State of California
California Regional Water Quality Control Board, Los Angeles Region

RESOLUTION NO. R06-014
July 13, 2006

Amendment to the Water Quality Control Plan for the Los Angeles Region to Incorporate a Total Maximum Daily Load for Metals and Selenium in the San Gabriel River and Impaired Tributaries

WHEREAS, the California Regional Water Quality Control Board, Los Angeles Region, finds that:

1. The Federal Clean Water Act (CWA) requires the California Regional Water Quality Control Board (Regional Board) to develop water quality objectives which are sufficient to protect beneficial uses for each water body found within its region.

2. A consent decree between the U.S. Environmental Protection Agency (USEPA), Heal the Bay, Inc. and BayKeeper, Inc. was approved on March 22, 1999. This court order directs the USEPA to complete Total Maximum Daily Loads (TMDLs) for all impaired waters within 13 years. A schedule was established in the consent decree for the completion of the first 29 TMDLs within 7 years. The remaining TMDLs will be scheduled by Regional Board staff within the 13-year period.

3. The elements of a TMDL are described in 40 CFR 130.2 and 130.7 and section 303(d) of the CWA, as well as in USEPA guidance documents (Report No. EPA/440/4-91/001). A TMDL is defined as the sum of the individual waste load allocations for point sources and load allocations for nonpoint sources and natural background (40 CFR 130.2). Regulations further stipulate that TMDLs must be set at levels necessary to attain and maintain the applicable narrative and numeric water quality standards with seasonal variations and a margin of safety that takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality (40 CFR 130.7(c)(1)). The regulations in 40 CFR 130.7 also state that TMDLs shall take into account critical conditions for stream flow, loading and water quality parameters.

4. The numeric targets in this TMDL are not water quality objectives and do not create new bases for enforcement against dischargers apart from the water quality objectives they translate. The targets merely establish the bases through which load allocations (LAs) and waste load allocations (WLAs) are calculated. WLAs are only enforced for a discharger's own discharges, and then only in the context of it National Pollutant Discharge Elimination System (NPDES) permit (or other permit, waiver, or prohibition), which must be consistent with the assumptions and requirements of the WLA. The Regional Board will develop permit requirements through a subsequent permit action that will allow all interested persons,

including but not limited to municipal storm water dischargers, to provide comments on how the WLA will be translated into permit requirements.

5. Upon establishment of TMDLs by the State or USEPA, the State is required to incorporate the TMDLs along with appropriate implementation measures into the State Water Quality Management Plan (40 CFR 130.6(c)(1), 130.7). This Water Quality Control Plan for the Los Angeles Region (Basin Plan), and other applicable statewide plans, serve as the State Water Quality Management Plan governing the watersheds under the jurisdiction of the Regional Board.

6. The San Gabriel River receives drainage from a 682 square mile area of eastern Los Angeles County and has a main channel length of approximately 58 miles. Its headwaters originate in the San Gabriel Mountains with the East, West, and North Forks. The river flows through a heavily developed commercial and industrial area before emptying into the Pacific Ocean at the Los Angeles/Orange County boundary in Long Beach. The main tributaries of the river are Walnut Creek, San Jose Creek, and Coyote Creek. The San Gabriel River includes 4 reaches and the Estuary as defined by the Basin Plan.

7. On May 18, 2000, the U.S. EPA promulgated numeric criteria for priority pollutants for the State of California, known as the California Toxics Rule (CTR), codified as 40 CFR section 131.38. Federal water quality standards under section 303 of the Clean Water Act consist of designated uses and criteria to protect those uses. (40 C.F.R. 131.3(i).) Designated uses are beneficial uses under state law, and criteria are water quality objectives under state law. The CTR establishes the numeric water quality objectives for various toxic pollutants. These objectives apply "without exception" to all inland surface waters within the State of California, including the Los Angeles region. (40 C.F.R. 131.38(d)(1)-(2).)

8. "[I]t is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited." (33 U.S.C. 1251(a)(3).) Water quality standards, including the CTR, reflect this express national policy of Congress. When a pollutant is present at levels in excess of the CTR numbers, then the pollutant is present in toxic amounts. In this sense, the numeric objectives in the CTR are U.S. EPA's determination of when priority pollutants are present at toxic amounts in contravention of Congress's national policy.

9. The Regional Board's goal in establishing the TMDL for Metals and Selenium in the San Gabriel River and Impaired Tributaries is to protect the aquatic life and water supply beneficial uses of the San Gabriel River and its tributaries and to achieve the numeric water quality objectives set to protect these uses as contained in the CTR.

10. Regional Board staff have prepared a detailed technical document that analyzes and describes the specific necessity and rationale for the development of this TMDL. The technical document entitled "Total Maximum Daily Loads for Metals and Selenium in the San Gabriel River and Impaired Tributaries" is an integral part of this Regional Board action and was reviewed, considered, and accepted by the Regional Board before acting. Further, the technical document provides the detailed factual basis and analysis supporting the problem statement, numeric targets (interpretation of the numeric water quality objective, used to calculate the load allocations), source analysis, linkage analysis, waste load allocations (for point sources), load allocation (for nonpoint sources), margin of safety, and seasonal variations and critical conditions of this TMDL.

11. The scientific basis for the TMDL was subjected to an independent, external peer review pursuant to the requirements of Health and Safety Code section 57004.

12. On July 13, 2006, prior to the Board's action on this resolution, public hearings were conducted on the TMDL for Metals and Selenium in the San Gabriel River and Impaired Tributaries. Notice of the hearing for the TMDL for Metals and Selenium in the San Gabriel River and Impaired Tributaries was published in accordance with the requirements of Water Code section 13244. This notice was published in the Los Angeles Times, the San Gabriel Valley Tribune, and the Long Beach Press Telegram.

13. The public has had reasonable opportunity to participate in review of the amendment to the Basin Plan. A public workshop was held on March 22, 2006 at the Regional Board offices at 320 West 4th Street, Los Angeles, CA 90013. A notice of the workshop was sent to interested parties including cities and/or counties with jurisdiction in or bordering the San Gabriel River watershed. A draft of the TMDL for Metals and Selenium in the San Gabriel River and Impaired Tributaries was released for public comment on May 5, 2006; a Notice of Hearing and Notice of Filing were published and circulated 45 days preceding Board action; Regional Board staff responded to oral and written comments received from the public; and the Regional Board held a public hearing on July 13, 2006 to consider adoption of the TMDL.

14. In amending the Basin Plan, the Regional Board considered the factors set forth in sections 13240 and 13242 of the Water Code.

15. The amendment is consistent with the State Antidegradation Policy (State Board Resolution No. 68-16), in that the changes to water quality objectives (i) consider maximum benefits to the people of the state, (ii) will not unreasonably affect present and anticipated beneficial use of waters, and (iii) will not result in water quality less than that prescribed in policies. Likewise, the amendment is consistent with the federal Antidegradation Policy (40 CFR 131.12).

