



Los Angeles Regional Water Quality Control Board

August 5, 2016

Mr. Johnny Ford
City Manager
City of Compton
205 S. Willowbrook Ave.
Compton, CA 90220

DISAPPROVAL OF THE CITY OF COMPTON'S PROPOSED INTEGRATED MONITORING PROGRAM; DIRECTIVE TO COMMENCE BASELINE MONITORING PURSUANT TO THE MONITORING AND REPORTING PROGRAM AS SET FORTH IN ATTACHMENT E (LOS ANGELES COUNTY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PERMIT - NPDES PERMIT NO. CAS004001; ORDER NO. R4-2012-0175)

Dear Mr. Ford:

Attachment E of the Los Angeles County Municipal Separate Storm Sewer System (MS4) Permit (NPDES Permit No. CAS004001; Order No. R4-2012-0175) (hereafter, LA County MS4 Permit) sets forth the monitoring and reporting program requirements for Permittees. It allows permittees the option to individually develop and implement an integrated monitoring program (IMP) to address all of the monitoring requirements in the Permit and other monitoring obligations or requirements in a cost efficient and effective manner. An IMP must achieve the five Primary Objectives set forth in Part II.A of Attachment E and include the elements set forth in Part II.E of Attachment E. These programs must be approved by the Executive Officer of the California Regional Water Quality Control Board, Los Angeles Region (Los Angeles Water Board or Board).

The Los Angeles Water Board has reviewed the City of Compton's (City) second revised IMP submitted on September 23, 2015. The purpose of this letter is to inform the City that the Board disapproves the City's second revised IMP as it does not meet the requirements for an IMP pursuant to Attachment E of the LA County MS4 Permit. Therefore, pursuant to Part VI.B.1 of the LA County MS4 Permit, the City shall comply with the monitoring and reporting provisions in Attachment E, described below.

Determination of IMP Deficiency

On June 30, 2014, the City submitted its draft IMP for Los Angeles Water Board review. On July 3, 2014, the Board provided public notice and a 46-day period to allow for public review and comment on the City's draft IMP. A separate notice of availability regarding the draft IMPs, including the City's draft IMP, was directed to State Senators and Assembly Members within the Coastal Watershed of Los Angeles County. The Board received two comment letters that had comments applicable to the City's draft IMP. One joint letter was from the Natural Resources Defense Council (NRDC), Heal the Bay, and Los Angeles Waterkeeper, and the other letter was from the Construction Industry Coalition on Water Quality (CICWQ). Concurrent with the public

review, the Los Angeles Water Board, along with U.S. EPA Region IX, reviewed the draft IMPs. During its review, the Los Angeles Water Board considered the written comments that were applicable to the City's draft IMP. Where appropriate, the public's comments were incorporated into the Board's review letter on the draft IMP to ensure that the public's comments were addressed appropriately in the revised IMP.

On January 16, 2015, the Los Angeles Water Board sent a letter¹ to the City detailing the Board's comments on the draft IMP, identifying revisions that needed to be addressed prior to the Board's approval of the City's IMP. The City submitted its revised IMP on March 16, 2015 for Los Angeles Water Board review and approval. On August 5, 2015, the Los Angeles Water Board sent a second letter to the City detailing the Board's comments on the revised IMP, identifying remaining deficiencies that needed to be addressed prior to the Board's approval of the City's IMP and allowing the City to submit a second revised IMP addressing the noted deficiencies. The City submitted its second revised IMP on September 23, 2015 for Los Angeles Water Board review and approval.

The Los Angeles Water Board has reviewed the City's second revised IMP and has determined that the submittal still does not meet the requirements for an IMP pursuant to Attachment E of the LA County MS4 Permit. The Board therefore disapproves of the City's second revised IMP and no further opportunities to address these deficiencies will be provided. A summary of the Board's comments and key deficiencies of the City's second revised IMP are identified in **Enclosure 1**.

In addition to these noted deficiencies, the City's second revised IMP contains multiple references to a purported administrative petition challenging the LA County MS4 Permit. These references generally assert that the City is not required to comply with certain requirements in the Permit, including certain provisions in Attachment E, on the basis that it has challenged those provisions in an administrative petition and that the City expects resolution by the State Water Resources Control Board (State Water Board). In its comments on the City's IMP submittals, the Los Angeles Water Board previously directed the City to remove these references from the draft and revised IMP as they were not appropriately included. Notably, the City did not actually timely file an administrative petition with the State Water Board; thus, these references are not even applicable to the City. Additionally, the administrative petitions filed by many other permittees have already been resolved through State Water Board Order WQ 2015-0075. The State Water Board adopted its order on June 16, 2015, which was several months prior to the City's submittal of its second revised IMP. Further, the State Water Board's order did not modify any monitoring and reporting requirements. The City's second revised IMP also largely restates the baseline stormwater management program requirements of the LA County MS4 Permit and enumerates the City's concerns with the Watershed Management Program (WMP) provisions of the LA County MS4 Permit. These references are not appropriate to include in the City's submittal of a proposed IMP as it is not the appropriate avenue for identifying purported concerns with the WMP/IMP provisions. As is made clear by the LA County MS4 Permit, participation in a WMP and IMP is voluntary. As such, if the City has concerns with either the WMP or IMP provisions, it is not required to participate in either a WMP or an IMP and is subject to baseline requirements of the Permit.

¹ The City of Compton's submittals and the Los Angeles Water Board's correspondence can be found at: http://www.swrcb.ca.gov/losangeles/water_issues/programs/stormwater/municipal/watershed_management/compton/index.shtml.

As the City does not have an approved IMP, the City is therefore immediately subject to the baseline monitoring and reporting requirements of the LA County MS4 Permit, as set forth in Attachment E and described below.

Directive to Commence Baseline Monitoring and Reporting as set forth in Attachment E

The City shall monitor and report pursuant to Attachment E of the LA County MS4 Permit, as described in **Enclosure 2** (Monitoring Requirements), **Enclosure 3** (Map of Monitoring Locations), and **Enclosure 4** (Aquatic Toxicity Monitoring Requirements). Enclosures 2, 3, and 4 contain the baseline monitoring requirements² specified in Attachment E of the LA County MS4 Permit. These baseline monitoring requirements include the elements set forth in Parts II.E and further detailed in Parts V - XII: receiving water monitoring during wet and dry weather, stormwater outfall based monitoring, non-stormwater outfall based screening and monitoring, new development/re-development effectiveness tracking, and regional studies.

