quality-based effluent limitations and submit report to Regional Water Board	MS4 Permittees discharging to Segment B, if using LRS	March 23, 2022
Achieve final water quality-based effluent limitations or demonstrate that non-compliance is due to upstream contributions and submit report to Regional Water Board	*MS4 Permittees discharging to Segment B, if using alternative compliance plan*	*March 23, 2022*
Second phase, if necessary – Segment B for LRS approach only		
Submit a new LRS	MS4 Permittees discharging to Segment B	March 23, 2023
Complete implementation of LRS	MS4 Permittees discharging to Segment B, if using LRS	September 23, 2026
Achieve final water quality-based effluent limitations in Segment B or demonstrate that non-compliance is only due to upstream contributions and submit report to Regional Water Board	MS4 Permittees discharging to Segment B, if using LRS	September 23, 2028
SEGMENT B TRIBUTARIES (Rio Hondo and Arroyo Seco)		
First phase – Segment B Tributaries (Rio Hondo and Arroyo Seco)		
Submit a Load Reduction Strategy (LRS) for Segment B tributaries *(or submit an alternative compliance plan)*	MS4 Permittees discharging to Segment B tributaries	March 23, 2016

Implementation Action	Responsible Parties	Deadline
Complete implementation of LRS	MS4 Permittees discharging to Segment B tributaries, if using LRS	September 23, 2020
Achieve interim (or final) water quality-based effluent limitations and submit report to Regional Water Board	MS4 Permittees discharging to Segment B tributaries, if using LRS	September 23, 2023
Achieve final water quality-based effluent limitations or demonstrate that non-compliance is only due to upstream contributions and submit report to Regional Water Board	*MS4 Permittees discharging to Segment B tributaries, if using alternative compliance plan*	*September 23, 2023*
Second phase, if necessary – Segment B Tributaries (Rio Hondo and Arroyo Seco) for LRS approach only		
Submit a new LRS	MS4 Permittees discharging to Segment B tributaries	September 23, 2024
Complete implementation of LRS	MS4 Permittees discharging to Segment B tributaries, if using LRS	March 23, 2028
Achieve final water quality-based effluent limitations Segment B tributaries or demonstrate that non-compliance is due to upstream contributions and submit report to Regional Water Board	MS4 Permittees discharging to Segment B tributaries, if using LRS	March 23, 2030
SEGMENT A (lower Reach 2 and Reach 1 – Rosecrans Avenue to Willow Street)		
First phase – Segment A		
Submit a Load Reduction Strategy (LRS) for Segment A (or submit an alternative compliance plan)	MS4 Permittees discharging to Segment A	September 23, 2016
Complete implementation of LRS	MS4 Permittees discharging to Segment A, if using LRS	March 23, 2021
Achieve interim (or final) water quality-based effluent limitations and submit report to Regional Water Board	MS4 Permittees discharging to Segment A, if using LRS	March 23, 2024
Achieve final water quality-based effluent limitations or demonstrate that non-compliance is due to upstream contributions and submit report to Regional Water Board	*MS4 Permittees discharging to Segment A, if using alternative compliance plan*	*March 23, 2024*
Second phase, if necessary – Segment A for LRS approach only		
Submit a new LRS	MS4 Permittees discharging to Segment A	March 23, 2025

