



CITY OF
San Fernando
Historic & Visionary

October 26, 2011

VIA EMAIL

Jeanine Townsend
Clerk to the Board
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-2000



Subject: Dominguez Channel/Harbor Toxics TMDL

Dear Ms. Townsend:

The **City of San Fernando** is pleased to respond to the State Water Resources Control Board (State Board) invitation to comment on the Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters (DC/Harbors Toxics TMDL).

The City's comments are contained in the attached petition the City filed with the State Board in early June of this year. As you may be aware, the State Board rejected the City's petition. This action was based on an opinion from the Assistant Chief Counsel, who concluded that Regional Board adoptions of basin plans are not subject to review by petition to the State Board, per CWC § 13320. However, we struggle to find anything in this section that prevents the State Board from reviewing a Regional Board's adoption of a TMDL as a basin plan amendment. It states clearly that:

- (a) Within 30 days of any action or failure to act by a regional board under subdivision (c) of Section 13225, Article 4 (commencing with Section 13260) of Chapter 4, Chapter 5 (commencing with Section 13300), Chapter 5.5 (commencing with Section 13370), Chapter 5.9 (commencing with Section 13399.25), or Chapter 7 (commencing with Section 13500), any aggrieved person may petition the state board to review that action or failure to act. In case of a failure to act, the 30-day*



period shall commence upon the refusal of the regional board to act, or 60 days after request has been made to the regional board to act. The state board may, on its own motion, at any time, review the regional board's action or failure to act and also any failure to act under Article 3 (commencing with Section 13240) of Chapter 4.

It is apparent that nothing in the above suggests the State Board cannot review a Regional Board's adoption of a basin plan amendment as a "failure to act" issue. Further, the City knows of no case law that supports that conclusion. Perhaps one day this issue will be resolved by the legislature.

In any case, beyond the comments expressed in the City's petition as arguments against the Regional Board's adoption of the Dominguez Channel the City would also like raise two addition concerns that are described more particularly below.

1. *The DC/Harbor Toxics TMDL Inappropriately Requires MS4 Permittees to Pay for Removal or Containment of Contaminated Sediment in the Harbors and Should Be Revised or Clarified to Eliminate this Possible Interpretation*

The DC/Harbor Toxics TMDL references dredging and capping as a means of remediating contaminated sediment in the harbors. Some have suggested that the Port of Los Angeles and Long Beach will be primarily responsible for performing this task. However, the DC/Harbor Toxics TMDL contains language that could be interpreted to mean that MS4 permittees – including those that are situated in the Los Angeles and San Gabriel Rivers – will be required to share the cost. MS4 permittees could be required to meet waste load allocations in this TMDL. If the WLAs are not met, affected permittees could be found in violation and could be compelled to fund remediation. This could be achieved through the next MS4 permit by requiring absolute compliance with WLAs – as it had with the Santa Monica Bay Beaches Dry Weather Bacteria TMDL.

It should be noted that the MS4 permit is limited to controlling pollutants in stormwater from the MS4 (to the receiving water) and to prohibiting non-stormwater discharges to the MS4 (not to the receiving water). The MS4 NPDES permit is a point-source permit (see 40 CFR §122.2). Under Clean Water Act section 402 p(iii), *MS4 permits are limited to controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.*¹ The MS4 NPDES permit is limited to compliance with water quality standards, including TMDL WLAs), in stormwater at the point of discharge (outfall or at the end-of-pipe) -- not in the receiving water. The MS4 NPDES permit's limitation to controlling discharges at the end of the point source suggests that the Regional Board may, in the alternative, rely on a waste

¹See CWA 402 p(iii).

discharge requirement (hereinafter "WDR"), pursuant to the California Water Code (hereinafter "CWC"). If the Regional Board intends to impose the DC/Harbor Toxics TMDL WLA or an alternative compliance requirement on the City exclusively through a WDR then it must first comply with CWC section 13241. Further, if an MS4 permittee is compelled to pay a share of cost associated with remediating contaminated sediment in the harbors an argument could be effectively made that such a requirement constitutes an unfunded mandate under the California Constitution.

2. *The DC/Harbor Toxics TMDL Inappropriately Includes Los Angeles River and San Gabriel River Permittees and Its Applicability is Unclear*

Although the DC/Harbor Toxics TMDL states that the Los Angeles River and San Gabriel River is not its focus, it nevertheless includes them. The DC/Harbor Toxics TMDL mentions both of these water bodies as contributing fresh water to the harbors. The DC/Harbor Toxics TMDL also references the Los Angeles and San Gabriel River as "responsible parties." In the DC/Harbor Toxics TMDL (staff report) implementation appears to restrict these responsible parties to submitting a *Report of Implementation, which will directly or indirectly support the goals of this TMDL.*² Regional Board staff has asserted that Los Angeles and San Gabriel River responsible parties are only subject to implementing metals TMDLs. This is reflected in the DC/Harbor Toxics TMDL's staff report which states that under Phase I (which has no commencement date): *Responsible parties in these watersheds are implementing other TMDLs, which will directly or indirectly support the goals of this TMDL.*³

However, under Table 7-2 of the DC/Harbor Toxics TMDL, "responsible parties" are required to meet the interim allocations as of the effective date of the DC/Harbor Toxics TMDL. It is not clear if the term "interim allocations" refer to the metals TMDLs for the Los Angeles and San Gabriel Rivers or to the harbors to which these water bodies contribute freshwater. Table 7.2 of the DC/Harbor Toxics TMDL is titled: *Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxics Pollutants TMDL: Implementation Schedule.* Under Task 2 of this implementation schedule, the Los Angeles and San Gabriel Rivers are required to: *Submit a Monitoring Plan to the Los Angeles Regional Board for Executive Officer Approval 9 months after the effective date of the DC/Harbor Toxics TMDL.*⁴ It is unclear as to whether the monitoring plan refers to the Dominguez Channel/Harbors Toxics TMDL or to the Los Angeles and San Gabriel River Metals TMDLs. The same holds for the tasks 3, 4, and 7.

Further complicating matters, the term "responsible parties" is not referenced in either the Los Angeles or San Gabriel River Metals TMDLs. The Los Angeles River Metals TMDLs uses the term responsible agencies – not responsible

²Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants, page 108.

³ *Ibid.*, page 108.

⁴ *Ibid.*, page 116

parties. The San Gabriel River Metals TMDL, which USEPA was compelled to adopt, makes no mention of either responsible agencies or parties. In fact, no municipal permittees are mentioned all. Therefore, neither of the DC/Harbor Toxics TMDLs should be applicable to the Dominguez Channel/Harbors Toxics TMDL.⁵

Beyond this, including the Los Angeles River and San Gabriel River and, presumably MS4 permittees located therein, ignores the fact that only a few of them are subject to metals TMDLs. In the case of the USEPA-adopted metals TMDL, which again does not mention what MS4 permittees are subject to it, only Reach 2, the San Jose Creek, and Coyote Creek, have been listed as impaired. Not all of the some 32 municipal permittees that partially or fully situated in the San Gabriel River drain into Reach 2 and San Jose and Coyotes Creek. Thus the DC/Harbors Toxics TMDL cannot extend its requirements to the San Gabriel River MS4 permittees based on the mere fact it contributes freshwater to the downstream harbors. As for the Los Angeles River, not all municipal permittees are subject to the metals TMDL. Reach 2 of the Rio Hondo, which is tributary to the Los Angeles River system, is not 303(d) listed for metals. Therefore, the 16 MS4 permittees located in this reach cannot be included in the DC/Harbors Toxics TMDL based on the metals TMDL connection.

Although these comments were made to the Regional Board prior to its adoption of the Dominguez Channel/Harbor Toxics TMDL and during the public hearing, it failed to adequately respond to them.

9. Request for 45-Day Public Hearing Notice

The City fervently hopes that the State Board will recognize the several deficiencies contained the DC/Harbors Toxics TMDL and returns it to the Regional Board for correction without the need for a State Board hearing. If, however, the State Board wishes to review the matter at a public hearing, the City requests that it be given 45 days of advanced notice.