The monitoring locations in Table 1 of Enclosure 2 and in Figures 2 and 3 in Enclosure 3 were selected consistent with criteria in Attachment E, Parts VI – IX and XI – XII of the LA County MS4 Permit.⁶ Enclosure 2 also identifies TMDL compliance monitoring that the City is required to conduct per Attachment E, Attachment N Part E (Dominguez Channel and Greater Harbor Waters Toxic Pollutants TMDL), and Attachment O (Los Angeles River TMDLs) of the LA County MS4 Permit.

Additionally, the City shall immediately implement a non-stormwater outfall-based screening and monitoring program, as required in Attachment E, Parts IX.A, IX.B.2, and IX.C-H of the LA County MS4 Permit. The non-stormwater outfall-based screening and monitoring program must use one of the following thresholds for field measurements to determine whether the non-stormwater discharge is significant:

1. Observed flow greater than a garden hose flow (>10 gpm), OR
2. Evidence that the non-stormwater discharge reaches the receiving water during dry weather and laboratory analysis for *E. coli* concentration, where the laboratory result shows that *E. coli* exceeds the Receiving Water Limitation of 235/100 mL daily maximum⁷ in the non-stormwater discharge.

The City shall screen each of its MS4 outfalls at least 3 times in order to determine the presence of significant non-stormwater discharge. The City must complete the screening and on the basis of the screening, identify all of its MS4 outfalls that have significant non-stormwater discharges, no later than February 6, 2016. If the City detects significant non-stormwater discharges at an outfall two or more times, it shall monitor that outfall thereafter as per Attachment E, Part IX.G-H of the LA County MS4 Permit.

² Baseline monitoring requirements are those monitoring requirements set forth in Attachment E that a Permittee is subject to where the Permittee does not have an approved IMP or CIMP.

⁶ Stormwater discharges from the MS4 may be monitored at outfalls or alternative access points such as manholes at the Permittee's jurisdictional boundary. The drainage(s) to the selected outfall(s) or alternative access point(s) must be representative of the land uses within the Permittee's jurisdiction. (Attachment E Part VIII.A of the LA County MS4 Permit)

⁷ Attachment G Part II and III of the LA County MS4 Permit.

Note that Enclosure 2 does not include monitoring requirements for Los Angeles River Reach 2 or the freshwater portion of Dominguez Channel (above Vermont Avenue). Per a desktop GIS analysis of the MS4 within the City of Compton, the Los Angeles Water Board determined that only "East Compton"⁸ drains to Los Angeles River Reach 2, and there is no MS4 discharge from the City of Compton to Los Angeles River Reach 2. Likewise, "West Compton"⁹ drains to the freshwater portion of Dominguez Channel (above Vermont Avenue), and there is no MS4 discharge from the City of Compton to the freshwater portion of Dominguez Channel (above Vermont Avenue). Monitoring for "East Compton" is addressed in the Upper Los Angeles River Group's coordinated integrated monitoring program (CIMP) and monitoring for "West Compton" is addressed in the Dominguez Channel Group's CIMP.

The City shall demonstrate compliance with: Receiving Water Limitations pursuant to Part V.A.1 and all applicable interim and final water quality-based effluent limitations in Part VI.E and Attachment N (Part E) and Attachment O (Parts A-D) pursuant to Part VI.E.2.d.i.(1)-(3) and/or Part VI.E.2.e.i.(1)-(3) in the LA County MS4 Permit.

Accordingly, the City must commence monitoring as described herein (including Enclosures 2 through 4) within 30 days of the date of this letter. Please note that the City is responsible for complying with all LA County MS4 Permit reporting provisions included in:

- Attachment E, Parts XIV to XVIII;
- Attachment E, Part XIX.C, "Reporting Requirements for Dominguez Channel and Greater Harbors Waters WMA TMDLs;"
- Attachment E, Part XIX.D, "Reporting Requirements for the Los Angeles River WMA TMDLs;" and
- Attachment D, Parts IV, V, and VII.A.

Finally, the City is also responsible for complying with the requirements below pertaining to Annual Reporting.

Annual Reporting

Pursuant to Attachment E, Part XVIII of the LA County MS4 Permit, the City's Annual Report shall provide an Integrated Monitoring Report that summarizes all identified exceedances of:

- outfall-based stormwater monitoring data,
- wet weather receiving water monitoring data,
- dry weather receiving water monitoring data, and
- non-stormwater outfall monitoring data

against all applicable receiving water limitations, water quality-based effluent limitations, non-storm water action levels, and aquatic toxicity thresholds as defined in Attachment E. All sample results that exceed one or more applicable thresholds shall be readily identified.

⁸ Also known as East Rancho Dominguez, East Compton is unincorporated Los Angeles County land and not part of the incorporated area of the City of Compton.

⁹ West Compton is unincorporated Los Angeles County land and not part of the incorporated area of the City of Compton.

The Annual Report shall also include a Municipal Action Level (MAL) Assessment Report, which shall present the stormwater outfall monitoring data in comparison to the applicable MALs, and identify those subwatersheds with a running average of twenty percent or greater of exceedances of the MALs in discharges of stormwater from the MS4. Pursuant to Attachment G, Part VIII of the LA County MS4 Permit, Permittees are required to submit a MAL Action Plan with the Annual Report to the Los Angeles Water Board, for those subwatersheds with a running average of twenty percent or greater of exceedances of the MALs in any discharge of storm water from the MS4. The deadline for submitting the MAL Action Plan was December 15, 2015; therefore the City shall submit a Plan to the Los Angeles Water Board within 30 days of this letter, by September 5, 2016.

Additionally, the City shall indicate which criterion (of those specified above) was used to determine a significant non-stormwater discharge in the Annual Report.

If you have any questions, please contact Ms. Erum Razzak of the Storm Water Permitting Unit by electronic mail at Erum.Razzak@waterboards.ca.gov or by phone at (213) 620-2095. Alternatively, you may also contact Mr. Ivar Ridgeway, Chief of the Storm Water Permitting Unit, by electronic mail at Ivar.Ridgeway@waterboards.ca.gov or by phone at (213) 620-2150.

Sincerely,



Samuel Unger, P.E.
Executive Officer

cc: Glen Kau, Director of Public Works, City of Compton
Mr. William Lewis, Assistant Civil Engineer, City of Compton
Ray Tahir, TECS Environmental, Inc.