Implementation Action	Responsible Parties	Deadline
Complete implementation of LRS	MS4 Permittees discharging to Segment A, if using LRS	September 23, 2029
Achieve final water quality-based effluent limitations in Segment A or demonstrate that non-compliance is due to upstream contributions and submit report to Regional Water Board	MS4 Permittees discharging to Segment A, if using LRS	September 23, 2031
SEGMENT A TRIBUTARY (Compton Creek)		
First phase – Segment A Tributary		
Submit a Load Reduction Strategy (LRS) for Segment A tributary (or submit an alternative compliance plan)	MS4 Permittees discharging to Segment A tributary	March 23, 2018
Complete implementation of LRS	MS4 Permittees discharging to Segment A tributary if using LRS	September 23, 2022
Achieve interim (or final) water quality-based effluent limitations and submit report to Regional Water Board	MS4 Permittees discharging to Segment A tributary if using LRS	September 23, 2025
Achieve final water quality-based effluent limitations or demonstrate that non-compliance is due to upstream contributions and submit report to Regional Water Board	*MS4 Permittees discharging to Segment A tributary, if using alternative compliance plan*	*September 23, 2025*
Second phase, if necessary – Segment A Tributary for LRS approach only		
Submit a new LRS	MS4 Permittees discharging to Segment A tributary	September 23, 2026
Complete implementation of LRS	MS4 Permittees discharging to Segment A tributary, if using LRS	March 23, 2030
Achieve final water quality-based effluent limitations in Segment A tributary or demonstrate that non-compliance is due to upstream contributions and submit report to Regional Water Board	MS4 Permittees discharging to Segment A tributary, if using LRS	March 23, 2032
SEGMENT E (Reach 6 – LA River headwaters [confluence with Bell Creek and Calabasas Creek] to Balboa Boulevard)		
First phase – Segment E		
Submit a Load Reduction Strategy (LRS) for Segment E *(or submit an alternative compliance plan)*	MS4 Permittees discharging to Segment E	September 23, 2017

Implementation Action	Responsible Parties	Deadline
Complete implementation of LRS	MS4 Permittees discharging to Segment E, if using LRS	March 23, 2022
Achieve interim (or final) water quality-based effluent limitations and submit report to Regional Water Board	MS4 Permittees discharging to Segment E, if using LRS	March 23, 2025
Achieve final water quality-based effluent limitations or demonstrate that non-compliance is due to upstream contributions and submit report to Regional Water Board	*MS4 Permittees discharging to Segment E, if using alternative compliance plan*	*March 23, 2025*
Second phase, if necessary –Segment E for LRS approach only		
Submit a new LRS	MS4 Permittees discharging to Segment E	March 23, 2026
Complete implementation of LRS	MS4 Permittees discharging to Segment E, if using LRS	September 23, 2029
Achieve final Water quality-based effluent limitations in Segment E or demonstrate that non-compliance is due to upstream contributions and submit report to Regional Water Board	MS4 Permittees discharging to Segment E, if using LRS	September 23, 2031
SEGMENT E TRIBUTARIES (Dry Canyon Creek, McCoy Creek, Bell Creek, and Aliso Canyon Wash)		
First phase – Segment E Tributaries		
Submit a Load Reduction Strategy (LRS) for Segment E tributaries (or submit an alternative compliance plan)	MS4 Permittees discharging to Segment E tributaries	September 23, 2021
Complete implementation of LRS	MS4 Permittees discharging to Segment E tributaries if using LRS	March 23, 2026
Achieve interim (or final) water quality-based effluent limitations and submit report to Regional Water Board	MS4 Permittees discharging to Segment E tributaries, if using LRS	March 23, 2029
Achieve final water quality-based effluent limitations or demonstrate that non-compliance is due to upstream contributions and submit report to Regional Water Board	*MS4 Permittees discharging to Segment E tributaries, if using alternative compliance plan*	*March 23, 2029*
Second phase, if necessary – Segment E Tributaries for LRS approach only		
Submit a new LRS	MS4 Permittees discharging to Segment E tributaries	March 23, 2030