16. The basin planning process has been certified by the Resources Agency as an exempt regulatory program because its process adequately fulfills the purposes of the California Environmental Quality Act. The Regional Board is therefore exempt from CEQA's requirement to prepare an environmental impact report, negative declaration, or initial study (Public Resources Code, Section 21000 et seq.), and as such, the required substitute environmental documentation (including the CEQA environmental checklist) have been prepared. The detailed technical report entitled "Total Maximum Daily Load for Metals and Selenium in the San Gabriel River and Impaired Tributaries," responses prepared by staff to address comments raised during the development of the TMDL, this resolution, and the Environmental Checklist serve as the substitute documents for this project. The project itself is the establishment of a TMDL for metals and selenium in the San Gabriel Rive and Impaired tributaries. While the Regional Board has no discretion to not establish a TMDL (the TMDL is required by federal law) or for determining the water quality standard to be applied, the Board does exercise discretion in assigning waste load allocations and load allocations, determining the program of implementation, and setting various milestones in achieving the numeric water quality standards established in the Basin Plan. A CEQA Scoping hearing was conducted on December 12, 2005 at the Regional Board offices at 320 West 4th Street, Los Angeles, CA 90013. A notice of the CEQA Scoping hearing was sent to interested parties including cities and/or counties with jurisdiction in or bordering the San Gabriel River watershed.

17. The lengthy implementation period allowed by the TMDL, will allow many compliance approaches to be pursued. In preparing the accompanying CEQA substitute documents, the Regional Board has considered the requirements of Public Resources Code section 21159 and California Code of Regulations, title 14, section 15187, and intends the substitute documents to serve as a tier 1 environmental review. Nearly all of the compliance obligations will be undertaken by public agencies that will have their own obligations under CEQA. Project level impacts will need to be considered in any subsequent environmental analysis performed by other public agencies, pursuant to Public Resources Code section 21159.2. If not properly mitigated at the project level, there could be adverse environmental impacts. The substitute documents for this TMDL, and in particular the Environmental Checklist and staff's responses to comments, identify broad mitigation approaches that should be considered at the project level. Consistent with CEQA, the substitute documents do not engage in speculation or conjecture and only consider the reasonably foreseeable environmental impacts of the methods of compliance, the reasonably foreseeable feasible mitigation measures, and the reasonably foreseeable alternative means of compliance, which would avoid or eliminate the identified impacts.

18. Comments were received on the substitute environmental documentation and the CEQA checklist was revised in response to comments.

19. The proposed amendment results in no reasonable potential for adverse effects (de minimis finding), either individually or cumulatively, on wildlife.

20. The regulatory action meets the "Necessity" standard of the Administrative Procedures Act, Government Code, section 11353, subdivision (b).

21. The Basin Plan amendment incorporating a TMDL for Metals and Selenium in the San Gabriel River and Impaired Tributaries must be submitted for review and approval by the State Water Resources Control Board (State Board), the State Office of Administrative Law (OAL), and the USEPA. The Basin Plan amendment will become effective upon approval by OAL and USEPA. A Notice of Decision will be filed.

22. If during its approval process Regional Board staff, the SWRCB or OAL determines that minor, non-substantive corrections to the language of the amendment are needed for clarity or consistency, the Executive Officer may make such changes, and shall inform the Board of any such changes.

THEREFORE, be it resolved that pursuant to sections 13240 and 13242 of the Water Code, the Regional Board hereby amends the Basin Plan as follows:

1. Pursuant to sections 13240 and 13242 of the California Water Code, and section 303(d) of the federal Clean Water Act, the Regional Board, after considering the entire record, including oral testimony at the hearing, hereby adopts the amendments to Chapters 3 and 7 of the Water Quality Control Plan for the Los Angeles Region, as set forth in Attachment A hereto, to incorporate the elements of the TMDL for Metals and Selenium in the San Gabriel River and Impaired Tributaries.

2. The Regional Board hereby certifies the final CEQA substitute environmental documentation prepared in accordance with Public Resources Code section 21159 and California Code of Regulations, title 14, section 15187.

3. The Executive Officer is directed to forward copies of the Basin Plan amendment to the State Board in accordance with the requirements of section 13245 of the California Water Code.

4. The Regional Board requests that the State Board approve the Basin Plan amendment in accordance with the requirements of sections 13245 and 13246 of the California Water Code and forward it to OAL and the USEPA.

5. If during its approval process the State Board or OAL determines that minor, non-substantive corrections to the language of the amendment are needed for clarity or consistency, the Executive Officer may make such changes, and shall inform the Board of any such changes.

6. The Executive Officer is authorized to sign a Certificate of Fee Exemption.

I, Jonathan S. Bishop, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of a resolution adopted by the California Regional Water Quality Control Board, Los Angeles Region, on July 13, 2006.

Jonathan S. Bishop
Executive Officer

Amendment to the Water Quality Control Plan – Los Angeles Region to incorporate the San Gabriel River and Impaired Tributaries Metals and Selenium TMDL

Adopted by the California Regional Water Quality Control Board, Los Angeles Region on July 13, 2006.

Amendments:

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Chapter 7. Total Maximum Daily Loads (TMDLs) Summaries
7-20 San Gabriel River and Impaired Tributaries Metals and Selenium TMDL

List of Figures, Tables and Inserts
Add:

Chapter 7. Total Maximum Daily Loads (TMDLs)
Tables
7-20 San Gabriel River and Impaired Tributaries Metals and Selenium TMDL
7-20.1 San Gabriel River and Impaired Tributaries Metals and Selenium TMDL: Elements
7-20.2 San Gabriel River and Impaired Tributaries Metals and Selenium TMDL: Implementation Schedule

Chapter 7. Total Maximum Daily Loads (TMDLs) Summaries
Add:

7-20 San Gabriel River and Impaired Tributaries Metals and Selenium TMDL

This TMDL was adopted by

The Regional Water Quality Control Board on July 13, 2006.

This TMDL was approved by:

The State Water Resources Control Board on [Insert Date].
The Office of Administrative Law on [Insert Date].
The U.S. Environmental Protection Agency on [Insert Date].