Enclosures: Enclosure 1 – Summary of Comments and Deficiencies
Enclosure 2 – Monitoring Requirements
Enclosure 3 – Map of Monitoring Locations
Enclosure 4 – Memorandum from Executive Officer to LA County MS4
Permittees Clarifying Aquatic Toxicity Monitoring Requirements

Los Angeles Regional Water Quality Control Board

Enclosure 1 – Summary of Comments and Deficiencies¹

City of Compton’s Second Revised IMP

1. The IMP does not indicate when receiving water monitoring will begin. Receiving water monitoring is required during both wet and dry weather. Ambient monitoring as proposed is inappropriate, and the City must conduct wet weather monitoring at the appropriate receiving water monitoring sites.
2. The IMP incorrectly states that the City does not discharge to Dominguez Channel Estuary. The City is required to participate in the water column, sediment, and fish tissue testing in the Dominguez Channel Estuary pursuant to Attachment K, Attachment N Part E (Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants TMDL (Harbor Toxics TMDL)), and Attachment E Part XIX.C of the LA County MS4 Permit
3. The City does not propose monitoring above the Los Angeles River Estuary as required by Attachment K, Attachment N Part E, and Attachment E Part XIX.C of the LA County MS4 Permit (Harbor Toxics TMDL).
4. The City’s IMP did not include all wet and dry weather TMDL monitoring requirements of the LA County MS4 Permit for receiving water.
5. All open channels and underground pipes 18 inches in diameter or greater (with the exception of catch basin connector pipes) within the City’s jurisdiction are not identified.
6. Dry weather diversions for any of the major outfalls within the City’s jurisdiction are not clearly identified.
7. Storm drain outfall catchment area (drainage area) maps for each major outfall within the City’s jurisdiction are missing. The IMP must include storm drain outfall catchment areas for each major outfall, or if not currently available, provide a schedule for delineating the catchment areas and submitting the delineations to the Los Angeles Water Board.
8. Although the IMP claims that each of the field screening points is representative of land uses within the City’s jurisdiction, there is insufficient justification for selection of the points.
9. Section 1.10 does not specify that, for stormwater outfall monitoring, other parameters in Table E-2 identified as exceeding the lowest applicable water quality objective in the nearest downstream receiving water monitoring station will be monitored.
10. The IMP contains language stating that the City is not required to comply with certain required elements specified in Attachment E (i.e., receiving water limitations, wet weather WQBELs, and Action Levels). Note that while the permit provided an opportunity for Permittees to customize, within certain constraints, its monitoring program, the permit’s compliance mechanisms are not customizable. Compliance will be determined as per the LA County MS4 Permit.
11. In Section 1.5, the screening frequency for identifying significant non-stormwater discharges is not clear.

¹ This enclosure does not provide a comprehensive enumeration of all deficiencies. Rather, it highlights the most significant of them.

12. The IMP is not specific on how a significant non-stormwater discharge will be determined. Greater specificity on thresholds for field measurements, including flow and water quality data that will be used to determine whether a non-stormwater discharge is significant (i.e., flow greater a garden hose) is required.
13. Section 1.12 contains inadequate non-stormwater outfall-based monitoring.
14. Monitoring for PCBs in sediment or water is insufficient as proposed. Monitoring should be reported as the summation of aroclors and minimum of 40 (and preferably at least 50) congeners.
15. Section 1.9.2 does not specify the saltwater sensitive species screening for Dominguez Channel Estuary.
16. Section 1.9.2 references the Dominguez Channel Watershed data to support the selection of *C. dubia* as a freshwater species for aquatic toxicity testing. However, the City is located in the Los Angeles River and the Dominguez Channel Watershed. Accordingly, Section 1.9.2 should be revised to include a test species for Compton Creek by either including test species sensitivity screening or choosing a test species on the basis of previous monitoring data and studies.
17. Typographical errors, such as:
 - a. Reference to Attachment U in Section 1.13 is incorrect.
 - b. In Section 1.16 part 1, wet weather receiving water monitoring must occur during wet weather, and not the wet season.
 - c. In the second to last sentence of the last paragraph in Section 1.5, "Attachment N" should be corrected to "Attachments N and O".

Los Angeles Regional Water Quality Control Board

Enclosure 2 – Monitoring Requirements

City of Compton

Enclosure 2 contains monitoring locations and monitoring requirements specified in Attachment E of the LA County MS4 Permit, including receiving water monitoring during wet and dry weather, stormwater outfall based monitoring, non-stormwater outfall based screening and monitoring, and aquatic toxicity monitoring. Enclosure 2 also identifies TMDL compliance monitoring that the City is required to conduct per Attachment E, Attachment N Part E (Dominguez Channel and Greater Harbor Waters Toxic Pollutants TMDL), and Attachment O (Los Angeles River TMDLs) of the LA County MS4 Permit. Furthermore, Attachment E Part VI.C–D, Part VIII.B, and Part IX.G of the LA County MS4 Permit require monitoring for 303(d) listed pollutants. Because the City of Compton discharges to 303(d) listed waterbodies (Compton Creek, the LA River Estuary, and the Dominguez Channel Estuary), it must monitor these pollutants.

Table 1. City of Compton Required Monitoring Sites¹

Station/Site ID	Description	Waterbody	Latitude	Longitude	Details
R1	Receiving Water	Compton Creek	33.869525	-118.215287	E. Artesia Blvd
FS1	Stormwater (SW) – Outfall	Compton Creek	33.872697	-118.218196	Artesia Blvd
FS2	Stormwater - Outfall	Compton Creek	33.883085	-118.223254	S. Willowbrook Ave
FS6	Stormwater - Outfall	Dominguez Channel Estuary	33.887762	-118.259493	S. Wilmington Ave
DOM-RW-DCE01	TMDL	Dominguez Channel Estuary	33.841922	-118.264579	S. Avalon Blvd
S10	Mass Emissions Station - TMDL	Los Angeles River	33.81900	-118.20556	above LA River Estuary

¹ All of the monitoring locations in Table 1 (above) and Enclosure 3 (Map of Monitoring Locations) were selected consistent with criteria in Attachment E, Parts VI - IX of the LA County MS4 Permit. Some of the locations in Table 1 (R1, FS1, FS2, and FS3) were also proposed by the City of Compton in their second revised IMP submitted to the Los Angeles Water Board on September 23, 2015.