Implementation Action	Responsible Parties	Deadline
Complete implementation of LRS	MS4 Permittees discharging to Segment E tributaries, if using LRS	September 23, 2033
Achieve final water quality-based effluent limitations in Segment E tributaries or demonstrate that non-compliance is due to upstream contributions and submit report to Regional Water Board	MS4 Permittees discharging to Segment E tributaries, if using LRS	September 23, 2035
SEGMENT C (lower Reach 4 and Reach 3 – Tujunga Avenue to Figueroa Street) SEGMENT C TRIBUTARIES (Tujunga Wash, Burbank Western Channel, and Verdugo Wash) SEGMENT D (Reach 5 and upper Reach 4 – Balboa Boulevard to Tujunga Avenue) SEGMENT D TRIBUTARIES (Bull Creek)		
First phase – Segment C, Segment C Tributaries, Segment D, Segment D tributaries		
Submit a Load Reduction Strategies (LRS) for Segment C, Segment C tributaries, Segment D, Segment D tributaries *(or submit an alternative compliance plan)*	MS4 Permittees discharging to Segment C, Segment C tributaries, Segment D, Segment D tributaries	March 23, 2023
Complete implementation of LRS	MS4 Permittees discharging to Segment C, Segment C tributaries, Segment D, Segment D tributaries, if using LRS	September 23, 2027
Achieve interim (or final) water quality-based effluent limitations and submit report to Regional Water Board	MS4 Permittees discharging to Segment C, Segment C tributaries, Segment D, Segment D tributaries, if using LRS	September 23, 2030
Achieve final water quality-based effluent limitations or demonstrate that non-compliance is due to upstream contributions and submit report to Regional Water Board	*MS4 Permittees discharging to Segment C, Segment C tributaries, Segment D, Segment D tributaries, if using alternative compliance plan*	*September 23, 2030*
Second phase, if necessary - Segment C, Segment C Tributaries, Segment D, Segment D Tributaries for LRS approach only		
Submit a new LRS	MS4 Permittees discharging to Segment C, Segment C tributaries, Segment D, Segment D tributaries	September 23, 2031
Complete implementation of LRS	MS4 Permittees discharging to Segment C, Segment C tributaries, Segment D, Segment D tributaries if using LRS	March 23, 2035
Achieve final water quality-based effluent limitations in Segment C, Segment C tributaries, Segment D, Segment D tributaries or demonstrate that non-compliance is due to upstream contributions and submit report to Regional Water Board	MS4 Permittees discharging to Segment C, Segment C tributaries, Segment D, Segment D tributaries if using LRS	March 23, 2037

e) Compliance Determination

(1) Permittees may demonstrate compliance with the final dry weather limitations by demonstrating that final receiving water limitations are met in the receiving waters or by demonstrating one of the following conditions at outfalls to the receiving waters:

(i) Flow-weighted concentration of *E. coli* in MS4 discharges during dry weather is less than or equal to 235 MPN/100mL, based on a weighted-average using flow rates from all measured outfalls; or

(ii) Zero discharge during dry weather.

(2) In addition, individual Permittees or subgroups of Permittees may differentiate their dry weather discharges from other dischargers or upstream contributions by demonstrating one of the following conditions at outfalls to the receiving waters or at segment, tributary or jurisdictional boundaries:

(i) The flow-weighted concentration of *E. coli* in a Permittee's individual discharge or in a group of Permittees' collective discharge during dry weather is less than or equal to 235 MPN/100mL, based on a weighted-average using flow rates from all measured outfalls; or

(ii) Zero discharge from a Permittee's individual outfall(s) or from a group of Permittees' outfall(s) during dry weather; or

(iii) Demonstration that the MS4 loading of *E. coli* to the segment or tributary during dry weather is less than or equal to the calculated loading rate that would not cause or contribute to exceedances based on the loading capacity representative of conditions in the River at the time of compliance.

(3) The interim dry weather water quality-based effluent limitations are group-based, shared among all MS4 Permittees that drain to a segment or tributary. However, the interim dry weather water quality-based effluent limitations may be distributed based on proportional drainage area, upon approval of the Executive Officer.

(4) By March 23, 2022, Permittees shall submit an implementation plan for wet weather with interim milestones.

5. Long Beach City Beaches and Los Angeles River Estuary Bacteria TMDL

a) Permittees subject to the provisions below are identified in Table D.

b) Permittees shall comply with the following final water quality-based effluent limitations for discharges to the Los Angeles River Estuary as of the effective date of this Order:

Constituent	Effluent Limitations (MPN or cfu)	
	Daily Maximum	Geometric Mean
Total coliform*	10,000/100 mL	1,000/100 mL
Fecal coliform	400/100 mL	200/100 mL
Enterococcus	104/100 mL	35/100 mL

* Total coliform density shall not exceed a daily maximum of 1,000/100 mL, if the ratio of fecal-to-total coliform exceeds 0.1.