The elements of the TMDL are presented in Table 7-20.1 and the Implementation Plan in Table 7-20.2

Table 7-20.1 San Gabriel River and Tributaries Metals and Selenium TMDL: Elements

Element	Key Findings and Regulatory Provisions
Problem Statement	Segments of the San Gabriel River and its tributaries are on the Clean Water Act section 303(d) list of impaired waterbodies for copper, lead, zinc, and selenium. The constituents subject to this TMDL are toxic pollutants, and the existing water quality objectives for these constituents reflect national policy that the discharge of toxic pollutants in toxic amounts be prohibited. When one of the constituents subject to this TMDL is present at levels exceeding the existing numeric objectives, then the receiving water is toxic. The beneficial uses impaired by metals and selenium in the San Gabriel River and its tributaries are those associated with aquatic life and water supply, including wildlife habitat, rare, threatened or endangered species, warm freshwater habitat, wetlands, and groundwater recharge. TMDLs are developed for reaches on the 303(d) list and for reaches where recent data indicate additional impairments. Addressing the impairing metals and selenium throughout the San Gabriel River watershed will ensure that they do not contribute to impairments elsewhere in the watershed. Metals and selenium allocations are therefore developed for upstream reaches and tributaries that drain to impaired reaches. These TMDLs address dry-weather impairments of copper in the San Gabriel River Estuary (Estuary) and selenium in San Jose Creek Reach 1 and wet-weather impairments of lead in San Gabriel River Reach 2 and copper, lead, and zinc in Coyote Creek.
Numeric Target *(Interpretation of the numeric water quality objective, used to calculate the waste load allocations)*	Numeric targets for the TMDL are based on California Toxics Rule (CTR) criteria. Separate numeric targets are developed for dry and wet weather. In San Gabriel River Reach 2, the delineation between dry and wet weather occurs when the maximum daily flow at USGS station 11085000 is 260 cfs. In Coyote Creek, the delineation between dry and wet weather occurs when the maximum daily flow at Los Angeles County Department of Public Works (LACDPW) flow gauge station F354-R is 156 cfs. Dry-weather numeric targets are based on chronic CTR criteria and wet weather numeric targets are based on acute CTR criteria. Saltwater targets are developed for the Estuary and freshwater targets are developed for all other reaches. Freshwater numeric targets (except selenium) are adjusted for reach specific hardness using median hardness values. CTR default conversion factors are used to convert dissolved CTR criteria for copper, lead, and zinc into numeric targets expressed in terms of total recoverable metals to address the potential for dissolution of particulate metals in the receiving water. Attainment of numeric targets expressed as total recoverable metals will ensure attainment of the dissolved CTR criteria. The CTR criterion for selenium is already expressed as total recoverable metals.

<table>
<tr><th>Element</th><th>Key Findings and Regulatory Provisions</th></tr>
<tr><td></td><td>
Dry-weather Numeric Targets (µg/L total recoverable metals)
<table>
<tr><th></th><th>Copper</th><th>Selenium</th></tr>
<tr><td>San Jose Creek Reach 1</td><td>--</td><td>5</td></tr>
<tr><td>San Gabriel River Estuary</td><td>3.7</td><td>--</td></tr>
</table>
Wet-weather Numeric Targets (µg/L total recoverable metals)
<table>
<tr><th></th><th>Copper</th><th>Lead</th><th>Zinc</th></tr>
<tr><td>San Gabriel Reach 2</td><td>--</td><td>166</td><td>--</td></tr>
<tr><td>Coyote Creek</td><td>15</td><td>87</td><td>125</td></tr>
</table>
</td></tr>
<tr><td>Source Analysis</td><td>There are significant differences in the sources of metals and selenium loading during dry and wet weather. Wet-weather flow is comprised mostly of storm water runoff and is the dominant source of annual metals loading to the river. This storm water flow is permitted through three municipal separate storm sewer system (MS4) permits, a separate Caltrans MS4 permit, a general construction storm water permit, and a general industrial storm water permit. (MS4, Caltrans, general industrial, and general construction permits are hereafter referred to as storm water permittees.) During dry weather, flows are significantly lower, with dry-weather urban runoff through storm drains, water reclamation plants (WRPs), power plants, and other point source discharges as major sources. The power plants are the dominant sources of flow and copper loading to the Estuary during dry weather.

Nonpoint sources may include tributaries that drain the open space areas of the watershed. Direct atmospheric deposition of metals on the river is also a small source. Indirect atmospheric deposition on the land surface that is washed off during storms is a larger source and is accounted for in the estimates of the storm water loading. Once metals are deposited on land under the jurisdiction of a storm water permittee, they are within a permittee’s control and responsibility. The TMDL Implementation Plan includes special studies to address atmospheric deposition and open space sources.

A portion of the San Gabriel River watershed (upper Coyote Creek) is located in Orange County and is under the jurisdiction of the Santa Ana Regional Water Quality Control Board. Sources in Orange County are assigned allocations in order to meet TMDLs.</td></tr>
<tr><td>Loading Capacity</td><td>Dry-weather TMDLs are assigned for selenium in San Jose Creek Reach 1 and copper in the Estuary. The dry-weather loading capacity for selenium for San Jose Creek Reach 1 is 0.232 kg/day, which is the product of the numeric target for selenium and the median non-WRP flow. In the Estuary, ocean water provides no assimilative capacity during the critical condition because it is displaced by the power plant flow. The concentration of copper in the Estuary is therefore a direct function of upstream and direct sources.</td></tr>
</table>

<table>
<tr><th>Element</th><th>Key Findings and Regulatory Provisions</th></tr>
<tr><td></td><td>
Dry-weather allocations are assigned to sources in San Jose Creek Reaches 1 and 2 to meet the selenium TMDL in Reach 1. Dry-weather allocations are assigned to sources in the Estuary, San Gabriel River Reach 1, and Coyote Creek to meet the copper TMDL in the Estuary.

Wet-weather TMDLs are assigned for lead in San Gabriel River Reach 2 and copper, lead, and zinc in Coyote Creek. Wet-weather loading capacities are equal to daily storm volumes multiplied by the wet-weather numeric target for each metal.

Wet-weather Loading Capacities (kg/day total recoverable metals)
<table>
<tr><th></th><th>Copper</th><th>Lead</th><th>Zinc</th></tr>
<tr><td>San Gabriel River Reach 2</td><td>--</td><td>Daily storm volume(L/day) x 166 µg/L</td><td>--</td></tr>
<tr><td>Coyote Creek</td><td>Daily storm volume(L/day) x 15 µg/L</td><td>Daily storm volume(L/day) x 87 µg/L</td><td>Daily storm volume(L/day) x 125 µg/L</td></tr>
</table>
The daily storm volume is equal to the total daily flow either in San Gabriel River Reach 2 or Coyote Creek.

Wet-weather allocations are assigned to all upstream reaches and tributaries of San Gabriel River Reach 2 and Coyote Creek.
</td></tr>
<tr><td>Load Allocations (for nonpoint sources)</td><td>
Dry Weather

Dry-weather load allocations for direct atmospheric deposition of copper to the Estuary, Reach 1, and Coyote Creek are based on previous studies and allocated based on the amount of surface water in these subwatersheds. No value for direct deposition of selenium is available; therefore, a load allocation of zero is assigned to San Jose Creek Reach 1 and Reach 2.