Table 2. City of Compton Monitoring Requirements

Constituent	Annual Frequency (number wet events/number dry events)						
	Los Angeles River Watershed Management Area				Dominguez Channel Estuary ²		
	Compton Creek			LA River Estuary			
	Receiving Water ³	Stormwater ⁴	Non-Stormwater ⁵	TMDL	Stormwater ⁶	Non-Stormwater ⁷	TMDL
	R1	FS1/FS2		S10	FS6		DOM-RW-DCE01
Pollutants identified in Attachment E Table E-2 of the LA County MS4 Permit	3/2 ⁸	3/0 ⁹	10		3/0 ¹¹	12	
Aquatic Toxicity ¹³	2/1 ¹⁴	15	16		17	18	
Total Suspended Solids (TSS)	3/2	3/0		4/1	3/0		2/1
Suspended-Sediment Concentration (SSC) ¹⁹	3/2	3/0		4/1	3/0		2/1

² In addition to Attachment N Part E.2.a.ii, samples of non-stormwater collected from outfalls during flow conditions less than the 90th percentile of annual flow rates must demonstrate that the acute and chronic hardness dependent water quality criteria (for copper, lead, and zinc) provided in the California Toxics Rule (CTR) are achieved (see Attachment N Part E.3.a.ii, footnote 6 of the LA County MS4 Permit).

³ Monitoring shall occur as per Attachment E Part VI.B-C of the LA County MS4 Permit. Dry weather monitoring shall occur in July, the historically driest month.

⁴ Monitoring and sampling shall occur as per Attachment E Part VIII.B-C of the LA County MS4 Permit.

⁵ Sampling shall occur as per Attachment E Part IX.H of the LA County MS4 Permit.

⁶ Ibid.

⁷ See footnote 4.

⁸ Wet weather receiving water Table E-2 constituents monitoring requirements per Attachment E Part VI.C.1.e and dry weather receiving water Table E-2 constituents monitoring requirements per Attachment E Part VI.D.1.d of the LA County MS4 Permit.

⁹ Other parameters in Table E-2 identified as exceeding the lowest applicable water quality objective in the nearest downstream receiving water monitoring station per Part VI.C.1.e (Attachment E Part VIII.B.1.d) of the LA County MS4 Permit.

¹⁰ Other parameters in Table E-2 identified as exceeding the lowest applicable water quality objective in the nearest downstream receiving water monitoring station per Part VI.D.1.d (Attachment E Part IX.G.1.e) of the LA County MS4 Permit.

¹¹ See footnote 3.

¹² See footnote 9.

¹³ Aquatic toxicity shall be monitored in accordance with Part XII of Attachment E, and as detailed in the Los Angeles Regional Board August 7, 2015, Memorandum titled "Clarification Regarding Follow-up Monitoring Requirements in Response to Observed Toxicity in Receiving Waters Pursuant to the Monitoring & Reporting Program (Attachment E) of the Los Angeles County MS4 Permit (Order No. R4-2012-0175)".

¹⁴ Minimum wet weather receiving water monitoring requirements per Attachment E Part VI.C.1.d.vi, and minimum dry weather receiving water monitoring requirements per Attachment E Part VI.D.1.c.vi of the LA County MS4 Permit.

¹⁵ Minimum storm water outfall based monitoring requirements per Attachment E Part VIII.B.1.c.vi of the LA County MS4 Permit.

¹⁶ If the discharge exhibits aquatic toxicity, then a TIE shall be conducted per Attachment E Part IX.G.1.d. of the LA County MS4 Permit.

¹⁷ See footnote 14.

¹⁸ See footnote 15.

Constituent	Annual Frequency (number wet events/number dry events)						
	Los Angeles River Watershed Management Area				Dominguez Channel Estuary ²		
	Compton Creek			LA River Estuary			
	Receiving Water ³	Stormwater ⁴	Non-Stormwater ⁵	TMDL	Stormwater ⁶	Non-Stormwater ⁷	TMDL
	R1	FS1/FS2		S10	FS6		DOM-RW-DCE01
Flow	3/2	3/0	0/4	4/2	3/0	0/4	2/1 ²⁰
Hardness	3/2	3/0		4/1	3/0	0/4	2/1
pH	3/2	3/0		4/2	3/0	0/4	2/1
Dissolved oxygen	3/2	3/0		4/2	3/0	0/4	2/1
Temperature	3/2	3/0		4/2	3/0	0/4	2/1
Specific/Electrical Conductivity	3/2	3/0		4/2	3/0	0/4	2/1
<i>E. coli</i>	3/2	3/0	0/4		3/0	0/4	
Cadmium	3/0	3/0		4/1			
Aluminum				4/1			
Mercury ²¹				4/1			
Selenium				4/1			
Copper	3/2	3/0	0/4	4/1	3/0	0/4	2/1
Lead	3/2	3/0	0/4	4/1	3/0	0/4	2/1
Nickel				4/1			
Zinc	3/0	3/0		4/1	3/0	0/4	2/1
Antimony (Sb)				4/1			
Trash	22						
Benthic Macroinvertebrate Bioassessments ²³	1						

¹⁹ Pursuant to Attachment E, Part III.G.1 of the LA County MS4 Permit, Suspended Sediment Concentration (SSC) shall be analyzed per American Society for Testing and Materials (ASTM) Standard Test Method D-3977-97.

²⁰ For the Estuary sites, tidal and water depth information will be collected in lieu of flow data.

²¹ For Mercury (Hg) EPA Method 245.7 or 1631E shall be used to get sufficiently sensitive minimum levels for analytical results to be compared with the water quality objective. 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 (Basin Plan Amendment Attachment A Resolution No. R11-008).

²² Permittees shall comply with the final water quality-based effluent limitation for zero trash discharged to the Los Angeles River no later than September 30, 2016, as required by Attachment O, Part A.3 of the LA County MS4 Permit. Compliance with the LA River Trash TMDL may be met through installation of full capture systems. Pursuant to Resolution No. R15-006, adopted June 11, 2015, the City of Compton shall submit a Trash Monitoring and Reporting Plan (TMRP) and a Plastic Pellet Monitoring and Reporting Plan (PMRP) for Los Angeles Water Board approval.

²³ Attachment E, Part VI.C.1.d.iii of the LA County MS4 Permit requires receiving water monitoring for "other pollutants identified on the CWA 303(d) List for the receiving water or downstream receiving waters." Compton Creek is identified on the CWA 303(d) List as impaired for benthic community structure. Accordingly, the City of Compton shall follow protocol in the

Constituent	Annual Frequency (number wet events/number dry events)						
	Los Angeles River Watershed Management Area				Dominguez Channel Estuary ²		
	Compton Creek			LA River Estuary			
	Receiving Water ³	Stormwater ⁴	Non-Stormwater ⁵	TMDL	Stormwater ⁶	Non-Stormwater ⁷	TMDL
	R1	FS1/FS2		S10	FS6		DOM-RW-DCE01
Nitrate-nitrogen (NO ₃ -N)	3/2	3/0	0/4				
Nitrite-nitrogen (NO ₂ -N)	3/2	3/0	0/4				
Ammonia	3/2	3/0	0/4		3/0	0/4	
Chlordane				2/1			
DDTs ²⁴				2/1	3/0	0/4	2/1
PCBs ²⁵				2/1	3/0	0/4	2/1
PAHs, High Resolution (EPA 1625)				2/1			2/1
Municipal Action Levels (MALs) ²⁶		3/0			3/0		
Non-Stormwater Action Levels (NALs)			0/4 ²⁷			0/4 ²⁸	
Pyrene							2/1
Phenanthrene							2/1
Chrysene							2/1
Benzo[a] pyrene							2/1
Benzo[a] anthracene							2/1
Sediment Monitoring				²⁹	³⁰	³¹	³²
Fish Tissue Monitoring							³³

Southern California Stormwater Monitoring Coalition (SMC) Regionally Consistent and Integrated Freshwater Stream Bioassessment Monitoring Program.