c) Receiving Water Limitations

(1) Permittees shall comply with the following grouped[14] final single sample bacteria receiving water limitations for the Los Angeles River Estuary as of the effective date of this Order:

Time Period	Annual Allowable Exceedance Days of the Single Sample Objective (days)	
	Daily sampling	Weekly sampling
Summer Dry-Weather (April 1 to October 31)	0	0
Winter Dry-Weather (November 1 to March 31)	9	2
Wet Weather[15]	17	3

(2) Permittees shall comply with the following geometric mean receiving water limitations for all monitoring stations in the Los Angeles River Estuary as of the effective date of this Order:

Constituent	Geometric Mean (MPN or cfu)
Total coliform	1,000/100 mL
Fecal coliform	200/100 mL
Enterococcus	35/100 mL

d) Compliance Determination

(1) Permittees may demonstrate compliance with the final dry or weather limitations by demonstrating that final receiving water limitations are met

[14] The final receiving water limitations are group-based and shared among all MS4 Permittees, which includes LA MS4 Permittees, Long Beach MS4 Permittees, and Caltrans.
[15] Wet weather is defined as days with 0.1 inch of rain or greater and the three days following the rain event.

in the receiving waters or by demonstrating one of the following conditions at outfalls to the receiving waters:

(i) Flow-weighted concentration of bacterial indicators in MS4 discharges during dry or wet weather is less than or equal to the water quality-based effluent limitations in part 5.b. above, based on a weighted-average using flow rates from all measured outfalls; or

(ii) Zero discharge during dry weather.

(2) In addition, individual Permittees or subgroups of Permittees may differentiate their dry or wet weather discharges from other dischargers or upstream contributions by demonstrating one of the following conditions at outfalls to the receiving waters or at segment, tributary or jurisdictional boundaries:

(i) The flow-weighted concentration of bacterial indicators in a Permittee's individual discharge or in a group of Permittees' collective discharge during dry or wet weather is less than or equal to the water quality-based effluent limitations in part 5.b. above, based on a weighted-average using flow rates from all measured outfalls; or

(ii) Zero discharge from a Permittee's individual outfall(s) or from a group of Permittees' outfall(s) during dry weather.

6. Los Angeles Area Lakes TMDLs

a) Lake Calabasas Nutrient TMDL

(1) Permittees subject to the provisions below are identified in Table D.

(2) Permittees may be deemed in compliance with water quality-based effluent limitations during both wet and dry weather by demonstrating reduction of total nitrogen and total phosphorous on an annual mass basis measured at the storm drain outfall of the Permittee's drainage area. The annual mass-based allocation shall be equal to monthly average concentrations of 0.1 mg/L total phosphorus and 1.0 mg/L total nitrogen based on approved flow conditions. Permittees shall comply with the annual mass allocation based on current flow conditions as of the effective date of this Order:

Permittee	Total Phosphorus (lb-P/yr)[16,17]	Total Nitrogen (lb-N/yr)[16,17]
City of Calabasas	48.5	220

(3) The following concentration based water quality-based receiving water limitations apply during both wet and dry weather if:

[16] Measured as a summer average (May – September) and annual average.
[17] Measured at the point of discharge.

- The responsible jurisdiction requests that the concentration-based receiving water limits apply and provides to U.S. EPA and the Los Angeles Water Board a Lake Management Plan describing actions that will be implemented and cause the applicable water quality criteria for ammonia, dissolved oxygen, and pH targets to be met.
- The Los Angeles Water Board Executive Officer approves the request. The concentration-based receiving water limitations are not to be exceeded as a summer average (May-September) and annual average.
- U.S. EPA does not object to the Los Angeles Water Boards decision within sixty days of receiving notice.
- The concentration-based receiving water limits must be met in the lake. However, if the applicable water quality criteria for ammonia, dissolved oxygen, pH, and the chlorophyll *a* targets are met, then the total phosphorus and total nitrogen limits are considered attained.

Permittee	Total Phosphorus Monthly Average (mg-P/L)[18,19]	Total Nitrogen Monthly Average (mg-N/L)[18,19]
City of Calabasas	0.1	1.0

b) Echo Park Lake Nutrient TMDL

(1) Permittees subject to the provisions below are identified in Table D.