Dry-weather load allocations for open space are equal to the percent area of open space not served by storm drains multiplied by loading capacities. The amount of open space not served by storm drains in the San Jose Creek Reach 1 and Reach 2 subwatersheds (1.8%) is multiplied by the selenium loading capacity of 0.232 kg/day. All open space in the Estuary, Reach 1, and Coyote Creek subwatersheds is served by storm drains; thus, the load allocation for open space is zero.

Dry-weather Load Allocations (kg/day total recoverable metals)
<table>
<tr><th></th><th>Copper Direct Air</th><th>Copper Open Space</th><th>Selenium Direct Air</th><th>Selenium Open Space</th></tr>
<tr><td>San Jose Creek Reach 1 and 2</td><td>--</td><td>--</td><td>0</td><td>0.0042</td></tr>
<tr><td>San Gabriel Estuary</td><td>7.75×10^{-4}</td><td>0</td><td>--</td><td>--</td></tr>
<tr><td>San Gabriel Reach 1</td><td>2.7×10^{-3}</td><td>0</td><td>--</td><td>--</td></tr>
<tr><td>Coyote Creek</td><td>2.0×10^{-3}</td><td>0</td><td>--</td><td>--</td></tr>
</table>
</td></tr>
</table>

Element	Key Findings and Regulatory Provisions
	Wet Weather Wet-weather load allocations for direct atmospheric deposition are equal to the percent area of surface water multiplied by the loading capacities. Approximately 0.4% of the watershed draining to San Gabriel River Reach 2 is comprised of water and approximately 0.2% of the watershed draining to Coyote Creek is comprised of water. Wet-weather open space load allocations are equal to the percent area of open space not served by storm drains multiplied by the loading capacities. Because all open space in the Coyote Creek subwatershed is served by storm drains, the load allocation for open space is zero. Approximately 48% of the San Gabriel River watershed that drains to Reach 2 is open space not served by storm drains. **Wet-weather Load Allocations (kg/day total recoverable metals)** Direct Air / Open Space **San Gabriel River Reach 2 and upstream reaches and tributaries** Lead: Daily storm volume(L/day) x 0.6 µg/L / Daily storm volume(L/day) x 79 µg/L **Coyote Creek and tributaries** Copper: Daily storm volume(L/day) x 0.03 µg/L / 0 Lead: Daily storm volume(L/day) x 0.2 µg/L / 0 Zinc: Daily storm volume(L/day) x 0. 3 µg/L / 0 The daily storm volume is equal to the total daily flow either in San Gabriel River Reach 2 or Coyote Creek.
Waste Load Allocations *(for point sources)*	**Dry Weather** Non-storm water program point sources (including WRPs and power plants) that discharge to the Estuary, Reach 1, and Coyote Creek are assigned concentration-based waste load allocations (WLA). The WLAs for discharges to Reach 1 and Coyote Creek are based on freshwater criteria and upstream hardness values, resulting in copper allocations equal to 18 µg/L for Reach 1 and 20 µg/L for Coyote Creek. Direct discharges to the Estuary receive a WLA of 3.1 µg/L in order to meet the numeric target while accounting for the relative flow of the power plants and upstream sources. The Implementation Plan includes special studies to assess the effect of upstream discharges on water quality and beneficial uses in the Estuary.

Element	Key Findings and Regulatory Provisions
	The storm water permittees in Reach 1 receive the same concentration-based WLA assigned to the non-storm water discharges because there is insufficient non-WRP flow to calculate a mass-based allocation in this reach. The storm water permittees in Coyote Creek receive a WLA equal to the concentration-based allocation multiplied by the median non-WRP flow, minus the load allocations for nonpoint sources. The storm water permittees that discharge directly to the Estuary have a concentration-based WLA equal to the Estuary numeric target. **Dry-weather Copper WLAs for the Estuary, Reach 1, and Coyote Creek (total recoverable metals)** Non-Storm Water Program Point Sources ~~(µg/L)~~ | Upstream Allowable Load ~~(kg/day)~~ | Storm Water Permittees ~~(kg/day)~~ Estuary | 3.1~~*~~µg/L | -- | 3.1 µg/L~~–~~ San Gabriel Reach 1 | 18~~*~~µg/L | -- | 18 µg/L~~–~~ Coyote Creek | 20 µg/L | 0.943 kg/day | 0.941 kg/day ~~*Also applies to storm water permittees in these reaches~~ The WLAs for the non-storm water program point sources in San Jose Creek Reach 1 and Reach 2 (including WRPs) are equal to the numeric target for selenium. The storm water permittees receive a WLA equal to the loading capacity minus the load allocations for direct air and open space. **Dry-weather Selenium WLAs for San Jose Creek Reach 1 and Reach 2 (total recoverable metals)** Non-Storm Water Program Point Sources (µg/L) | Loading Capacity (kg/day) | Storm Water Permittees (kg/day) San Jose Creek Reach 1 and 2 | 5 | 0.232 | 0.228 The dry-weather WLAs for storm water permittees are shared by the MS4 and Caltrans permittees because there is not enough data on the relative extent of MS4 and Caltrans areas. A zero WLA is assigned to the industrial and construction stormwater permits during dry weather. Non-storm water discharges are already prohibited or restricted by existing general permits. **Wet Weather** Non-storm water program point sources (including WRPs) are assigned concentration-based WLAs equal to wet-weather numeric targets.

Element	Key Findings and Regulatory Provisions

Wet-weather Non-storm Water Program Point Source WLAs (total recoverable metals)

	Copper	Lead	Zinc
San Gabriel River Reach 2 and upstream reaches and tributaries	--	166 µg/L	--
Coyote Creek and tributaries	15 µg/L	87 µg/L	125 µg/L

The combined wet-weather WLAs for storm water permittees are equal to the loading capacities minus the load allocations for open space and direct air deposition.

Wet-weather Storm Water Permittee WLAs (kg/day total recoverable metals)

	Copper	Lead	Zinc
San Gabriel River Reach 2 and upstream reaches and tributaries	--	Daily storm volume(L/day)x 86.4 µg/L	--
Coyote Creek and tributaries	Daily storm volume(L/day)x 14.9 µg/L	Daily storm volume(L/day)x 86.8 µg/L	Daily storm volume(L/day)x 124.7 µg/L

The daily storm volume is equal to the total daily flow either in San Gabriel River Reach 2 or Coyote Creek.

The combined storm water permittee WLAs are further allocated to the general industrial, general construction, MS4 and Caltrans permits based on their percent area of the developed portion of the watershed. The MS4 permittees and Caltrans share a WLA because there is not enough data on the relative extent of MS4 and Caltrans areas.