<http://www.socalsmc.org/Docs/SMC-DesignofBioassessmentRegionalMonitoringProgram.pdf>

Alternatively, the City can fulfill this requirement by formally participating in the aforementioned SMC Bioassessment Monitoring Program.

²⁴ High Resolution (EPA 1699); DDTs include DDT, DDE, DDD, and Total DDT.

²⁵ High Resolution (EPA 1668); monitoring for PCBs in sediment or water should be reported as the summation of aroclors and a minimum of 40 (and preferably at least 50) congeners. See Table C8 in the state's Surface Water Ambient Monitoring Program's Quality Assurance Program Plan (page 72 of Appendix C).

²⁶ Municipal action level monitoring pursuant to Attachment G Part VIII of the LA County MS4 Permit.

²⁷ Non-stormwater action level monitoring pursuant to Attachment G Part II of the LA County MS4 Permit.

²⁸ Non-stormwater action level monitoring pursuant to Attachment G Part III of the LA County MS4 Permit.

²⁹ Refer to Table 3. Sediment and Fish Tissue Monitoring Requirements.

³⁰ Ibid.

³¹ Ibid.

³² Ibid.

³³ Ibid.

Table 3. Sediment and Fish Tissue Monitoring Requirements³⁴

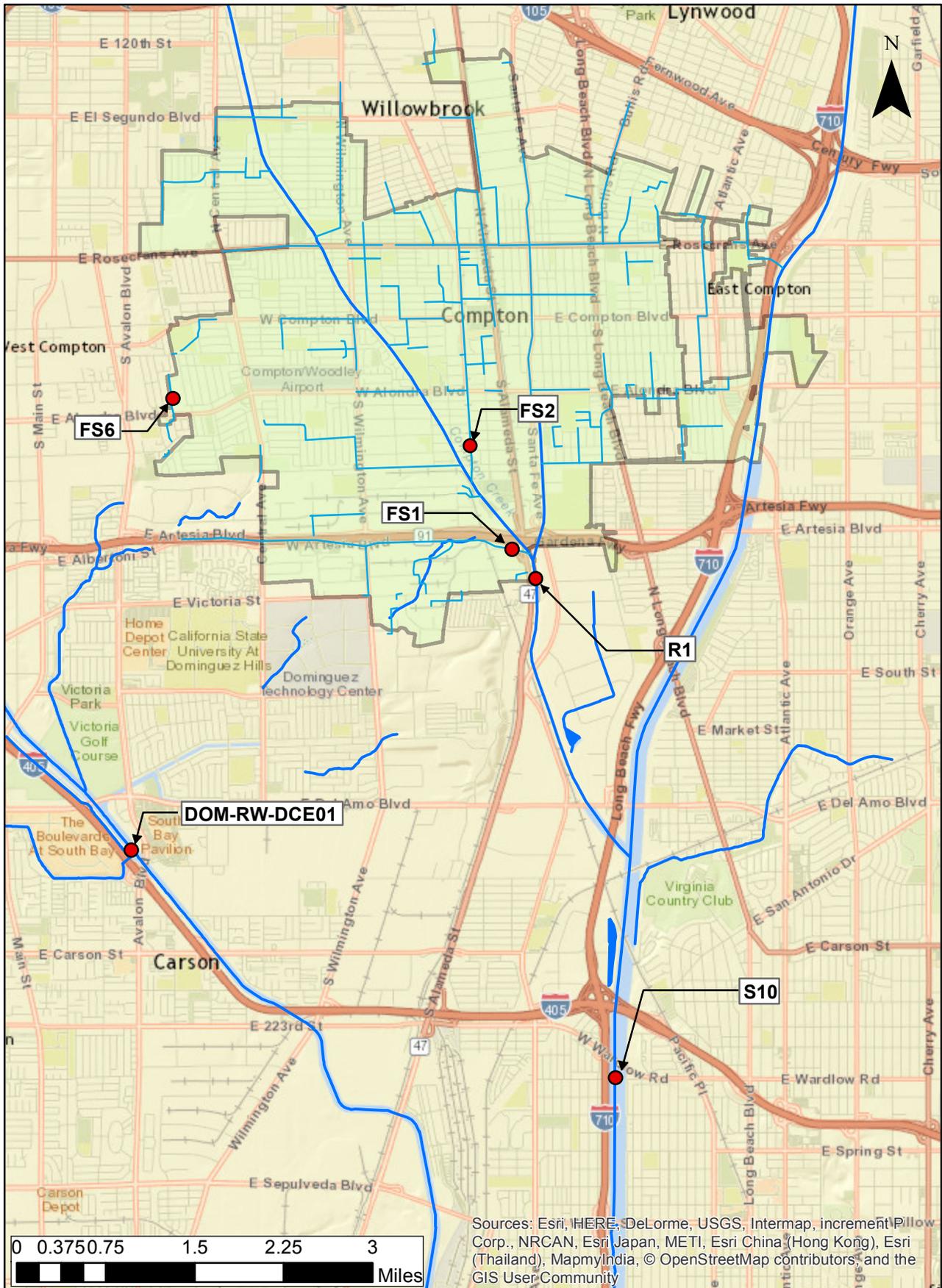
Parameter	Frequency
Sediment Monitoring³⁵	
Copper	Once every 2 years
Lead	
Mercury	
Zinc	
Cadmium	
PAHs	
Chlordane	
DDD _s , total	
DDE, total	
DDT _s , total	
PCBs, total	
Total Organic Carbon (TOC)	
Grain Size	
Sediment Toxicity	
Benthic Community	
Fish Tissue	
Chlordane	Once every 2 years
Dieldrin	
Toxaphene	
DDT	
PCBs ³⁶	

³⁴ Sediment and fish tissue monitoring requirements pursuant to Attachment N Part E of the LA County MS4 Permit.