In closing, the City appreciates the opportunity to comment on this extremely important matter and looks forward to its amicable resolution. In the meantime, should you have any questions, please feel free to call me.

Sincerely,



Ron Ruiz
Public Works Director

⁵This should be of interest to the Office of Administrative Law.

1 Michael Estrada
City Attorney
2 City of San Fernando
117 Macneil Street
3 San Fernando, CA 91340

4 In the Matter of:

5
6 California Regional Water Quality
Control Board, Los Angeles Region
7 Adoption of the Dominguez Channel
and Greater Los Angeles and Long
8 Beach Harbor Waters Toxics
Pollutants Total Maximum Daily
9 Loads

PETITION FOR REVIEW
Water Code §13320 and Title 23,
CCR §2050, et seq.]

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1 This Petition for Review is submitted by the City of San
2 Fernando (hereinafter referred to as "Petitioner" or "City"),
3 pursuant to California Water Code Section 13320 and California Code
4 of Regulations ("CCR"), Title 23, Section 2050, for review of the
5 Dominguez Channel and Greater Los Angeles and Long Beach Harbor
6 Waters Toxics Pollutants Total Maximum Daily Loads (hereinafter
7 "Toxics TMDL"), adopted on May 5, 2011, by the California Regional
8 Water Quality Control Board, Los Angeles Region (hereinafter
9 "Regional Board"), attached herewith as Exhibit 1. As of the date of
10 this submittal, the final adopted Toxics TMDL has not been made
11 available for review.

12
13 **I. NAME, ADDRESS, AND TELEPHONE NUMBER OF PETITIONER**

14 All written correspondence and other communications regarding
15 this matter should be addressed to:

16 City of San Fernando
17 Attn: Michael Estrada
18 City Attorney
19 117 Macneil Street
20 San Fernando, CA 91340
21 Telephone: 818-898-1200
22 Email: MEstrada@rwglaw.com

23 With a copy to:

24 City of San Fernando
25 Attn: Ron Ruiz
26 Director of Public Works
27 117 Macneil Street
San Fernando, CA 91340
Telephone: (818) 898-1293
Email: rruiz@ci.san-fernando.ca.us

28 **II. SPECIFIC ACTION OF THE REGIONAL BOARD FOR WHICH REVIEW IS SOUGHT**

29 The City is challenging certain requirements contained in

1 the Log Angeles and Long Beach Harbor Toxics and Metals TMDL
2 (hereinafter "Toxics TMDL") adopted on May 5, 2011. Several changes
3 were made to the TMDL during the May 5, 2011, Regional Board public
4 hearing that have not yet been made available.

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6 **III. DATE OF REGIONAL BOARD'S ACTION**

7 The Regional Board adopted the Toxics TMDL on May 5, 2011.
8

9 **IV. STATEMENT OF REASONS WHY THE REGIONAL BOARD'S ACTION WAS**
10 **INAPPROPRIATE OR IMPROPER**

11 The Toxics TMDL adopted by the Regional Board contains
12 compliance requirements that: are unclear; are inconsistent with
13 TMDLs adopted by other Regional Boards; if incorporated into the next
14 Los Angeles County Municipal Separate Storm Sewer System (hereinafter
15 "MS4") National Pollutant Discharge Elimination System (hereinafter
16 "NPDES") Permit would exceed federal stormwater regulations and would
17 be contrary to State law; and where it exceeds federal stormwater
18 regulations would constitute an unfunded mandate under the Article
19 XIIIIB of the California Constitution. These complaints are described
20 more particularly below.

21 1. The Toxics TMDL includes the Los Angeles and San Gabriel
22 River watersheds. Although the TMDL states that these watersheds are
23 not its focus, it refers to the municipalities therein nevertheless
24 as "responsible parties." A responsible party is a term used in the
25 Comprehensive Environmental Response, Compensation and Liability Act
26 (hereinafter "CERCLA") to refer to parties that are responsible for
27

1 hazardous waste pollution and thus liable for remediation costs. The
2 TMDL, however, does not specify what MS4 permittees in the Los
3 Angeles and San Gabriel River watersheds would be subject to its
4 waste load allocation (hereinafter "WLA") requirements. Even more
5 troubling is that it suggests the possibility that the City may be
6 required to pay for the clean-up of pollutants in downstream water
7 bodies. This is an inappropriate use for a TMDL. When implemented
8 through the MS4 NPDES permit, the City's responsibility is limited to
9 implementing best management practices (hereinafter "BMPs") and other
10 actions within its jurisdiction to meet the TMDL's WLA. Requiring
11 downstream clean-up of legacy pollutants exceeds the scope of the MS4
12 NPDES permit.

13
14 2. The Toxics TMDL, as with others recently adopted by the
15 Regional Board, improperly requires the City to submit an
16 implementation plan without first having to translate a WLA into a
17 water quality based effluent limitation (hereinafter "WQBEL"); and
18 unlawfully authorizes the Regional Board's Executive Officer instead
19 of its governing board to consider and approve it. The implementation
20 plan is a procedure that has been unlawfully constructed to allow the
21 Regional Board to bypass the WQBEL development process, a federal
22 stormwater regulatory requirement. The implementation plan is to be
23 executed through the MS4 NPDES permit. The City, as an MS4 permittee,
24 is required under the Toxics TMDL to submit an implementation plan
25 with BMPs and a schedule to meet the WLAs. Without the WQBEL, the
26 City would be required to comply with the WLAs by any means
27 necessary, which exceeds federal stormwater regulations (the

1 Regional Board asserts, incorrectly, that 40 CFR §130.2 allows it to
2 define a WQBEL as a WLA). The implementation plan also spares the
3 Regional Board from having to comply with a reasonable potential
4 analysis to determine (in accordance with USEPA's *NPDES Permit*
5 *Writers' Manual*), and in this case validate, that the discharge
6 causes or contributes to an excursion above a water quality standard.
7 Further, submitting the implementation plan to the Executive Officer,
8 instead of the Regional Board governing body, denies affected and
9 interested parties a public hearing.

10 3. The Toxics TMDL improperly requires strict compliance with
11 WLAs and other numeric standards, as the following indicates:

12 *Compliance with the TMDL for metals and PAHs is based on achieving*
13 *the load and waste load allocations and/or demonstrating attainment*
14 *of the sediment quality objectives (SQO Part 1) as multiple lines*
15 *of evidence. Compliance with the TMDLs for bio-accumulative*
16 *compounds shall be based on achieving the assigned loads and waste*
17 *load allocations or, alternatively, by meeting fish tissue targets.*
18 *Compliance will require the elimination of toxic pollutants being*
19 *loaded into Dominguez Channel and the harbors, and clean up of*
20 *contaminated sediments lying at the bottom of greater Los Angeles*
21 *and Long Beach Harbors. Dischargers and responsible parties may*
22 *implement structural and or non-structural BMPs and work*
23 *collaboratively to achieve the numeric targets and allocations.*

18 The subject TMDL implies that compliance will require extra-
19 jurisdictional structural controls such as dredging and capping.
20 This compliance requirement would be enforceable once it is
21 incorporated into the MS4 NPDES permit. However, using the MS4 NPDES
22 permit for this purpose is improper. The MS4 NPDES permit is a
23 point-source permit (see 40 CFR §122.2). Under Clean Water Act
24 section 402 p(iii), permits for MS4 discharges are limited to
25 *controls to reduce the discharge of pollutants to the maximum extent*
26 *practicable, including management practices, control techniques and*
27 *system, design and engineering methods, and such other*

1 provisions as the Administrator or the State determines appropriate
2 for the control of such pollutants. Further, the MS4 NPDES permit is
3 limited to compliance with water quality standards, (including TMDL
4 WLAs), in stormwater at the point of discharge, at the end-of-pipe,
5 not in the receiving water. The MS4 NPDES permit's limitation to
6 controlling discharges at the end-of-pipe suggests that the Regional
7 Board may, in the alternative, rely on a waste discharge requirement
8 (hereinafter "WDR"), pursuant to the California Water Code
9 (hereinafter "CWC"). If the Regional Board intends to impose the
10 Toxics TMDL WLA or an alternative compliance requirement on the City
11 through a WDR then it must first comply with CWC section 13241.