Wet-weather MS4 and Caltrans Permittees WLAs (kg/day total recoverable metals)

	Copper	Lead	Zinc
San Gabriel River Reach 2 and upstream reaches and tributaries	--	Daily storm volume(L/day)x 82 µg/L	--
Coyote Creek and tributaries	Daily storm volume(L/day)x 13.7 µg/L	Daily storm volume(L/day)x 79.5 µg/L	Daily storm volume(L/day)x 114.2 µg/L

For the MS4 and Caltrans permits, the daily storm volume is measured at TMDL effectiveness monitoring locations. The final TMDL effectiveness monitoring locations are the LACDPW storm water mass emission stations at Coyote Creek (S13) and San Gabriel River Reach 2 (S14).

<table>
<tr><th>Element</th><th>Key Findings and Regulatory Provisions</th></tr>
<tr><td></td><td>
Wet-weather General Industrial Permittees WLAs
(kg/day total recoverable metals)
<table>
<tr><th></th><th>Copper</th><th>Lead</th><th>Zinc</th></tr>
<tr><td>San Gabriel River Reach 2 and upstream reaches and tributaries</td><td>--</td><td>Daily storm volume(L/day)x 3.6 µg/L</td><td>--</td></tr>
<tr><td>Coyote Creek and tributaries</td><td>Daily storm volume(L/day)x 0.5 µg/L</td><td>Daily storm volume(L/day)x 3.0 µg/L</td><td>Daily storm volume(L/day)x 4.3 µg/L</td></tr>
</table>
Wet-weather General Construction Permittees WLAs
(kg/day total recoverable metals)
<table>
<tr><th></th><th>Copper</th><th>Lead</th><th>Zinc</th></tr>
<tr><td>San Gabriel River Reach 2 and upstream reaches and tributaries</td><td>--</td><td>Daily storm volume(L/day) x 1.24 µg/L</td><td>--</td></tr>
<tr><td>Coyote Creek and tributaries</td><td>Daily storm volume(L/day)x 0.7 µg/L</td><td>Daily storm volume(L/day)x 4.3 µg/L</td><td>Daily storm volume(L/day)x 6.2 µg/L</td></tr>
</table>
Each enrollee under the general industrial and construction storm water permits receives a WLA on a per acre basis.

Wet-weather WLAs for Enrollees Under the General Construction or Industrial Permits (kg/day/acre total recoverable metals)
<table>
<tr><th></th><th>Copper</th><th>Lead</th><th>Zinc</th></tr>
<tr><td>San Gabriel River Reach 2 and upstream reaches and tributaries</td><td>--</td><td>Daily storm volume(L/day)x 0.56 µg/L</td><td>--</td></tr>
<tr><td>Coyote Creek and tributaries</td><td>Daily storm volume(L/day)x 0.12 µg/L</td><td>Daily storm volume(L/day)x 0.70 µg/L</td><td>Daily storm volume(L/day)x 1.01 µg/L</td></tr>
</table>
For the general industrial and construction storm water permits, the daily storm volume is measured at USGS station 11085000 for discharges to Reach 2 and above and at LACDPW flow gauge station F354-R for discharges to Coyote Creek.
</td></tr>
<tr><td>Margin of Safety</td><td>A margin of safety accounts for any lack of knowledge concerning the relationship between pollutant loads and water quality. There is little uncertainty in the development of these TMDLs because they are simply equal to the numeric targets multiplied by the median flow or mean low tide in dry weather and the numeric targets multiplied by actual flow in wet-weather. The primary sources of uncertainty are related to assumptions made in developing numeric targets. The use of default conversion factors is an implicitly conservative assumption, which is applied to the margin of safety. Conversion factors are defined as the fraction of dissolved metals divided by the total metals</td></tr>
</table>

Element	Key Findings and Regulatory Provisions
	concentration. The default conversion factors overestimate the fraction of copper in the dissolved form. When the CTR criteria expressed as dissolved metals are divided by conversion factors to convert to obtain numeric targets expressed as total recoverable metals, the resulting dry- and wet-weather targets are underestimated. This underestimation is applied to the margin of safety.
Implementation	The regulatory mechanisms used to implement the TMDL will include the Los Angeles County MS4, the City of Long Beach MS4, The Orange County MS4 (under the jurisdiction of the Santa Ana Regional Water Quality Control Board) the Caltrans storm water permit, major NPDES permits, minor NPDES permits, general NPDES permits, general industrial storm water NPDES permits, and general construction storm water NPDES permits. Nonpoint sources will be regulated through the authority contained in sections 13263 and 13269 of the Water Code and in conformance with the State Water Resources Control Board's Nonpoint Source Implementation and Enforcement Policy (May 2004) and the Conditional Waiver for Discharges from Irrigated Lands, adopted by the Los Angeles Regional Water Quality Control Board on November 3, 2005. Each NPDES permit assigned a WLA shall be reopened or amended at reissuance, in accordance with applicable laws, to incorporate effluent limitations that implement the applicable WLAs as permit requirements. The Regional Board shall reconsider this TMDL five years after its effective date based on additional data obtained from special studies. Table 7-20.2 presents the implementation schedule for the responsible permittees. **WRPs, power plants, and other non-storm water program NPDES permits** Permit writers may translate applicable WLAs into effluent limits for the major, minor and general NPDES permits by applying the effluent limitation procedures in Section 1.4 of the State Water Resources Control Board's Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (2000) or other applicable engineering practices authorized under federal regulations. Wet-weather WLAs will not be used to determine monthly permit limits, but will only be used in the determination of a daily limit. For permits subject to both dry- and wet-weather WLAs, it is expected that permit writers would write a monthly limit based on the dry-weather WLA and two separate daily maximums based on the dry- and wet-weather WLAs. Compliance schedules may be established in individual NPDES permits, at Regional Board discretion, allowing up to 5 years within a permit cycle to achieve compliance. Compliance schedules may not be established in general NPDES permits. A discharger that cannot comply immediately with effluent limitations specified to implement WLAs will be required to apply for an individual permit in order to demonstrate the need for a compliance schedule.