(2) Permittees may be deemed in compliance with water quality-based effluent limitations during both wet and dry weather by demonstrating reduction of total nitrogen and total phosphorous on an annual mass basis measured at the storm drain outfall of the Permittee's drainage area. The annual mass-based allocation shall be equal to monthly average concentrations of 0.1 mg/L total phosphorus and 1.0 mg/L total nitrogen based on approved flow conditions. Permittees shall comply with the annual mass allocation based on current flow conditions as of the effective date of this Order:

Subwatershed	Permittee	Total Phosphorus (lb-P/yr)[19,20]	Total Nitrogen (lb-N/yr)[19,20]
Northern	City of Los Angeles	24.7	156
Southern	City of Los Angeles	7.129	49.69

[18] Measured as an in-lake concentration.
[19] Measured as a summer average (May – September) and annual average.
[20] Measured at the point of discharge.

(3) In assessing compliance with wasteload allocations, responsible jurisdictions assigned both northern and southern subwatershed allocations may have their allocations combined.

c) Echo Park Lake PCBs TMDL

(1) Permittees subject to the provisions below are identified in Table D.

(2) Permittees shall comply with the following water quality-based effluent limitations as of the effective date of this Order:

Subwatershed	Permittee	Total PCBs associated with Suspended Sediment (ug/kg dry weight)[21,22]	Total PCBs in the Water Column (ng/L)[21,22]
Northern	City of Los Angeles	1.77	0.17
Southern	City of Los Angeles	1.77	0.17

(3) Permittees may comply with the following alternative effluent limitations if the responsible jurisdictions submit to U.S. EPA and the Regional Board material describing that the fish tissue target of 3.6 ppb wet weight has been met for the preceding three or more years. A demonstration that the fish tissue target has been met in any given year must at a minimum include a composite sample of skin of fillets from at least five common carp each measuring at least 350 mm in length and it is approved by the Los Angeles Water Board Executive Officer and U.S. EPA does not object within 60 days of receiving notice:

Subwatershed	Permittee	Total PCBs associated with Suspended Sediment (ug/kg dry weight)[22,23]	Total PCBs in the Water Column (ng/L)[21,22]
Northern	City of Los Angeles	59.8	0.17
Southern	City of Los Angeles	59.8	0.17

d) Echo Park Lake Chlordane TMDL

(1) Permittees subject to the provisions below are identified in Table D.

(2) Permittees shall comply with the following water quality-based effluent limitations as of the effective date of this Order:

[21] Applied as an annual average.
[22] Measured at the point of discharge.
[23] Applied as a 3-year average.

Subwatershed	Permittee	Total Chlordane associated with Suspended Sediment (ug/kg dry weight)[24,25]	Total Chlordane in the Water Column (ng/L)[24,25]
Northern	City of Los Angeles	2.10	0.59
Southern	City of Los Angeles	2.10	0.59

(3) Permittees may comply with the following alternative effluent limitations if the responsible jurisdictions submit to U.S. EPA and the Regional Board material describing that the fish tissue target of 3.6 ppb wet weight has been met for the preceding three or more years. A demonstration that the fish tissue target has been met in any given year must at a minimum include a composite sample of skin of fillets from at least five common carp each measuring at least 350 mm in length and it is approved by the Los Angeles Water Board Executive Officer and U.S. EPA does not object within 60 days of receiving notice:

Subwatershed	Permittee	Total Chlordane associated with Suspended Sediment (ug/kg dry weight)[24,26]	Total Chlordane in the Water Column (ng/L)[24,25]
Northern	City of Los Angeles	3.24	0.59
Southern	City of Los Angeles	3.24	0.59

e) Echo Park Lake Dieldrin TMDL

(1) Permittees subject to the provisions below are identified in Table D.