12 4. In justifying compliance with WLAs and other numeric
13 standards by any means necessary, the Regional Board has incorrectly
14 bypassed the requirement to identify the appropriate WQBEL necessary
15 to comply with the TMDL WLA. A WQBEL translates a WLA into BMPs or
16 other actions (e.g., surrogate parameters) for implementation through
17 the MS4 NPDES permit to attain a water quality standard, per 40 CFR
18 §122.44[d]. The Regional Board has also ignored setting properly
19 established WQBELs for other TMDLs it has adopted. It also has not
20 included WQBEL-related language for TMDLs incorporated into the
21 current Los Angeles County MS4 NPDES permit (viz., the Los Angeles
22 River Trash TMDL and the Santa Monica Bay Beaches Dry Weather
23 Bacteria TMDL). Other Southern California Regional Boards such as
24 Santa Ana and San Diego, however, have referenced WQBELs not only in
25 TMDLs they have adopted, but also in recently issued MS4 NPDES
26 permits. WQBELs are also discussed at length in USEPA's *Interim*
27 *Permitting Approach for Water Quality-Based Effluent*

1 *Limitations in Storm Water Permits.* The application of WQBELs to MS4
2 permits is also discussed in a USEPA memorandum issued in November
3 2010 entitled: *Revisions to the November 22, 2002 Memorandum*
4 *"Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations*
5 *(WLAs) from Storm Water Sources and NPDES Permit Requirements Based*
6 *on Those WLAs."* The Regional Board, in response to these arguments,
7 defends strict compliance with WLAs by relying on 40 CFR §130.2[h]
8 and USEPA's 2010 TMDL guidance memorandum. 40 CFR §130.2[h] defines
9 a WQBEL as a type of WLA. As mentioned above, the Regional Board
10 concluded that a WQBEL is automatically established by the WLA and,
11 therefore, can require compliance with a WLA by any means necessary.
12 However, CFR §130.2[h] applies to receiving waters, not to point
13 source discharges. Here, 40 CFR §122.44[k][2] is the controlling
14 federal statute as affirmed in *Divers Environmental Conservation*
15 *Organization v. State Water Resources Control Board.* The Regional
16 Board also claims that the 2010 USEPA TMDL guidance memo gives it, as
17 a permitting authority, discretion to impose numeric limitations to
18 comply with a WLA. In its response to comments to the draft Toxics
19 TMDL, the Regional Board claims that the WQBEL sanctions compliance
20 with numeric effluent limitations, including WLAs. This conclusion is
21 incorrect for two reasons. First, the Regional Board has not
22 conducted a reasonable potential analysis in accordance with USEPA's
23 *NPDES Permit Writers' Manual*, to establish that a discharge has
24 caused an excursion above a water quality standard. Such an analysis
25 is a prerequisite to establishing a WQBEL pursuant to CFR 40
26 §122.44[d]. Second, the Regional Board defines a numeric effluent
27 limitation to mean strict compliance with a WQBEL-WLA.

1 However, as indicated in USEPA's *Interim Permitting Approach for*
2 *Water Quality-Based Effluent Limitations in Storm Water Permits*, a
3 numeric limitation is the same as a numeric WQBEL. Further, the 2010
4 USEPA TMDL guidance memorandum defines a numeric WQBEL to be a
5 surrogate parameter, which translates a WLA, for example, into flow
6 or impervious cover reduction, and which is achieved essentially
7 through structural and/or non-structural BMPs. Therefore, strict
8 compliance with the WLA numeric target is not required.

9 5. The Regional Board asserts that the adaptive/iterative
10 process does not apply to compliance with TMDLs through MS4 NPDES
11 Permits. In its response to comments regarding the Toxics TMDL, the
12 Regional Board argues that *federal regulations do not suggest the*
13 *iterative/adaptive process is an inherent component of BMP based*
14 *permit requirements*. While federal stormwater regulations do not use
15 the term adaptive or iterative per se relative to BMP implementation
16 in stormwater permits, USEPA's *Interim Permitting Approach for Water*
17 *Quality-Based Effluent Limitations in Storm Water Permits* does
18 describe a progressive incremental approach to meeting water quality
19 standards. In fact USEPA's first memorandum on TMDL compliance issued
20 in 2002 uses the term iterative as the following excerpt from it
21 reveals: *The Interim Permitting Approach Policy recognizes the need*
22 *for an iterative approach to control pollutants in storm water*
23 *discharges*. Beyond this, the State Board reaffirmed the iterative
24 process in meeting water quality standards in precedential Water
25 Quality Order 99-05.

26 6. The Toxics TMDL improperly calls for the approval of an
27 implementation plan and a monitoring plan by the Regional

1 Board's Executive Officer. However, the CWC does not give the
2 Executive Officer the authority to approve what are essentially water
3 quality control plan elements. CWC section 13240 makes it clear that
4 the Regional Board governing body is responsible for adopting water
5 quality control plans. The governing body of the California Regional
6 Water Quality Control Board, Santa Ana Region, for example, adopted
7 by resolution *the Urban Source Evaluation Plan, a requirement of the*
8 *Middle Santa Ana River Bacteria TMDL*. The plan was adopted three
9 years after this TMDL was adopted by this Regional Board in 2008 at a
10 public hearing. Further, the adoption of any water quality control
11 plan associated with the Toxics TMDL would also require compliance
12 with CWC section 13241.

13 7. The Toxics TMDL improperly requires sediment and fish
14 tissue monitoring in receiving waters. Such requirement exceeds
15 federal stormwater regulations as they apply to point sources, which
16 limits monitoring to stormwater discharges from the permittee's
17 outfall or field screening at MS4 input points, per 40 CFR §122.26.
18 Should the Regional Board exceed this requirement, it would raise the
19 issue of an unfunded mandate.

20 8. Since sediment and fish tissue testing is not authorized
21 under federal stormwater regulations, the Regional Board must comply
22 with CWC section 13225[c], which requires a showing that *the burden,*
23 *including costs, of such reports shall bear a reasonable relationship*
24 *to the need for the report and the benefits obtained therefrom.*
25 Further, CWC section 13267 requires the Regional Board to provide the
26 *person with a written explanation with regard to the need for the*
27 *reports, and shall identify the evidence that supports requiring*

1 *that person to provide the reports.*

2 9. The Toxics TMDL proposes requirements that exceed federal
3 stormwater regulations and, therefore, could be subject to unfunded
4 mandate claims, including: (1) preparing and submitting an
5 implementation plan forcing the City to commit to implementing BMPs
6 without having to translate the WLAs into WQBELs; (2) having to
7 implement extra-jurisdictional structural controls, which could even
8 include dredging and/or capping of downstream contaminated sediment;
9 and (3) requiring sediment and fish tissue monitoring.

10
11 **V. HOW THE PETITIONER IS AGGRIEVED**

12 1. The City is aggrieved by the Toxics TMDL as it relates to
13 the Los Angeles River because the City is not certain if it is
14 subject to it. The TMDL merely implies that it could be subject
15 because the Los Angeles and San Gabriel River Watersheds have been
16 designated as responsible parties, without naming specifically the
17 subject municipalities. Once the TMDL is placed in the MS4 permit,
18 the City could be surprised to learn that it is subject to one or
19 more of its WLAs.

20 2. The City is aggrieved by the Toxics TMDL requirement to
21 submit an implementation plan. First, it requires the City to
22 propose BMPs and a schedule for implementation without having to
23 establish WQBELs. WQBELs translate the WLAs into BMPs or surrogate
24 parameters. Without this translator, the City would be compelled to
25 comply with the WLAs by any means necessary. In all likelihood, this
26 would represent an impossible-to-meet standard, which would expose
27 the City to Regional Board enforcement action or, much

1 worse, exposure to third party litigation, as was the case in *NRDC v.*
2 *the County of Los Angeles Flood Control District*. Second, requiring
3 the submittal of the implementation plan to the Regional Board's
4 Executive Officer, instead of its governing board, denies a public
5 hearing, the purpose of which is to provide the opportunity to allow
6 affected parties, including but not limited to City residents and
7 businesses to comment on the plan and its impact on them in terms of
8 cost and reduction of programs and services. Third, the
9 implementation plan circumvents the WQBEL development process. The
10 implementation plan invites the City to propose BMPs, thereby
11 obviating the need for the Regional Board to conduct a *reasonable*
12 *potential analysis* to determine if the City's stormwater discharges
13 cause or contribute to an excursion above the water quality standard
14 for pollutants that are the subject of the TMDL. Such an analysis
15 could demonstrate that the City is not causing or contributing to an
16 excursion above the water quality standards, which would relieve the
17 City of having to allocate scarce funding to implement non-structural
18 and structural BMPs to comply with the TMDL's WLAs.