Element	Key Findings and Regulatory Provisions
	Permittees that hold individual NPDES permits and solely discharge storm water may be allowed (at Regional Board discretion) compliance schedules up to 9 years from the effective date of the TMDL to achieve compliance with final WLAs. **General industrial storm water permits** WLAs will be incorporated into the State Board general permit upon renewal or into a watershed-specific general permit developed by the Regional Board. <u>Dry-weather implementation</u> Non-storm water flows authorized by NPDES Permit No. CAS000001, or any successor permit, are exempt from the dry-weather WLA equal to zero. Instead, these authorized non-storm water flows shall meet the reach-specific concentration-based WLAs assigned to the non-storm water permits. The zero dry-weather WLA applies to unauthorized non-storm water flows, which are prohibited by Permit No. CAS000001. It is anticipated that the dry-weather WLAs will be implemented by requiring improved best management practices (BMPs) to eliminate the discharge of non-storm water flows. Permit writers must provide adequate justification and documentation to demonstrate that specified BMPs are expected to result in attainment of the numeric WLAs. <u>Wet-weather implementation</u> General industrial storm water permittees are allowed interim wet-weather concentration-based WLAs for copper equal to 63.6 µg/L and lead equal to 480 µg/L as a monthly interim limit and 638 µg/L as a daily interim limit. The interim copper WLA is based on the copper benchmark contained in EPA's Storm Water Multi-sector General Permit for Industrial Activities. The interim lead WLA is based on the 95th percentile of the total lead values for the monthly limit and the 99th percentile for the daily limit obtained from historical runoff data from the Puente Hills Landfill, operated by Los Angeles County Sanitation Districts, and enrolled under the existing general industrial permit. The interim WLAs apply to all industry sectors and apply for a period not to exceed nine years from the effective date of the TMDL. Interim WLAs are not required for zinc because EPA benchmarks for these metals are lower than the TMDL WLAs. Permittees are required to meet final zinc WLAs four years from the effective date of the TMDL. In the first four years from the effective date of the TMDL, interim copper and lead and final zinc WLAs will not be interpreted as enforceable permit conditions. The interim waste load allocations will not be included in any permits until the historical and recent storm water data from the Puente Hills landfill and industry wide data are evaluated by the Regional Board and the Regional Board reconsiders the interim waste load allocation as appropriate or in need of a revision to reflect BMP performance under varying storm conditions. The

Element	Key Findings and Regulatory Provisions
	interim waste load allocations will be reconsidered within one year of the effective date of the final 2006 303(d) list as described in the Implementation Schedule. If monitoring demonstrates that interim copper and lead and final zinc WLAs are being exceeded, the permittee shall evaluate existing and potential BMPs, including structural BMPs, and implement any necessary BMP improvements. It is anticipated that monitoring results and any necessary BMP improvements would occur as part of an annual reporting process. After four years from the effective date of the TMDL, interim copper and lead and final zinc WLAs shall be translated into enforceable permit conditions. Compliance with permit conditions may be demonstrated through the installation, maintenance, and monitoring of Regional Board-approved BMPs. If this method of compliance is chosen, permit writers must provide adequate justification and documentation to demonstrate that BMPs are expected to result in attainment of interim WLAs. The general industrial storm water permits shall achieve final copper and lead wet-weather WLAs no later than nine years from the effective date of the TMDL, which shall be expressed as NPDES water quality-based effluent limitations. Effluent limitations may be expressed as permit conditions, such as the installation, maintenance, and monitoring of Regional Board-approved BMPs if adequate justification and documentation demonstrate that BMPs are expected to result in attainment of WLAs. **General construction storm water permits** WLAs will be incorporated into the State Board general permit upon renewal or into a watershed-specific general permit developed by the Regional Board. <u>Dry-weather implementation</u> Non-storm water flows authorized by the General Permit for Storm Water Discharges Associated with Construction Activity (NPDES Permit No. CAS000002), or any successor permit, are exempt from the dry-weather WLA equal to zero as long as they comply with the provisions of sections C.3.and A.9 of the Order No. 99-08 DWQ, which state that these authorized non-storm discharges shall be (1) infeasible to eliminate (2) comply with BMPs as described in the Storm Water Pollution Prevention Plan prepared by the permittee, and (3) not cause or contribute to a violation of water quality standards, or comparable provisions in any successor order. Unauthorized non-storm water flows are already prohibited by Permit No. CAS000002. <u>Wet-weather implementation</u> Within six years of the effective date of the TMDL, the construction industry will submit the results of BMP effectiveness studies to determine BMPs that will achieve compliance with the final WLAs assigned to construction storm water permittees. Regional Board staff will bring the recommended BMPs before the Regional Board for

Element	Key Findings and Regulatory Provisions
	consideration within seven years of the effective date of the TMDL. General construction storm water permittees will be considered in compliance with final WLAs if they implement these Regional Board approved BMPs. All permittees must implement the approved BMPs within eight years of the effective date of the TMDL. If no effectiveness studies are conducted and no BMPs are approved by the Regional Board within seven years of the effective date of the TMDL, each general construction storm water permit holder will be subject to site-specific BMPs and monitoring requirements to demonstrate compliance with final WLAs. **MS4 and Caltrans permits** The shared allocations apply to the Caltrans permit and all NPDES-regulated municipal storm water discharges in the San Gabriel River watershed, including municipalities enrolled under the Los Angeles County MS4 permit, the City of Long Beach MS4 permit, and the Orange County MS4 permit. Permittes may incorporate into jurisdictional groups to better coordinate compliance and monitoring efforts upon approval by the Executive Officer. For the dry-weather condition, mass-based WLAs will be incorporated into these or other NPDES permits. Applicable CTR limits are being met most of the time during dry weather. Due to the expense of obtaining accurate flow measurements required for calculating loads, concentration-based permit limits equal to the dry-weather WLAs assigned to the WRPs, power plants, and other non-storm water program NPDES permits may apply to MS4 and Caltrans permittees during dry weather. For the wet-weather condition, mass-based WLAs will be incorporated into NPDES permits as mass-based permit limits. The implementation schedule for the MS4 and Caltrans storm water permits shall consist of a phased approach. Permittees shall demonstrate TMDL effectiveness in prescribed percentages of the watershed, with dry-weather TMDLs achieved within 10 years and wet-weather TMDLs achieved in 15 years. The implementation period may be extended, upon Regional Board approval if an integrated water resources approach is employed and permittees demonstrate the need for an extended schedule. Each municipality and permittee will be required to meet the WLAs shared by the MS4 and Caltrans permittees at the designated TMDL effectiveness monitoring points. A combination of non-structural and structural BMPs may be used to achieve compliance with the WLAs. The administrative record and the fact sheets for the MS4 and Caltrans permits must provide reasonable assurance that the BMPs selected will be sufficient to implement the WLAs. Reductions to be achieved by each BMP shall be documented and sufficient monitoring shall be put in place to verify that the desired reductions are achieved. The permits shall also provide a mechanism to make adjustments to the required BMPs as necessary to ensure their adequate performance.