(2) Permittees shall comply with the following water quality-based effluent limitations as of the effective date of this Order:

Subwatershed	Permittee	Dieldrin associated with Suspended Sediment (ug/kg dry weight)[24,25]	Dieldrin in the Water Column (ng/L)[24,25]
Northern	City of Los Angeles	0.80	0.14
Southern	City of Los Angeles	0.80	0.14

(3) Permittees may comply with the following alternative effluent limitations if the responsible jurisdictions submit to U.S. EPA and the

[24] Measured at the point of discharge.
[25] Applied as an annual average.
[26] Applied as a 3-year average.

Regional Board material describing that the fish tissue target of 3.6 ppb wet weight has been met for the preceding three or more years. A demonstration that the fish tissue target has been met in any given year must at a minimum include a composite sample of skin of fillets from at least five common carp each measuring at least 350 mm in length and it is approved by the Los Angeles Water Board Executive Officer and U.S. EPA does not object within 60 days of receiving notice:

Subwatershed	Permittee	Dieldrin associated with Suspended Sediment (ug/kg dry weight)[27,28]	Dieldrin in the Water Column (ng/L)[27,29]
Northern	City of Los Angeles	1.90	0.14
Southern	City of Los Angeles	1.90	0.14

f) Echo Park Lake Trash TMDL

(1) Permittees subject to the provisions below are identified in Table D.

(2) Permittees shall comply with the following water quality-based effluent limitation as of the effective date of this Order:

Permittee	Trash (Gal/year)
City of Los Angeles	0

g) Peck Road Park Lake Nutrient TMDL

(1) Permittees subject to the provisions below are identified in Table D.

(2) Permittees may be deemed in compliance with water quality-based effluent limitations during both wet and dry weather by demonstrating reduction of total nitrogen and total phosphorous on an annual mass basis measured at the storm drain outfall of the Permittee's drainage area. The annual mass-based allocation shall be equal to monthly average concentrations of 0.1 mg/L total phosphorus and 1.0 mg/L total nitrogen based on approved flow conditions. Permittees shall comply with the annual mass allocation based on current flow conditions as of the effective date of this Order:

Subwatershed	Permittee	Total Phosphorus (lb-P/yr) [27,29]	Total Nitrogen (lb-N/yr)[27,29]
Eastern	Arcadia	383	2,320
Eastern	Bradbury	497	3,223
Eastern	Duarte	1,540	9,616

[27] Measured at the point of discharge.
[28] Applied as a 3-year average.
[29] Applied as an annual average.

Eastern	Irwindale	496	3,487
Eastern	County of Los Angles	924	5,532
Eastern	Monrovia	6,243	38,736
Near Lake	Arcadia	158	1,115
Near Lake	El Monte	96.2	602
Near Lake	Irwindale	28.2	207
Near Lake	County of Los Angeles	129	773
Near Lake	Monrovia	60.4	415
Western	Arcadia	2,840	16,334
Western	County of Los Angeles	467	2,818
Western	Monrovia	425	2,678
Western	Sierra Madre	695	4,254

h) Peck Road Park Lake PCBs TMDL

(1) Permittees subject to the provisions below are identified in Table D.

(2) Permittees shall comply with the following water quality-based effluent limitations as of the effective date of this Order:

Subwatershed	Permittee	Total PCBs associated with Suspended Sediment (ug/kg dry weight)[30,31]	Total PCBs in the Water Column (ng/L)[30,31]
Eastern	Arcadia	1.29	0.17
Eastern	Bradbury	1.29	0.17
Eastern	Duarte	1.29	0.17
Eastern	Irwindale	1.29	0.17
Eastern	County of Los Angles	1.29	0.17
Eastern	Monrovia	1.29	0.17
Near Lake	Arcadia	1.29	0.17
Near Lake	El Monte	1.29	0.17
Near Lake	Irwindale	1.29	0.17
Near Lake	County of Los Angeles	1.29	0.17
Near Lake	Monrovia	1.29	0.17
Western	Arcadia	1.29	0.17
Western	County of Los Angeles	1.29	0.17
Western	Monrovia	1.29	0.17
Western	Sierra Madre	1.29	0.17

(3) Permittees may comply with the following alternative effluent limitations if the responsible jurisdictions submit to U.S. EPA and the Regional Board material describing that the fish tissue target of 3.6