19 3. The City is aggrieved by the Toxics TMDL's intention to require
20 absolute compliance with its WLAs or alternative compliance
21 requirements through the MS4 NPDES permit. It avoids setting WQBELs
22 to translate the WLAs into BMPs or surrogate parameters, which would
23 allow the City to pursue more cost-effective and reasonable BMPs and
24 avoid exposure to Regional Board enforcement action or third party
25 litigation.

26 4. The City is aggrieved by the Regional Board's intention to deny
27 the adaptive/iterative process in progressively meeting the

1 Toxics TMDL through the MS4 NPDES permit. Instead, the Regional Board
2 would require strict compliance with the TMDL's WLAs and other
3 requirements during the term of the permit. Failure to meet these
4 compliance standards could result in enforcement action from the
5 Regional Board and third party litigation from non-governmental
6 organizations. The adaptive/iterative process, on the other hand,
7 would allow the City to implement BMPs or surrogate parameters, in
8 accordance with a set schedule, during the term of the MS4 NPDES
9 without risking violation or third party litigation - even if the
10 numeric target is not met. The City, however, would be obligated in
11 the next MS4 NPDES permit to ramp-up BMPs or actions needed to
12 achieve the chosen surrogate parameter in an effort to meet a WLA.

13 5. The City is aggrieved by the sediment and fish tissue
14 requirement, which is not authorized under federal stormwater
15 regulations. Complying with this unauthorized requirement imposes an
16 unnecessary cost burden on the City. The Regional Board could, in
17 the alternative, attempt to impose this requirement by relying on a
18 WDR. If it does, it must comply with CWC section 13241 and be subject
19 to a possible unfunded mandate claim.

20 6. The City is aggrieved by the Regional Board's imposition of
21 requirements that would exceed federal stormwater regulations, which
22 would compel the City to file unfunded mandate claims to recover
23 costs associated with the extra-federal regulatory requirements. Such
24 an action would require an expenditure of scarce City funds,
25 pending the outcome of the unfunded mandate claim, which would risk a
26 reduction of vital programs and services. It would also require the
27 retention of legal counsel and staff time to prepare and submit

1 the claims to the unfunded mandate commission.

2 **VI. ACTION PETITIONER REQUESTS THE STATE BOARD TO TAKE**

3 The City respectfully requests the State Board to direct the
4 Regional Board to revise the Toxics TMDL as is explained below.

5 1. Delete the Los Angeles and San Gabriel River watersheds as
6 being subject to the Toxics TMDL or provide an explanation as to why
7 these watersheds are subject.

8 2. Delete the reference to CERCLA and municipal MS4 permittees
9 as being responsible parties.

10 3. Specify that the Regional Board governing body's, instead of
11 the Executive Officer, adopt the implementation plan, after receiving
12 public comment.

13 4. Insert language to translate the Toxics TMDL WLAs into WQBELS
14 in MS4 permits and to perform a reasonable potential analysis prior
15 to requiring the City to submit an implementation plan for execution
16 through the MS4 NPDES permit. The Regional Board may use the same
17 language as in the California Regional Water Quality Control Board
18 San Diego Region's *Revised Total Maximum Daily Loads for Indicator*
19 *Bacteria Project I - Twenty Beaches and Creeks in the San Diego*
20 *Region (Including Tecolote Creek), Final Technical Report, February*
21 *10, 2010.*

22 5. Insert language referencing the adaptive/iterative process in
23 executing the Toxics TMDL through the MS4 NPDES permit (such language
24 is contained in the above-mentioned San Diego Bacteria TMDL Final
25 Technical Report).

26 6. Delete from the Toxics TMDL any reference to having to comply
27 with any of its WLAs requiring controls such as dredging,

1 capping, or capture and treat controls outside of the City's
2 jurisdiction.

3 7. Delete from the Toxics TMDL compliance fish tissue and
4 sediment testing.

5 8. If the Regional Board intends to impose any Toxics TMDL-
6 related requirement that exceeds federal stormwater regulations
7 direct it to comply with the aforementioned CWC requirements, and
8 advise them they that may be subject to unfunded mandate claims in
9 accordance with Article XIIIIB, Section 6 of the California
10 Constitution.

11
12 **VII. POINTS AND AUTHORITIES**

13 **State Statutes**

14 California Water Code §13225(c)
15 California Water Code §13241
16 California Water Code §13267
17 California Constitution, Article XIIIIB

18 **Federal Statues**

19 Clean Water Act §402 p(iii)

20 **Federal Regulations**

21 Code of Federal Regulations, §122.21
22 Code of Federal Regulations, §122.44 [d]
23 Code of Federal Regulations, §122.44 [k] [2]
24 Code of Federal Regulations, §122.26

25 **Federal Guidance Documents**

26 *NPDES Permit Writer's Manual, USEPA-833-K-10-001, September,*
27 *2010*
Interim Permitting Approach for Water Quality Based Effluent
Limitations in Stormwater Permits (EPA 833-D-96-001, September,
1996)

1 Revisions to the November 22, 2002 Memorandum "Establishing
2 Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs)
3 from Storm Water Sources and NPDES Permit Requirements Based on
Those WLAs," USEPA, James Hanlon, Director of the Office of
Wastewater Management, November 12, 2010.

4 **State Water Resources Control Board Orders**

5 State Water Resources Control Board Water Quality Order 99-05,
6 June 17, 1999

7 **California Regional Water Quality Control Board Basin Plan
Amendments**

8 Santa Ana Regional Water Quality Control Board, Resolution No.
9 R8-2008-0044, Amending the Basin Plan to Incorporate the Middle
10 Santa Ana River Bacterial Indicator TMDL Urban Source
Evaluation Plan, April 18, 2008

11 San Diego Regional Water Quality Control Board, Resolution No.
12 R9-2010-0001, Amending the Basin Plan to Incorporate the Revised
13 Indicator Bacteria TMDLs Developed in Project I - Twenty Beaches
and Creeks in the San Diego Region (including Tecolote Creek),
on February 10, 2010

14 **State Cases**

15 *Diver's Environmental Conservation Organization v. State Water
16 Resources Control Board et. al.*, 145 Cal. App.3d. 497

17 **VIII. SERVICE OF PETITION**

18 This Petition is being served upon the following parties via
19 electronic mail, facsimile and U.S. mail:

20 State Water Resources Control Board
21 Office of Chief Counsel
22 Jeannette L. Bashaw, Legal Analyst
23 Post Office Box 100
24 Sacramento, CA 95812-0100
25 Fax: (916)341-5199
26 jbashaw@waterboards.ca.gov

27 California Regional Water
Quality Control Board
Mr. Samuel Unger
Executive Officer
Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013
Fax: (213)576-6686

2
3 **IX. ISSUES PREVIOUSLY RAISED**

4 These issues were raised in comments submitted from the City and
5 in a collective MS4 permittee submittal from the Dominguez Channel
6 Watershed Management Committee to the Regional Board prior to and
7 during the May 5, 2011 public hearing.

8
9 **X. REQUEST TO HOLD PETITION IN ABEYANCE**

10 Pursuant to California Code of Regulations, Title 23, Section
11 2050.5(d), the City respectfully requests the State Board to hold
12 this Petition in abeyance to allow the City to attempt to resolve the
13 issues contained in it with the Regional Board. The City shall
14 promptly notify the State Board when the City seeks to have its
15 Petition considered.