³⁵ Pursuant to Attachment N Part E.4.d.iv of the LA County MS4 Permit, samples shall be collected in accordance with SWAMP protocols as specified in the State Water Board's Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality (SQO).

³⁶ See footnote 18.

Enclosure 3 - Map of Monitoring Locations



Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P, Willow Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

Figure 1. City of Compton Monitoring Stations

Los Angeles Regional Water Quality Control Board

TO: Los Angeles County MS4 Permittees and City of Long Beach

FROM: Samuel Unger, P.E.
Executive Officer 

DATE: August 7, 2015

SUBJECT: CLARIFICATION REGARDING FOLLOW-UP MONITORING REQUIREMENTS IN RESPONSE TO OBSERVED TOXICITY IN RECEIVING WATERS PURSUANT TO THE MONITORING & REPORTING PROGRAM (ATTACHMENT E) OF THE LOS ANGELES COUNTY MS4 PERMIT (ORDER NO. R4-2012-0175)

The Los Angeles County MS4 Permit, Attachment E requires chronic aquatic toxicity monitoring in receiving waters during both wet and dry weather conditions to determine whether designated beneficial uses are fully supported. Further, Attachment E requires additional monitoring at MS4 outfalls where aquatic toxicity is present above a certain effect level in downstream receiving waters to determine whether MS4 discharges are causing or contributing to the aquatic toxicity. In this situation, outfall monitoring must either entail monitoring for specific pollutants identified in a toxicity identification evaluation (TIE) in the downstream receiving water, or for aquatic toxicity itself, where the specific pollutants could not be identified through the TIE conducted on the downstream receiving water.

In its comments on the draft Integrated Monitoring Programs (IMPs) and Coordinated Integrated Monitoring Programs (CIMPs) submitted per the Los Angeles County MS4 Permit, the Los Angeles Water Board provided clarification and recommendations to Permittees regarding aquatic toxicity monitoring, particularly pertaining to the requirement to conduct chronic toxicity tests in dry and wet weather conditions and requirements for conducting a TIE and outfall monitoring. Subsequently, on December 9, 2014, Board staff met with several Permittees regarding its comments. During this meeting it was apparent that further clarification was necessary regarding requirements for follow-up monitoring when aquatic toxicity is present in downstream receiving waters. This memo provides additional clarification and applies to all IMPs and CIMPs developed pursuant to Part VI.B of the Los Angeles County MS4 Permit and Part VII.B of the City of Long Beach MS4 Permit.

It is acknowledged, however, that this memo may not address every situation that is encountered. We encourage the Permittees to approach toxicity testing and the TIE and TRE procedures thoughtfully and thoroughly in the interest of identifying and eliminating any source(s) of toxicity in MS4 discharges as expeditiously as possible and to consult with Los Angeles Water Board staff if you need assistance or clarification.

If you have any questions regarding these clarifications, please contact Renee Purdy at Renee.Purdy@waterboards.ca.gov or Shirley Birosik at Shirley.Birosik@waterboards.ca.gov.

The memo addresses requirements for follow-up monitoring in four **receiving water** scenarios where toxicity is present:

- Toxicity is present, but not above the TIE trigger as defined in Attachment E, Part XII.I.1¹;
- Toxicity is present above the TIE trigger and the TIE identifies the constituent(s) causing the toxicity;
- Toxicity is present above the TIE trigger during wet weather, but the TIE is inconclusive; and
- Toxicity is present above the TIE trigger during dry weather, but the TIE is inconclusive.

The memo also addresses the several scenarios once **outfall** toxicity testing has been triggered. Attached to the memo are several simplified flowcharts to aid in understanding the process.

An inconclusive TIE is defined as a TIE for which the cause of toxicity cannot be attributed to a constituent or class of constituents (e.g., metals, insecticides, etc.) that can be targeted for monitoring even after conducting appropriate Phase I and Phase II TIE treatments. This outcome may result from either non-persistent toxicity such that the TIE treatments cannot be successfully completed on the toxic sample, or from the inability with available Phase I and Phase II TIE

An **inconclusive TIE** is one for which the cause of toxicity cannot be identified after the conclusion of TIE Phases I and II.

If a TIE is inconclusive:

- ✓ Check QA/QC
- ✓ Evaluate sensitive species selection
- ✓ Initiate future TIEs earlier (to address non-persistent toxicity)
- ✓ Conduct all phases of TIE

treatments to isolate the constituent or class of constituents causing the toxicity. If the TIE is inconclusive due to non-persistent toxicity, the Los Angeles Water Board expects that Permittees will proactively identify and implement actions during the subsequent upstream and/or outfall toxicity sampling event to improve the likelihood of a conclusive TIE, while also following the steps below. Where a TIE is inconclusive due to the inability to determine the constituent(s) causing the toxicity, Permittees should evaluate further steps to improve the TIE outcome including sensitive species selection, QA/QC, and the need to conduct Phases I through III of a TIE, among others.

¹ Permit references correspond to the Los Angeles County MS4 Permit (Order No. R4-2012-0175)

TRIGGERS FOR ADDING TOXICITY MONITORING TO UPSTREAM RECEIVING WATER MONITORING / OUTFALL MONITORING:

1. If toxicity is present as determined based on a fail of the Test of Significant Toxicity (TST) t-test as specified in the Permit (Attachment E, Part XII.G.4) during wet or dry weather, but not above the TIE trigger (which is defined as when the survival or sublethal endpoint demonstrates a ≥ 50 Percent Effect at the IWC as per Attachment E, Part XII.I.1), then:
 - a. Toxicity monitoring will be added to the next existing upstream receiving water site(s) during the same condition (wet or dry weather) for which toxicity was determined to be present. Monitoring for toxicity at the next existing upstream receiving water site(s) will occur during the next monitoring event that is at least 30 days following the original toxicity sample collection. Toxicity monitoring at individual receiving water sites will continue until (1) the deactivation criterion (i.e., two consecutive samples that pass the pass/fail TST t-test during the same condition) is met at the receiving water site or (2) a TIE is triggered and conclusively identifies the constituent or class of constituents causing toxicity, in which case the process outlined in Bullet 2 below is followed. OR
 - b. If there is no upstream receiving water monitoring site already established as part of the monitoring program, continue receiving water toxicity monitoring at the original site until (1) the deactivation criterion (i.e., two consecutive samples that pass the pass/fail TST t-test during the same condition) is met at the original receiving water site or (2) a TIE is triggered at the original site and conclusively identifies the constituent or class of constituents causing toxicity, in which case the process outlined in Bullet 2 below is followed. Also, conduct an evaluation similar to the TRE outlined in Attachment E, Part XII.J to identify, to the extent practicable, the source(s) of toxicity with the goal of identifying cause(s) of toxicity, paying particular attention to sources of potential constituent(s) causing toxicity (e.g., fipronil).
 - i. If there is no upstream receiving water monitoring site already established as part of the monitoring program and toxicity is present during dry weather, actions taken as part of the non-stormwater program (e.g., source identification and elimination or treatment of unauthorized non-stormwater discharges that are a source of pollutants) should be utilized to support the TRE.
 - ii. If there is no upstream receiving water monitoring site already established as part of the monitoring program and toxicity is present during wet weather, consider the following actions to support TRE: evaluating land uses and potential associated source(s) in the drainage area, evaluation of other permitted discharges, and evaluation of inspection activities. AND
 - c. If there is no upstream receiving monitoring site already established as part of the monitoring program and more than one occurrence of a fail of the TST t-test occurs at the original receiving water site within 3 years, then evaluate opportunities to conduct toxicity monitoring at upstream receiving water sites (either newly established or sites utilized by other monitoring programs), including tributaries.