Element	Key Findings and Regulatory Provisions
Seasonal Variations and Critical Conditions	Seasonal variations are addressed by developing separate TMDLs and allocations for dry weather and wet weather. For dry weather, the critical flow for San Jose Creek is established from the long-term flow records (1990-2005) generated by stream gages in the creek. The median dry-weather non-WRP flow is selected as the critical flow since most of the flow is from effluent, which results in a relatively stable dry-weather flow condition. The critical condition for the Estuary is equal to the volume of water in the Estuary at low tide, which is the condition when there is the least amount of assimilative capacity in the Estuary. Wet-weather loading capacities and allocations vary by storm. Given this variability in storm water flows, no justification was found for selecting a particular sized storm as the critical condition.
Monitoring and Special Studies	Monitoring is necessary to assess the condition of the San Gabriel River and its tributaries and to assess the on-going effectiveness of efforts by dischargers to reduce metals loading to the river. Special studies may provide additional data, new or alternative sources, and revised scientific assumptions. The monitoring programs, reports, and studies will be developed in response to subsequent orders issued by the Executive Officer. **Ambient Monitoring** An ambient monitoring program is necessary to assess water quality throughout the San Gabriel River and its tributaries. The MS4 and Caltrans NPDES permittees are jointly responsible for implementing the ambient monitoring program. The responsible agencies shall sample for total recoverable metals, dissolved metals, and hardness once per month at each proposed ambient monitoring location until at least year five when the TMDL is reconsidered. Detection limits shall be less than numeric targets. The ambient monitoring program shall contain monitoring in all reaches and major tributaries of the San Gabriel River, including but not limited to additional dry- and wet-weather monitoring in the San Gabriel River upper reaches and Walnut Creek, additional dry-weather monitoring in San Gabriel River Reach 2, and additional wet-weather monitoring in San Jose Creek, San Gabriel River Reach 1 and the Estuary. In addition, sediment samples shall be collected semi-annually in the Estuary and analyzed for sediment toxicity resulting from copper, lead, selenium, and zinc. **TMDL Effectiveness Monitoring** TMDL effectiveness monitoring requirements for implementation will be specified in NPDES permits for WRPs, power plants, and other non-storm water NPDES permits. The permits should specify the monitoring necessary to determine if the WLAs are achieved. For the WRPs and power plants, daily and monthly effluent monitoring requirements will be developed to ensure compliance with WLAs. Receiving water monitoring requirements in the existing permits to assess impact of the WRPs and power plants will not change as a result of this TMDL.

Element	Key Findings and Regulatory Provisions
	The general industrial storm water permit shall contain a model monitoring and reporting program to evaluate BMP effectiveness. A permittee enrolled under the general industrial permit shall have the choice of conducting individual monitoring based on the model program or participating in a group monitoring effort. A group monitoring effort will not only assess individual compliance, but will assess the effectiveness of chosen BMPs to reduce pollutant loading on an industry-wide or permit category basis. MS4 permittees are encouraged to take the lead in group monitoring efforts for industrial and facilities within their jurisdiction because compliance with WLAs by these facilities will translate to reductions in metals loads to the MS4 system. The MS4 and Caltrans storm water NPDES permittees are jointly responsible for assessing progress in reducing pollutant loads to achieve the dry- and wet-weather TMDLs. The permittees are required to submit for approval by the Executive Officer a coordinated monitoring plan that will demonstrate the effectiveness of the phased implementation schedule for this TMDL. Monitoring stations specified for the ambient monitoring program may also be used for TMDL effectiveness monitoring. Responsible parties are encouraged to coordinate with the San Gabriel River watershed-wide monitoring program, managed through the Southern California Coastal Water Research Project (SCCWRP) and the Los Angeles and San Gabriel Rivers Watershed Council, to avoid duplication and reduce costs. The storm water NPDES permittees will be found to be effectively meeting the dry-weather WLAs if the in-stream pollutant concentration or load at the first downstream effectiveness monitoring location is equal to or less than the corresponding concentration- or load-based WLA. Alternatively, effectiveness of the TMDL may be assessed at the storm drain outlet based on the numeric target for the receiving water. For storm drains that discharge to other storm drains, effectiveness will be based on the WLA for the ultimate receiving water for that storm drain system. The responsible agencies shall sample once per month during dry-weather conditions at each proposed TMDL effectiveness monitoring location. The final dry-weather monitoring stations shall be located in San Jose Creek Reach 1 and the Estuary. The storm water NPDES permittees will be found to be effectively meeting wet-weather WLAs if the load at the downstream monitoring location is equal to or less then the WLA. For practical purposes, this is when the event mean concentration for a flow-weighted composite is less than or equal to the numeric target. Responsible agencies shall sample at least one wet-weather event per month in any month where flow meets wet-weather conditions (260 cfs in San Gabriel River Reach 2 and 156 cfs in Coyote Creek) and at least 4 wet-weather events total in a given storm season (November to March), unless there are fewer than 4 wet-weather events total, at each proposed TMDL effectiveness monitoring location. Final wet-weather TMDL effectiveness monitoring stations may be located at the existing Los Angeles County

Element	Key Findings and Regulatory Provisions
	MS4 mass emission sites in San Gabriel Reach 2 and Coyote Creek. **Special Studies** Additional monitoring and special studies may be needed to evaluate the uncertainties and the assumptions made in development of this TMDL. The results of special studies may be used to reevaluate WLAs when the TMDL is reconsidered. <u>Required Studies</u>: 1. The San Jose Creek WRP, Los Coyotes WRP, Long Beach WRP, and the MS4 and Caltrans storm water permittees that discharge to San Gabriel River Reach 1 and Coyote Creek are jointly responsible for conducting a study to better understand the mixing of fresh and salt waters in the Estuary and to assess the effect of upstream freshwater discharges on water quality and aquatic life beneficial uses in the Estuary. The purpose of the study is to refine the assumptions made in establishing the copper waste load allocations for discharges to the Estuary and discharges to those reaches tributary to the Estuary. Results may lead to an adjustment of copper waste load allocations at the time the TMDL is reconsidered. Responsible agencies are encouraged to coordinate with the SCCWRP's ongoing effort to model the Estuary's hydrodynamic characteristics and the fate and transport of metals loading to the Estuary. <u>Voluntary Studies</u>: 2. Special studies may be warranted to evaluate the numeric targets. Studies on background concentrations of total recoverable vs. dissolved metals concentrations, total suspended solids, and organic carbon will help with the refinement of metals conversion factors. 3. Special studies are allowed to better characterize metals loading from open space and natural sources. Studies may also be developed to assess natural soils as a potential background source of selenium in San Jose Creek Reach 1. 4. Studies should be considered to evaluate the potential contribution of atmospheric deposition to metals loading and sources of atmospheric deposition in the watershed. 5. Special studies should be considered to refine some of the assumptions used in the modeling for the linkage analysis - specifically, source representation in dry-weather, the relationship between total recoverable and dissolved metals in storm water, the assumption that metals loading are closely associated with suspended sediments, the accuracy and robustness of the potency factors, the uncertainties in the understanding sediment washoff and transport, and the representation of reservoirs, spreading grounds, and other hydromodifications in the watershed.

Element	Key Findings and Regulatory Provisions
	6. Special studies should be considered to evaluate the effectiveness of various structural and non-structural BMPs in removing metals and meeting WLAs. 7. A water effect ratio (WER) study may be warranted to calculate a site-specific copper objective for the Estuary.