16
17 **XI. CONCLUSION**

18 The City has been aggrieved by the Regional Board's action for
19 reasons stated herein. While the City is aware that the Regional
20 Board has broad discretion as a permitting authority under the
21 federal law in establishing TMDLs, the City believes it has exceeded
22 that authority. While the Regional Board may rely on State law to
23 ultimately compel compliance with provisions in the Toxics TMDL that
24 exceed federal law, it must be prepared to comply with aforementioned
25 CWC requirements and be confronted with unfunded mandate claims.
26 Nevertheless, it is the City's hope to resolve these issues with the
27 Regional Board informally before the Toxics TMDL rises to the State

1 Board.

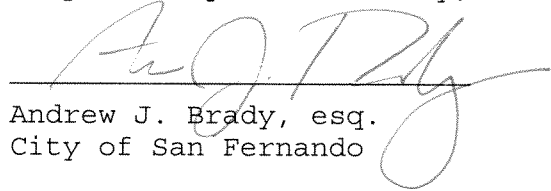
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5 Dated: June 3, 2011

6 Respectfully Submitted By,

7 
8 Andrew J. Brady, esq.
9 City of San Fernando

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EXHIBIT 1

**Proposed Amendment to the Water Quality Control Plan – Los Angeles Region
to Incorporate the**

Total Maximum Daily Load for Toxic Pollutants in Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters

Proposed for adoption by the California Regional Water Quality Control Board, Los Angeles Region on May 5, 2011

Amendments

Table of Contents

Add:

Chapter 7. Total Maximum Daily Loads (TMDLs)
7-40 Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants TMDL

List of Figures, Tables, and Inserts

Add:

Chapter 7. Total Maximum Daily Loads (TMDLs)
Tables
7-40 Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants TMDL
7-40.1 Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants TMDL – Elements
7-40.2 Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants TMDL – Implementation Schedule

**Chapter 7. Total Maximum Daily Loads (TMDLs)
Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters
Toxic Pollutants TMDL**

This TMDL was adopted by:
The Regional Water Quality Control Board on [Insert Date].

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].
This TMDL is effective on [Insert date].

The elements of the TMDL are presented in Table 7-40.1 and the Implementation Plan in Table 7-40.2.

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7-40.1 Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants TMDL – Elements

TMDL Element	Regulatory Provisions
<p>Problem Statement</p>	<p>The waters of Dominguez Channel and the Greater Los Angeles and Long Beach Harbor area¹ are impaired by heavy metals and organic pollutants. These water bodies are included on the State’s Clean Water Act 303(d) impaired waters list for one or more of the following pollutants: cadmium, chromium, copper, mercury, lead, zinc, chlordane, dieldrin, toxaphene, DDT, PCBs, certain PAH compounds, benthic community effects and toxicity. These impairments exist in one or more environmental media—water, sediment, or tissue. Impairments in fish tissue are for DDT, PCBs, toxaphene, chlordane and dieldrin.</p> <p>Beneficial uses designated in these waters to protect aquatic life include the marine habitat use (MAR) and rare, threatened or endangered species habitat use (RARE). In addition, the estuaries (EST) are recognized as areas for spawning, reproduction and/or early development (SPWN), migration of aquatic organisms (MIGR), and wildlife habitat (WILD). Dominguez Channel also has an existing designated use of warm freshwater habitat (WARM) and the Los Angeles River Estuary has the designated use of wetland habitat (WET). Beneficial uses associated with human use of these waters include recreational use for water contact (REC1), non-contact water recreation (REC2), industrial service supply (IND), navigation (NAV), commercial and sport fishing (COMM), and shellfish harvesting (SHELL).</p> <p>Because of the impairments, these waterbodies fail to fully support the designated beneficial uses. The goal of this TMDL is to protect and restore fish tissue, water and sediment quality in Dominguez Channel and Greater Los Angeles and Long Beach Harbor waters by remediating contaminated sediment and controlling the sediment loading and accumulation of contaminated sediment in the Harbors.</p>
<p>Numeric Targets</p>	<p>Applicable water quality objectives for this TMDL are narrative objectives for Chemical Constituents, Bioaccumulation, Pesticides, and Toxicity in the Basin Plan and the numeric water quality criteria promulgated in 40 CFR section 131.38 (the California Toxics Rule (CTR)). In addition, sediment condition objectives were determined using the State Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality (SQO Part 1) and the sediment quality guidelines.²</p> <p>The following tables provide the water, sediment and fish tissue targets for the Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants TMDLs.</p> <p><u>Water Column Targets</u></p> <p>Water targets were determined by this Basin Plan and the California Toxics Rule (CTR). Site-specific conversion factors were developed to convert CTR acute dissolved metal criteria to total recoverable metals using <i>The Metals Translator Guidance for Calculating a Total Recoverable Permit Limit From a Dissolved Criterion</i> EPA 823-B-96-007.</p> <p>Because exceedances of CTR criteria were only observed in freshwaters of the Dominguez</p>

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¹ Dominguez Channel includes the Dominguez Channel Estuary and Torrance Lateral Channel and Greater Los Angeles/Long Beach Harbor waters include Inner and Outer Harbor, Main Channel, Consolidated Slip, Southwest Slip, Fish Harbor, Cabrillo Marina, Inner Cabrillo Beach, Los Angeles River Estuary, and San Pedro Bay.

Attachment A to Resolution No. R11-XXX

TMDL Element	Regulatory Provisions					
	Channel during wet weather, targets are set for wet weather only. Site-specific wet-weather conversion factors were calculated using paired dissolved and total metals data and the statistical method outlined in the Guidance.					
	Dissolved Metals and Organic Compounds Targets					
	Pollutant	Criteria for the Protection of Aquatic Life (µg/L)				Criteria for Protection of Human Health (µg/L) For consumption of:
		Freshwater		Saltwater		Organisms only
		Acute	Chronic	Acute	Chronic	
	Dissolved Metals					
	Copper	6.99*	4.95*	4.8	3.1	-
	Lead	30.14*	1.17*	210	8.1	-
	Zinc	65.13*	65.66*	90	81	-
	Mercury	-	-	-	-	0.051
	Organic Compounds					
	Chlordane	n/a	n/a	0.09	0.004	0.00059
	4,4'-DDT	1.1	0.001	0.13	0.001	0.00059
	Total PCBs	-	0.014	-	0.03	0.00017
	Benzo[a]pyrene**	-	-	-	-	0.049
	Dieldrin	0.24	0.056	0.71	0.0019	0.00014
	<p>Freshwater aquatic life criteria for Cu, Pb and Zn are expressed as a function of total hardness (mg/L) in the water body. Values presented correspond to median hardness from 2002 to 2010 of 50 mg/L based upon Los Angeles County Department of Public Works data from Station ID S28 (n = 35).</p> <p>- means that no criteria were established for California.</p> <p>** CTR human health criteria were not established for total PAHs. Therefore, the CTR criteria for individual PAHs of 0.049 µg/L are applied individually to benzo(a)pyrene, benzo(a)anthracene, and chrysene. The CTR human health criterion for Pyrene is 11,000 µg/L. Other PAH compounds in the CTR shall be screened as part of the TMDL monitoring.</p>					
	Total Recoverable Metals, Freshwater Targets					
	Metal	Acute Dissolved CTR Criteria		Conversion Factor*	Acute Total Recoverable Metals	
	Copper	6.99		0.722	9.7	
	Lead	30.14		0.706	42.7	
	Zinc	65.13		0.935	69.6	
	* Site-specific conversion factors were calculated using Los Angeles County Department of Public Works data from					

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² Long, ER, LJ Field and DD MacDonald. 1998. *Predicting Toxicity in Marine Sediments with Numerical Sediment Quality Guidelines*, *Environ. Toxicol. Chem.* **17**:4, 714-727. MacDonald, DD, CG Ingersoll and TA Berger. 2000. *Development and evaluation of consensus-based sediment quality guidelines for freshwater ecosystems*. *Arch. Environ. Contam. Toxicol.* **39**:20-31.