2. If toxicity is present at a level exceeding the TIE trigger and the TIE identifies the constituent or class of constituents causing toxicity, then:
 - a. Do not add toxicity monitoring to upstream sites. AND
 - a. During the same condition, add the identified constituent or constituents within the class of constituents² to the monitoring site where toxicity was identified, the upstream receiving water site(s), and upstream outfall site(s) starting with the next monitoring event that is at least 45 days following the toxicity sample collection. Monitoring for the identified constituent(s) will continue until the deactivation criterion (i.e., two consecutive samples do not exceed Receiving Water Limitations (RWLs), Water Quality Based Effluent Limitations (WQBELs), or other appropriate threshold or guideline if there is no numeric RWL or WQBEL, for the identified constituents during the same condition) is met at the individual site. Where constituent(s) are identified in the outfall(s) above the RWL(s), WQBEL(s), or other appropriate threshold or guideline commence TRE at each corresponding outfall location per Attachment E, Part XII.J.
3. If toxicity is present at a level exceeding the TIE trigger during wet weather and the TIE is inconclusive, then:
 - a. Add toxicity monitoring to the next existing upstream receiving water site(s) during the next monitoring event that is at least 45 days following the original toxicity sample collection. Toxicity monitoring at individual receiving water site(s) will continue until (1) the deactivation criterion (i.e., two consecutive samples that pass the pass/fail TST t-test during the same condition) is met at the receiving water site or (2) a TIE is triggered and conclusively identifies the constituent or class of constituents causing toxicity, in which case the process outlined in Bullet 2 above is followed. AND
 - b. The second inconclusive TIE in 3 years during wet weather would trigger outfall toxicity testing at upstream outfall sites (i.e., (1) outfall sites located between the receiving water site and the nearest upstream receiving water site located on the same waterbody and (2) outfall sites located on tributaries that have a confluence with the waterbody where the confluence is located between the receiving water site and the nearest upstream receiving water site located on the same waterbody) following the process outlined below in “Steps Related Outfall Toxicity Testing” during the next monitoring event that is at least 45 days following the original toxicity sample collection. OR
 - c. As an alternative to the outfall monitoring described in Bullet 3.b., Permittees may propose an alternative approach any time after the first inconclusive TIE, which could include utilizing upstream receiving water sites (either newly established or sites utilized by other monitoring programs), including tributaries, additional outfall sites, and/or different outfall sites. However, the outfall monitoring approach described in Bullet 3.b. must be followed until Regional Water Board EO approval of the alternative approach.

² Using appropriate detection limits

4. If toxicity is present at a level exceeding the TIE trigger during dry weather and the TIE is inconclusive, then:
 - a. Add toxicity monitoring to the next existing upstream receiving water site(s) during the next monitoring event that is at least 45 days following the original toxicity sample collection. Toxicity monitoring at individual receiving water site(s) will continue until (1) the deactivation criterion (i.e., two consecutive samples that pass the pass/fail TST t-test during the same condition) is met at the receiving water site or (2) a TIE is triggered and conclusively identifies the constituent or class of constituents causing toxicity, in which case the process outlined in Bullet 2 above is followed during the next monitoring event that is at least 45 days following the original toxicity sample collection. AND
 - b. Add toxicity testing to upstream outfall sites (i.e., (1) outfall sites located between the receiving water site and the nearest upstream receiving water site located on the same waterbody and (2) outfall sites located on tributaries that have a confluence with the waterbody where the confluence is located between the receiving water site and the nearest upstream receiving water site located on the same waterbody) following the process outlined below in “Steps Related Outfall Toxicity Testing” during the next monitoring event that is at least 45 days following the original toxicity sample collection. OR
 - c. As an alternative to the outfall monitoring described in Bullet 4.b above, Permittees may propose an alternative approach any time after the first inconclusive TIE, which could include utilizing upstream receiving water sites (either newly established or sites utilized by other monitoring programs), including tributaries, additional outfall sites, and/or different outfall sites. However, the outfall monitoring approach described in Bullet 4.b above must be followed until Regional Water Board EO approval of the alternative approach.

STEPS RELATED TO OUTFALL TOXICITY TESTING ONCE TRIGGERED:

1. If toxicity is not present as determined based on pass of the TST t-test as specified in the Permit, then continue toxicity testing during the same condition
2. (i.e. wet or dry weather) until (1) meeting the deactivation criterion (i.e., two consecutive samples that pass the pass/fail TST t-test during the same condition), or (2) a TIE conducted at the downstream receiving water site conclusively identifies the constituent or class of constituents causing toxicity, or (3) the discharge is eliminated.
3. If toxicity is present as determined based on fail of the TST t-test as specified in the Permit, but not above the TIE trigger, then continue toxicity testing during the same condition until (1) meeting the deactivation criterion (i.e., two consecutive samples that pass the pass/fail TST t-test during the same condition), or (2) a TIE conducted at a downstream receiving water site conclusively identifies the constituent or class of constituents causing toxicity, or (3) the discharge is eliminated. Concurrently conduct an evaluation similar to the TRE in Attachment E, Part XII.J to identify, to the extent practicable, the source(s) of toxicity with the goal of addressing cause(s) of toxicity, paying particular attention to sources of potential constituent(s) causing toxicity (e.g., fipronil).