[30] Measured at the point of discharge.
[31] Applied as an annual average.

ppb wet weight has been met for the preceding three or more years. A demonstration that the fish tissue target has been met in any given year must at a minimum include a composite sample of skin of fillets from at least five common carp each measuring at least 350 mm in length and it is approved by the Los Angeles Water Board Executive Officer and U.S. EPA does not object within 60 days of receiving notice:

Subwatershed	Permittee	Total PCBs associated with Suspended Sediment (ug/kg dry weight)[32,33]	Total PCBs in the Water Column (ng/L)[32,34]
Eastern	Arcadia	59.8	0.17
Eastern	Bradbury	59.8	0.17
Eastern	Duarte	59.8	0.17
Eastern	Irwindale	59.8	0.17
Eastern	County of Los Angles	59.8	0.17
Eastern	Monrovia	59.8	0.17
Near Lake	Arcadia	59.8	0.17
Near Lake	El Monte	59.8	0.17
Near Lake	Irwindale	59.8	0.17
Near Lake	County of Los Angeles	59.8	0.17
Near Lake	Monrovia	59.8	0.17
Western	Arcadia	59.8	0.17
Western	County of Los Angeles	59.8	0.17
Western	Monrovia	59.8	0.17
Western	Sierra Madre	59.8	0.17

i) Peck Road Park Lake Chlordane TMDL

(1) Permittees subject to the provisions below are identified in Table D.

(2) Permittees shall comply with the following water quality-based effluent limitations as of the effective date of this Order:

Subwatershed	Permittee	Total Chlordane associated with Suspended Sediment (ug/kg dry weight)[32,34]	Total Chlordane in the Water Column (ng/L)[32,34]
Eastern	Arcadia	1.73	0.59
Eastern	Bradbury	1.73	0.59
Eastern	Duarte	1.73	0.59
Eastern	Irwindale	1.73	0.59
Eastern	County of Los Angles	1.73	0.59

[32] Measured at the point of discharge.
[33] Applied as a 3-year average.
[34] Applied as an annual average.

Eastern	Monrovia	1.73	0.59
Near Lake	Arcadia	1.73	0.59
Near Lake	El Monte	1.73	0.59
Near Lake	Irwindale	1.73	0.59
Near Lake	County of Los Angeles	1.73	0.59
Near Lake	Monrovia	1.73	0.59
Western	Arcadia	1.73	0.59
Western	County of Los Angeles	1.73	0.59
Western	Monrovia	1.73	0.59
Western	Sierra Madre	1.73	0.59

(3) Permittees may comply with the following alternative effluent limitations if the responsible jurisdictions submit to U.S. EPA and the Regional Board material describing that the fish tissue target of 3.6 ppb wet weight has been met for the preceding three or more years. A demonstration that the fish tissue target has been met in any given year must at a minimum include a composite sample of skin of fillets from at least five common carp each measuring at least 350 mm in length and it is approved by the Los Angeles Water Board Executive Officer and U.S. EPA does not object within 60 days of receiving notice:

Subwatershed	Permittee	Total Chlordane associated with Suspended Sediment (ug/kg dry weight)[35,36]	Total Chlordane in the Water Column (ng/L)[35,37]
Eastern	Arcadia	3.24	0.59
Eastern	Bradbury	3.24	0.59
Eastern	Duarte	3.24	0.59
Eastern	Irwindale	3.24	0.59
Eastern	County of Los Angles	3.24	0.59
Eastern	Monrovia	3.24	0.59
Near Lake	Arcadia	3.24	0.59
Near Lake	El Monte	3.24	0.59
Near Lake	Irwindale	3.24	0.59
Near Lake	County of Los Angeles	3.24	0.59
Near Lake	Monrovia	3.24	0.59
Western	Arcadia	3.24	0.59
Western	County of Los Angeles	3.24	0.59
Western	Monrovia	3.24	0.59
Western	Sierra Madre	3.24	0.59

[35] Measured at the point of discharge.
[36] Applied as a 3-year average.
[37] Applied as an annual average.

j) Peck Road Park DDT TMDL

(1) Permittees subject to the provisions below are identified in Table D.