Attachment A to Resolution No. R11-XXX

TMDL Element	Regulatory Provisions																																																			
	<p>Station ID S28 using the data record 2002-2010 (n = 35), which had a median hardness of 50 mg/L. Site-specific conversion factors maybe recalculated based on updated data at the time of permit issuance, modification, or renewal.</p> <p>Freshwater toxicity target: This TMDL also establishes a numeric toxicity target of 1.0 toxicity unit, chronic (1.0 TU_c) to address toxicity.</p> <p>TU_c = Toxicity Unit, chronic = 100/NOEC (no observable effects concentration)</p> <p>Targets based on new toxicity criteria that achieve the narrative Toxicity objective of Chapter 3 of this Basin Plan may substitute for the TU_c of 1, when those new criteria are adopted and in effect.</p> <p><u>Sediment Targets</u></p> <p>Sediment targets were determined by the narrative standards of this Basin Plan, the SQO Part 1 and the sediment quality guidelines of Long et al. (1998) and MacDonald et al. (2000), which are recommended by the State Listing Policy. The fresh water sediment numeric targets for Dominguez Channel are based on the freshwater Threshold Effect Concentration (TEC) sediment guidelines compiled by the National Oceanic and Atmospheric Administration (NOAA) in the Screening Quick Reference Tables (SQuiRTs). The marine sediment quality guidelines of Effect Range Low (ERL), also from NOAA SQuiRTs, were used to establish the numeric targets for marine sediment for the greater Los Angeles and Long Beach Harbor waters. These TECs and ERLs are set as the sediment quality thresholds for the calculation of loading capacity and allocations. This TMDL anticipates that revisions to specific sediment quality targets may be determined by development of site-specific sediment quality values (SQV).</p> <p align="center">Sediment targets</p> <table border="1" data-bbox="480 1182 1382 1854"> <thead> <tr> <th data-bbox="480 1182 781 1272">Metals</th> <th data-bbox="786 1182 1081 1272">Freshwater Sediment (mg/kg)</th> <th data-bbox="1086 1182 1382 1272">Marine Sediment (mg/kg)</th> </tr> </thead> <tbody> <tr> <td>Cadmium</td> <td align="center">n/a</td> <td align="center">1.2</td> </tr> <tr> <td>Copper</td> <td align="center">31.6</td> <td align="center">34</td> </tr> <tr> <td>Lead</td> <td align="center">35.8</td> <td align="center">46.7</td> </tr> <tr> <td>Mercury</td> <td align="center">n/a</td> <td align="center">0.15</td> </tr> <tr> <td>Zinc</td> <td align="center">121</td> <td align="center">150</td> </tr> <tr> <td>Chromium</td> <td align="center">n/a</td> <td align="center">81</td> </tr> <tr> <th data-bbox="480 1465 781 1570">Organics</th> <th colspan="2" data-bbox="786 1465 1382 1570">Marine Sediment (µg/kg)</th> </tr> <tr> <td>Chlordane, total</td> <td align="center" colspan="2">0.5</td> </tr> <tr> <td>Dieldrin</td> <td align="center" colspan="2">0.02</td> </tr> <tr> <td>Toxaphene</td> <td align="center" colspan="2">0.10*</td> </tr> <tr> <td>Total PCBs</td> <td align="center" colspan="2">22.7</td> </tr> <tr> <td>Benzo[a]anthracene</td> <td align="center" colspan="2">261</td> </tr> <tr> <td>Benzo[a]pyrene</td> <td align="center" colspan="2">430</td> </tr> <tr> <td>Chrysene</td> <td align="center" colspan="2">384</td> </tr> <tr> <td>Pyrene</td> <td align="center" colspan="2">665</td> </tr> <tr> <td>2-methylnaphthalene</td> <td align="center" colspan="2">201</td> </tr> </tbody> </table>	Metals	Freshwater Sediment (mg/kg)	Marine Sediment (mg/kg)	Cadmium	n/a	1.2	Copper	31.6	34	Lead	35.8	46.7	Mercury	n/a	0.15	Zinc	121	150	Chromium	n/a	81	Organics	Marine Sediment (µg/kg)		Chlordane, total	0.5		Dieldrin	0.02		Toxaphene	0.10*		Total PCBs	22.7		Benzo[a]anthracene	261		Benzo[a]pyrene	430		Chrysene	384		Pyrene	665		2-methylnaphthalene	201	
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Attachment A to Resolution No. R11-XXX

TMDL Element	Regulatory Provisions																						
	Dibenz[a,h]anthracene	260																					
	Phenanthrene	240																					
	Hi MW PAHs	1700																					
	Lo MW PAHs	552																					
	Total PAHs	4,022																					
	Total DDT	1.58																					
	<p>*Toxaphene value from <i>Technical Guidance for Screening Contaminated Sediments</i>, New York State, Department of Environmental Conservation, Division of Fish, Wildlife and Marine Resources (1999), assumes 1% TOC. n/a indicates that a fresh water sediment target is not established in this TMDL for this constituent, since impairments for the constituent is in saltwater only.</p> <p>These sediment targets are not intended to be used as necessarily 'clean-up standards' for navigational, capital or maintenance dredging or capping activities; rather they are long-term sediment concentrations that should be attained after reduction of external loads, targeted actions addressing internal reservoirs of contaminants, and environmental decay of contaminants in sediment. In addition, the categories designated in the SQO Part 1 as Unimpacted and Likely Unimpacted by the interpretation and integration of multiple lines of evidence shall be considered as the protective narrative objective for sediment toxicity and benthic community effects. The thresholds established in the SQO Part 1 are based on statistical significance and magnitude of the effect. Therefore, this TMDL implicitly includes sediment toxicity and benthic community targets by its use of the SQO Part 1.</p> <p><u>Fish Tissue and Associated Sediment Targets</u></p> <p>Fish tissue targets were determined from <i>Fish Contaminant Goals and Advisory Tissue Levels for Common Contaminants in California Sport Fish: Chlordane, DDTs, Dieldrin, Methylmercury, PCBs, Selenium, and Toxaphene</i>, developed by OEHHA (2008) to assist agencies in developing fish tissue-based criteria for pollution mitigation or elimination and to protect humans from consumption of contaminated fish. Associated sediment targets required to achieve the fish tissue targets were determined from several sources depending on the contaminant.</p> <p align="center">Fish Tissue and Associated Sediment Targets</p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Fish Tissue Target (µg/kg wet)</th> <th>Associated Sediment Target (µg/kg dry)</th> </tr> </thead> <tbody> <tr> <td>Chlordane</td> <td align="center">5.6</td> <td align="center">1.3^b</td> </tr> <tr> <td>Dieldrin</td> <td align="center">0.46</td> <td align="center">n/a</td> </tr> <tr> <td>Total DDT</td> <td align="center">21</td> <td align="center">1.9^b</td> </tr> <tr> <td>Total PCBs</td> <td align="center">3.6</td> <td align="center">3.2^c</td> </tr> <tr> <td>Total PAHs</td> <td align="center">5.47^a</td> <td align="center">n/a</td> </tr> <tr> <td>Toxaphene</td> <td align="center">6.1</td> <td align="center">0.1^d</td> </tr> </tbody> </table> <p>^a Total PAHs in fish from EPA screening value. ^b Chlordane and total DDT associated sediment values from SFEI (2007) "Indicator development and framework for assessing indirect effects of sediment contaminants", SFEI Contribution #524. ^c Total PCBs - associated sediment target from Gobas, F. and J. Arnot (2010) "Food Web Bioaccumulation Model for Polychlorinated Biphenyls in San Francisco Bay, California, USA", ET&C 29:6, 1385-95. ^d Toxaphene value from New York State (1999), assumes 1% TOC. n/a indicates that an associated sediment target is not established in this TMDL at this time because there is no BSAF in literature to use in the calculation. If BSAFs are developed in the future, associated sediment targets for dieldrin and/or PAHs may be added during reconsideration of the TMDL.</p>		Pollutant	Fish Tissue Target (µg/kg wet)	Associated Sediment Target (µg/kg dry)	Chlordane	5.6	1.3 ^b	Dieldrin	0.46	n/a	Total DDT	21	1.9 ^b	Total PCBs	3.6	3.2 ^c	Total PAHs	5.47 ^a	n/a	Toxaphene	6.1	0.1 ^d
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TMDL Element	Regulatory Provisions
<p>Source Analysis</p>	<p>Monitoring data from NPDES discharges and land use runoff coefficients were used to estimate the magnitude of metals, organo-chlorine pesticides, PCBs, and PAHs loads to Dominguez Channel and Greater Los Angeles and Long Beach Harbor waters.</p> <p>PCBs, DDT, dieldrin, and chlordane are legacy pollutants for the most part, yet, they remain present in the environment, bound to fine-grained particles. Because they are legacy pollutants and are subject to environmental decay, their concentrations are gradually decreasing over time. When these particles become waterborne, the chemicals are ferried to new locations. Urban runoff and rainfall higher in the watersheds mobilize the particles, which are then washed into storm drains and channels that discharge to the Dominguez Channel and greater Harbor waters. Metals and PAHs are currently generated or deposited in the watersheds and are then washed into storm drains and channels that discharge to the Dominguez Channel and greater Harbor waters.</p> <p>Briefly there are several categories of pollutant sources to the waters of concern in these TMDLs. Point sources include stormwater and urban runoff (MS4) and other NPDES discharges, including but not limited to Port operations, Terminal Island Water Reclamation Plant (TIWRP), refineries, and generating plants. Nonpoint sources include existing contaminated sediments and direct (air) deposition.</p> <p>Dominguez Channel waters: The major point sources of organo-chlorine pesticides, PCBs, and metals into Dominguez Channel are stormwater and urban runoff discharges. Nonpoint sources include atmospheric deposition and fluxes from contaminated sediments into the overlying water.</p> <p>Current loads of metals into Dominguez Channel were estimated using Loading Simulation Program in C++ (LSPC) model output from simulated flows for 1995-2005. Monitoring data from NPDES discharges and land use runoff coefficients were analyzed along with Channel stream flow rates to estimate the magnitude of metal loadings. In recognition of the wide variety of stream flow rates generated by various rainfall conditions, flow duration curves were utilized to analyze the metals loading during wet weather.</p> <p>Greater Los Angeles and Long Beach Harbor waters: A variety of activities over the past decades in the four contributing watersheds (Dominguez Channel, Los Angeles River, San Gabriel River and the nearshore watershed) and in the Harbors themselves have contributed to the sediment contamination. The contaminated sediments are a reservoir of historically deposited pollutants. Stormwater runoff from manufacturing, military facilities, fish processing plants, wastewater treatment plants, oil production facilities, and shipbuilding or repair yards in both Ports discharged untreated or partially treated wastes into Harbor waters. Current activities also contribute pollutants to Harbor sediments. In particular, stormwater runoff from port facilities, commercial vessels (ocean going vessels and harbor craft), recreational vessels, and the re-suspension of contaminated sediments via natural processes and/or anthropogenic activities including (ship) propeller wash within the Ports also contributes to transport of pollutants within the Harbors. Loadings from the four contributing watersheds are also potential sources of metals, pesticides, PCBs, and PAHs to the Harbors.</p> <p>The major nonpoint source of pesticides and PCBs to the greater Harbor waters is the current sediments. The re-suspension of these sediments contributes to the fish tissue impairments. In addition, atmospheric deposition may be a potential nonpoint source of metals to the watershed,</p>