- a. If toxicity is present in the non-stormwater discharge, actions taken as part of the non-stormwater program (e.g., source identification and elimination or treatment of unauthorized non-stormwater discharges that are a source of pollutants) should be utilized to support the TRE.
 - b. If toxicity is present in the stormwater discharge, consider the following actions to support the TRE: evaluating land uses and potential associated source(s) in the drainage area, evaluation of other permitted discharges, and evaluation of inspection activities.
4. If toxicity is present at a level exceeding the TIE trigger and the TIE identifies the constituent or class of constituents causing toxicity, then:
- a. Discontinue toxicity testing at the outfall. AND
 - b. Add the identified constituent or constituents within the identified class of constituents³ during the same condition starting with the next monitoring event that is at least 45 days following the toxicity sample collection and monitor for those constituents at the outfall until meeting the deactivation criterion for those constituents (i.e., two consecutive samples do not exceed RWLs, WQBELs, or other appropriate threshold or guideline if there is no numeric RWL or WQBEL, for identified constituents), while simultaneously performing a TRE for the constituent(s) causing toxicity per Attachment E, Part XII.J.
5. If toxicity is present at a level exceeding the TIE trigger and the TIE is inconclusive, then continue toxicity testing during the same condition until (1) meeting the deactivation criterion (i.e., two consecutive samples that pass the pass/fail TST t-test during the same condition), or (2) a TIE identifies the constituent or class of constituents causing toxicity (proceed with following the process outlined in Bullet 3, above), or (3) eliminate the discharge. Concurrently conduct an evaluation similar to the TRE in Attachment E, Part XII.J to identify, to the extent practicable, the source(s) of toxicity with the goal of addressing cause(s) of toxicity, paying particular attention to identifying sources of potential constituent(s) causing toxicity that may not have been evaluated in the TIE (e.g., fipronil).
- a. If the TIE is inconclusive in the non-stormwater discharge, actions taken as part of the non-stormwater program (e.g., source identification and elimination or treatment of unauthorized non-stormwater discharges that are a source of pollutants) should be utilized to support the TRE.
 - b. If the TIE is inconclusive in the stormwater discharge, consider the following actions to support the TRE: evaluating land uses and potential associated source(s) in the drainage area, evaluation of other permitted discharges, and evaluation of inspection activities.

³ Using appropriate detection limits

**Receiving Water Toxicity
Present but Does *NOT* Exceed
TIE Trigger**

Upstream
RW Site
Exists?

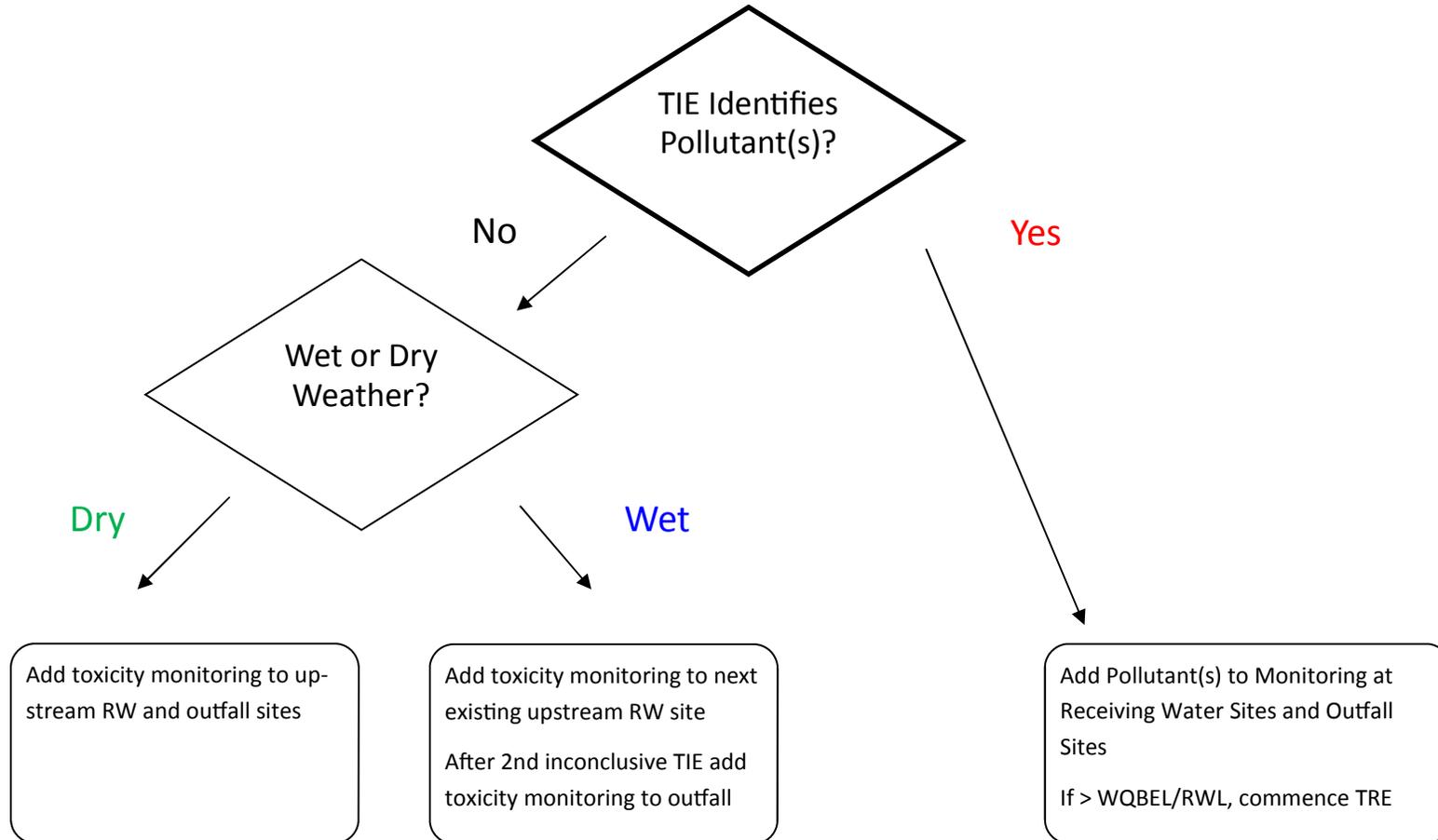
No

Yes

Continue monitoring toxicity at existing site
Conduct TRE-like evaluation
Evaluate potential for upstream monitoring

Add toxicity testing under same conditions (wet/dry)

**Receiving Water Toxicity
Present and Exceeds TIE
Trigger**



Outfall Toxicity Testing Once Triggered