Table 7-13.2 San Gabriel River and Impaired Tributaries Metals and Selenium TMDL: Implementation Schedule

Date	Action
Effective date of TMDL	Regional Board permit writers shall incorporate WLAs into NPDES permits. WLAs will be implemented through NPDES permit limits in accordance with the implementation schedule contained herein, at the time of permit issuance, renewal, or re-opener.
Within 1 year of the effective date of the 2006 303(d) list.	The Los Angeles Regional Board shall reconsider this TMDL to develop dry- and wet-weather numeric targets, WLAs and LAs for copper and zinc in San Gabriel River Reach 2 and selenium in Coyote Creek if impairments are maintained in these reaches on the final 2006 303(d) list. The Regional Board shall also revise this TMDL to include dry-weather numeric targets for lead in San Gabriel River Reach 2 and copper, lead and zinc in Coyote Creek in addition to the wet-weather targets for these pollutant-waterbody combinations already assigned in this TMDL.
4 years after effective date of the TMDL	Responsible jurisdictions and agencies shall provide to the Los Angeles Regional Board results of the special studies.
5 years after effective date of the TMDLs	The Los Angeles Regional Board shall reconsider this TMDL to recalculate numeric targets using alternative hardness values, site specific translators, and/or water effect ratios based on the results of the ambient monitoring program. If necessary, the Regional Board shall add alternative targets based on sediment quality guidelines to protect benthic sediments in the Estuary. The Los Angeles Regional Board shall also reconsider this TMDL to re-evaluate the WLAs, LAs and the implementation schedule based on the results of special studies.
NON-STORM WATER PROGRAM NPDES PERMITS (INCLUDING WRPS AND POWER PLANTS)	
Upon permit issuance, renewal, or re-opener	The non-storm water program NPDES permits shall achieve WLAs, which shall be expressed as NPDES water quality-based effluent limitations specified in accordance with federal regulations and state policy on water quality control. Compliance schedules may allow up to 4 years in individual NPDES permits to meet permit requirements. Compliance schedules may not be established in general NPDES permits. Permittees that hold individual NPDES permits and solely discharge storm water may be allowed (at Regional Board discretion) compliance schedules up to 9 years from the effective date of the TMDL to achieve compliance with final WLAs.

Date	Action
GENERAL INDUSTRIAL STORM WATER PERMITS	
Upon permit issuance, renewal, or re-opener	The general industrial storm water permitees shall achieve dry-weather WLAs, which shall be expressed as NPDES water quality-based effluent limitations specified in accordance with federal regulations and state policy on water quality control. Effluent limitations may be expressed as permit conditions, such as the installation, maintenance, and monitoring of Regional Board-approved BMPs. Permittees shall begin to install and test BMPs to meet the interim copper wet-weather WLAs. BMP effectiveness monitoring will be implemented to determine progress in achieving interim copper wet-weather WLAs.
4 years after effective date of the TMDLs	The general industrial storm water permittees shall achieve interim copper and lead WLAs. Permittees shall begin an iterative BMP process, including BMP effectiveness monitoring to achieve compliance with final copper and lead WLAs. Permittees shall achieve final zinc wet-weather WLAs, which shall be expressed as NPDES water quality-based effluent limitations. Effluent limitations may be expressed as permit conditions, such as the installation, maintenance, and monitoring of Regional Board-approved BMPs.
9 years after the effective date of TMDL	The general industrial storm water NPDES permittees shall achieve final copper and lead wet-weather WLAs, which shall be expressed as NPDES water quality-based effluent limitations. Effluent limitations may be expressed as permit conditions, such as the installation, maintenance, and monitoring of Regional Board-approved BMPs.
GENERAL CONSTRUCTION STORM WATER PERMITS	
Upon permit issuance, renewal, or re-opener	Non-storm water flows not authorized by Order No. 99-08 DWQ, or any successor order, shall achieve dry-weather WLAs. WLAs shall be expressed as NPDES water quality-based effluent limitations specified in accordance with federal regulations and state policy on water quality control. Effluent limitations may be expressed as permit conditions, such as the installation, maintenance, and monitoring of Regional Board-approved BMPs.
Six years from the effective date of the TMDL	The construction industry will submit the results of wet-weather BMP effectiveness studies to the Los Angeles Regional Board for consideration. In the event that no effectiveness studies are conducted and no BMPs are approved, permittees shall be subject to site-specific BMPs and monitoring to demonstrate BMP effectiveness.
Seven years from the effective date of the TMDL	The Los Angeles Regional Board will consider results of the wet-weather BMP effectiveness studies and consider approval of BMPs.
Eight years from the effective date of the TMDL	All general construction storm water permittees shall implement Regional Board-approved BMPs.

Date	Action
MS4 AND CALTRANS STORM WATER PERMITS	
12 months after the effective date of the TMDL	In response to an order issued by the Executive Officer, MS4 and Caltrans storm water NPDES permittees shall submit a coordinated monitoring plan, to be approved by the Executive Officer, which includes both TMDL effectiveness monitoring and ambient monitoring. Ambient monitoring shall commence within six months of approval of the coordinated monitoring plan by the Executive Officer. The monitoring plan shall be made available for public review and comment prior to Executive Officer approval.
4 years after effective date of TMDL (Draft Report) 4 ½ years after effective date of TMDL (Final Report)	MS4 and Caltrans storm water NPDES permittees shall provide a written report to the Regional Board outlining the drainage areas to be addressed and how these areas will achieve compliance with the WLAs. The report shall include implementation methods, an implementation schedule, proposed milestones, and any revisions to the TMDL effectiveness monitoring plan.
6 years after effective date of the TMDL*	The MS4 and Caltrans storm water NPDES permittees shall demonstrate that 50% of the total drainage area served by the storm drain system is effectively meeting the dry-weather WLAs and 25% of the total drainage area served by the storm drain system is effectively meeting the wet-weather WLAs.
8 years after effective date of the TMDL*	The MS4 and Caltrans storm water NPDES permittees shall demonstrate that 75% of the total drainage area served by the storm drain system is effectively meeting the dry-weather WLAs.
10 years after effective date of the TMDL*	The MS4 and Caltrans storm water NPDES permittees shall demonstrate that 100% of the total drainage area served by the storm drain system is effectively meeting the dry-weather WLAs and 50% of the total drainage area served by the storm drain system is effectively meeting the wet-weather WLAs.
15 years after effective date of the TMDL*	The MS4 and Caltrans storm water NPDES permittees shall demonstrate that 100% of the total drainage area served by the storm drain system is effectively meeting both the dry-weather and wet-weather WLAs and attaining water quality standards for copper, lead, selenium, and zinc.

* Implementation schedule may be extended, upon Regional Board approval, if an integrated resources approach is employed and permittees demonstrate the need for an extended schedule.