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Attachment A to Resolution No. R11-XXX

TMDL Element	Regulatory Provisions																																																				
	<p>through either direct deposition or indirect deposition.</p> <p>Current loading of metals, PAHs, DDT and PCBs to contaminated sediments within the Dominguez Channel Estuary and Greater Harbor waters was estimated using monitoring data from special studies and water body surface area for air deposition; discharge results for refineries and TIWRP; and Environmental Fluid Dynamics Code (EFDC) model output for 2002-2005. Model inputs included the existing average sediment concentration in the top 5 cm of bed sediments and the total sediment deposition rate per waterbody.</p>																																																				
<p>Linkage Analysis</p>	<p>The linkage analysis connects pollutant loads to the numeric targets and protection of beneficial uses of Dominguez Channel and Greater Los Angeles and Long Beach Harbor waters. To represent the linkage between source contributions and ambient water and sediment response, two dynamic water quality models were developed to simulate source loadings and transport of the listed pollutants in Dominguez Channel and Greater Los Angeles and Long Beach Harbor waters. The Environmental Fluid Dynamics Code (EFDC) and Loading Simulation Program in C++ (LSPC) models were selected to simulate the pollutants in this TMDL.</p> <p>LSPC for freshwater loadings of metals and total PAHs, DDT, and PCBs. LSPC was developed for Dominguez Channel based on information initially provided by SCCWRP for this watershed. In addition, Los Angeles River and San Gabriel River LSPC models were updated from earlier TMDL models. Model development throughout the Los Angeles Region relies on Event Mean Concentrations (EMC) as well as simulated flows to estimate pollutant loadings. Flow data records for 1995-2005 were used to calibrate LSPC models for each watershed; similar simulation time frames were used to generate simulated flows for each watershed. Dominguez Channel freshwater metals TMDLs examined only wet weather flows; however, LSPC output for dry and wet weather conditions was applied to all estuarine and marine receiving waters.</p> <p>The nearshore watershed was analyzed and modeled using LSPC by breaking it into 67 subwatersheds that discharge directly to the Greater Los Angeles and Long Beach Harbor waters. These sub-watersheds were then aggregated by receiving waterbody; e.g. nearshore contributions to Inner Harbor consisted of stormdrains and surface (sheet) flows that discharge directly into the Inner Harbor.</p> <p>The table below shows total loads from the four contributing watersheds to the Greater Harbor waters. Overall, the Los Angeles River is the largest freshwater contributor of pollutants to the greater Harbor waters; flows from the Los Angeles River primarily impact water quality in eastern San Pedro Bay. The Inner Harbor receives the bulk of the loading from the nearshore watershed.</p> <p>Comparative Watershed Loading to Greater Harbor Waters</p> <table border="1" data-bbox="391 1612 1443 1866"> <thead> <tr> <th rowspan="3">Contaminant</th> <th colspan="8">LSPC Modeled Existing Loading by Watershed (1995-2005)</th> </tr> <tr> <th colspan="2">Dominguez Channel</th> <th colspan="2">Los Angeles River</th> <th colspan="2">San Gabriel River</th> <th colspan="2">Nearshore Watershed</th> </tr> <tr> <th>Percent of Total Loading</th> <th>Average Daily Load (kg/day)</th> <th>Percent of Total Loading</th> <th>Average Daily Load (kg/day)</th> <th>Percent of Total Loading</th> <th>Average Daily Load (kg/day)</th> <th>Percent of Total Loading</th> <th>Average Daily Load (kg/day)</th> </tr> </thead> <tbody> <tr> <td colspan="9" style="text-align:center">Wet Conditions</td> </tr> <tr> <td>Sediment</td> <td>5.6%</td> <td>1.88E+05</td> <td>72.0%</td> <td>2.79E+06</td> <td>20.4%</td> <td>4.90E+05</td> <td>1.9%</td> <td>6.54E+04</td> </tr> <tr> <td>Total Copper</td> <td>4.3%</td> <td>3.58E+01</td> <td>81.1%</td> <td>7.85E+02</td> <td>12.5%</td> <td>7.51E+01</td> <td>2.1%</td> <td>1.78E+01</td> </tr> </tbody> </table>	Contaminant	LSPC Modeled Existing Loading by Watershed (1995-2005)								Dominguez Channel		Los Angeles River		San Gabriel River		Nearshore Watershed		Percent of Total Loading	Average Daily Load (kg/day)	Percent of Total Loading	Average Daily Load (kg/day)	Percent of Total Loading	Average Daily Load (kg/day)	Percent of Total Loading	Average Daily Load (kg/day)	Wet Conditions									Sediment	5.6%	1.88E+05	72.0%	2.79E+06	20.4%	4.90E+05	1.9%	6.54E+04	Total Copper	4.3%	3.58E+01	81.1%	7.85E+02	12.5%	7.51E+01	2.1%	1.78E+01
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Total Lead	3.0%	2.08E+01	71.5%	5.67E+02	23.3%	1.15E+02	2.2%	1.53E+01																																																													
Total Zinc	5.0%	3.56E+02	72.2%	5.89E+03	20.2%	1.02E+03	2.6%	1.84E+02																																																													
Total DDT	9.2%	2.20E-02	89.5%	2.46E-01	0.7%	1.15E-03	0.7%	1.59E-03																																																													
Total PAH	8.0%	2.04E+00	70.2%	2.07E+01	16.1%	2.95E+00	5.8%	1.50E+00																																																													
Total PCB	2.3%	1.38E-02	97.5%	6.86E-01	0.1%	3.11E-04	0.2%	9.92E-04																																																													
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Sediment	0.7%	8.57E+01	19.0%	2.27E+03	80.1%	1.01E+04	0.1%	1.54E+01																																																													
Total Copper	2.6%	2.56E-01	48.7%	4.69E+00	40.8%	4.18E+00	8.0%	7.78E-01																																																													
Total Lead	0.9%	3.48E-02	19.8%	7.86E-01	72.9%	3.07E+00	6.5%	2.59E-01																																																													
Total Zinc	0.9%	5.65E-01	30.4%	1.90E+01	62.6%	4.15E+01	6.2%	3.89E+00																																																													
Total DDT	7.7%	1.90E-05	83.0%	2.01E-04	9.3%	2.38E-05	0.0%	2.88E-10																																																													
Total PAH	6.8%	7.06E-02	62.7%	6.39E-01	30.4%	3.29E-01	0.0%	4.18E-05																																																													
Total PCB	1.8%	1.06E-05	97.1%	5.59E-04	1.1%	6.43E-06	0.0%	1.45E-10																																																													