(2) Permittees shall comply with the following water quality-based effluent limitations as of the effective date of this Order:

Subwatershed	Permittee	Total DDT associated with Suspended Sediment (ug/kg dry weight)[38,39]	4-4' DDT in the Water Column (ng/L)[38,39]
Eastern	Arcadia	5.28	0.59
Eastern	Bradbury	5.28	0.59
Eastern	Duarte	5.28	0.59
Eastern	Irwindale	5.28	0.59
Eastern	County of Los Angles	5.28	0.59
Eastern	Monrovia	5.28	0.59
Near Lake	Arcadia	5.28	0.59
Near Lake	El Monte	5.28	0.59
Near Lake	Irwindale	5.28	0.59
Near Lake	County of Los Angeles	5.28	0.59
Near Lake	Monrovia	5.28	0.59
Western	Arcadia	5.28	0.59
Western	County of Los Angeles	5.28	0.59
Western	Monrovia	5.28	0.59
Western	Sierra Madre	5.28	0.59

k) Peck Road Park Lake Dieldrin TMDL

(1) Permittees subject to the provisions below are identified in Table D.

(2) Permittees shall comply with the following water quality-based effluent limitations as of the effective date of this Order:

Subwatershed	Permittee	Dieldrin associated with Suspended Sediment (ug/kg dry weight)[38,39]	Dieldrin in the Water Column (ng/L)[38,39]
Eastern	Arcadia	0.43	0.14
Eastern	Bradbury	0.43	0.14
Eastern	Duarte	0.43	0.14
Eastern	Irwindale	0.43	0.14
Eastern	County of Los Angles	0.43	0.14
Eastern	Monrovia	0.43	0.14
Near Lake	Arcadia	0.43	0.14
Near Lake	El Monte	0.43	0.14

[38] Measured at the point of discharge.
[39] Applied as an annual average.

Near Lake	Irwindale	0.43	0.14
Near Lake	County of Los Angeles	0.43	0.14
Near Lake	Monrovia	0.43	0.14
Western	Arcadia	0.43	0.14
Western	County of Los Angeles	0.43	0.14
Western	Monrovia	0.43	0.14
Western	Sierra Madre	0.43	0.14

(3) Permittees may comply with the following alternative effluent limitations if the responsible jurisdictions submit to U.S. EPA and the Regional Board material describing that the fish tissue target of 3.6 ppb wet weight has been met for the preceding three or more years. A demonstration that the fish tissue target has been met in any given year must at a minimum include a composite sample of skin of fillets from at least five common carp each measuring at least 350 mm in length and it is approved by the Los Angeles Water Board Executive Officer and U.S. EPA does not object within 60 days of receiving notice:

Subwatershed	Permittee	Dieldrin associated with Suspended Sediment (ug/kg dry weight)[40,41]	Dieldrin in the Water Column (ng/L)[40,42]
Eastern	Arcadia	1.90	0.14
Eastern	Bradbury	1.90	0.14
Eastern	Duarte	1.90	0.14
Eastern	Irwindale	1.90	0.14
Eastern	County of Los Angles	1.90	0.14
Eastern	Monrovia	1.90	0.14
Near Lake	Arcadia	1.90	0.14
Near Lake	El Monte	1.90	0.14
Near Lake	Irwindale	1.90	0.14
Near Lake	County of Los Angeles	1.90	0.14
Near Lake	Monrovia	1.90	0.14
Western	Arcadia	1.90	0.14
Western	County of Los Angeles	1.90	0.14
Western	Monrovia	1.90	0.14
Western	Sierra Madre	1.90	0.14

l) Peck Road Park Lake Trash TMDL

(1) Permittees subject to the provisions below are identified in Table D.

[40] Measured at the point of discharge.
[41] Applied as a 3-year average.
[42] Applied as an annual average.

(2) Permittees shall comply with the following water quality-based effluent limitation as of the effective date of this Order:

Permittee	Trash (gal/year)
Arcadia	0
Bradbury	0
Duarte	0
El Monte	0
Irwindale	0
County of Los Angeles	0
Monrovia	0
Sierra Madre	0