<p>The EFDC was used to model hydrodynamics and water and sediment quality of the greater Los Angeles and Long Beach Harbor waters. The EFDC model applied a simulated time period of 2002-2005. The model was calibrated with numerous sediment monitoring studies, including Los Angeles and Long Beach Harbor's 2006 sediment characterization study, which yielded sediment, porewater and overlying water concentrations as well as results from highly sensitive monitoring devices for detecting DDT, PCBs, and PAHs in the water column. The EFDC model also considered ocean water (outside breakwater) conditions and fine and coarse sediment transport and deposition. Ultimately the EFDC model was integrated with LSPC output – hourly for three watersheds, daily for nearshore watersheds – to model metals, PAHs, PCBs, and DDT (total) sediment concentrations in the receiving waters. The annual total (clean) sediment deposition rate for the top 5 cm (active sediment layer) was multiplied by the corresponding existing sediment pollutant level or the TMDL sediment quality target to yield pollutant load within each waterbody.</p> <p>Annual (clean) Sediment Deposition Rates per (salt)Waterbody</p> <table border="1"> <thead> <tr> <th>Waterbody Name</th> <th>TMDL Zone</th> <th>Area (acres)¹</th> <th>Area (m²)¹</th> <th>Total Deposition (kg/yr)²</th> </tr> </thead> <tbody> <tr> <td>Dominguez Channel Estuary</td> <td>01</td> <td>140</td> <td>567,900</td> <td>2,470,201</td> </tr> <tr> <td>Consolidated Slip</td> <td>02</td> <td>36</td> <td>147,103</td> <td>355,560</td> </tr> <tr> <td>Inner Harbor - POLA</td> <td>03</td> <td>1,539</td> <td>6,228,431</td> <td>1,580,809</td> </tr> <tr> <td>Inner Harbor - POLB</td> <td>08</td> <td>1,464</td> <td>5,926,130</td> <td>674,604</td> </tr> <tr> <td>Fish Harbor</td> <td>04</td> <td>91</td> <td>368,524</td> <td>30,593</td> </tr> <tr> <td>Cabrillo Marina</td> <td>05</td> <td>77</td> <td>310,259</td> <td>38,859</td> </tr> <tr> <td>Cabrillo Beach</td> <td>06</td> <td>82</td> <td>331,799</td> <td>27,089</td> </tr> <tr> <td>Outer Harbor - POLA</td> <td>07</td> <td>1,454</td> <td>5,885,626</td> <td>572,349</td> </tr> <tr> <td>Outer Harbor - POLB</td> <td>09</td> <td>2,588</td> <td>10,472,741</td> <td>1,828,407</td> </tr> <tr> <td>Los Angeles River Estuary</td> <td>10</td> <td>207</td> <td>837,873</td> <td>21,610,283</td> </tr> <tr> <td>San Pedro Bay</td> <td>11</td> <td>8,173</td> <td>33,073,517</td> <td>19,056,271</td> </tr> </tbody> </table> <p>¹ Area obtained from GIS layer of the 2006 303(d) list. Available at:</p>										Waterbody Name	TMDL Zone	Area (acres) ¹	Area (m ²) ¹	Total Deposition (kg/yr) ²	Dominguez Channel Estuary	01	140	567,900	2,470,201	Consolidated Slip	02	36	147,103	355,560	Inner Harbor - POLA	03	1,539	6,228,431	1,580,809	Inner Harbor - POLB	08	1,464	5,926,130	674,604	Fish Harbor	04	91	368,524	30,593	Cabrillo Marina	05	77	310,259	38,859	Cabrillo Beach	06	82	331,799	27,089	Outer Harbor - POLA	07	1,454	5,885,626	572,349	Outer Harbor - POLB	09	2,588	10,472,741	1,828,407	Los Angeles River Estuary	10	207	837,873	21,610,283	San Pedro Bay	11	8,173	33,073,517	19,056,271
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	<p>http://www.waterboards.ca.gov/water_issues/programs/tmdl/303d_lists2006_gis.shtml</p> <p>² Sediment deposition rates were calculated by approximating the average mass of total sediment (fine and coarse particles) deposited in each waterbody annually based on 2002-2005 EFDC output. Sediment flux for each grid cell, which is dependent on watershed inputs as well as tidal movements between waterbodies, was obtained from the EFDC model output. These values were summarized across each TMDL waterbody, resulting in the average deposition of both sediment fines and sand by waterbody. The total deposition rate is simply the sum of the rates for fines and sand and this value is the waterbody-specific average annual (clean) sediment deposition rate.</p> <p>The EFDC model was used to evaluate several management scenarios and relative contributions from various inputs to support water quality management decisions in Dominguez Channel and Greater Los Angeles and Long Beach Harbor waters. Preliminary results for two scenarios indicate that reducing freshwater input loads may not be sufficient to achieve target concentrations in water and sediments; thus reductions in contaminant levels in bed sediments may be required.</p>
<p>Loading Capacity</p>	<p>Loading capacity was calculated for both Dominguez Channel (wet weather) and in the Dominguez Channel Estuary and Greater Harbor waters (dry and wet weather).</p> <p><u>Dominguez Channel wet weather metals TMDLs:</u> During wet weather, the loading capacity is a function of the volume of water in the Channel. Given the variability in wet-weather flows, the concept of a single critical flow was not justified. Instead, a load duration curve approach was used to establish the wet-weather loading capacity. The load duration curve was developed by multiplying the wet-weather flows by the in-stream numeric targets. The resulting curves identify the allowable load for a given flow. The wet-weather TMDLs for copper and zinc are defined by these load duration curves.</p> <p>Loading capacities were calculated by multiplying the daily storm volume by the appropriate numeric water quality target or, in the case of lead, the observed existing average concentration. The wet-weather loading capacity applies to any day when the maximum daily flow measured at a location within the Dominguez Channel is equal to or greater than 62.7 cfs, which is the 90th percentile flow rate from estimated/modeled flow rates.</p> <p>The freshwater toxicity TMDL is equal to 1 TUc.</p> <p><u>Dominguez Channel Estuary and Greater Harbor waters, metals and organics in sediment TMDLs:</u> Loading capacities for Dominguez Channel Estuary and Greater Harbor waters were calculated by estimating the sediment load (based on modeled sediment deposition rates) multiplied by the sediment quality target. The active sediment layer was defined as the top 5 cm of sediment; the habitat of approximately 95% of benthic organisms.</p> <p>In addition, chlordane, dieldrin, toxaphene and mercury TMDLs were defined for specific waterbodies as equivalent to the concentration-based sediment quality target.</p>

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Waste Load and Load Allocations	<p>Final waste load allocations (WLA) are assigned to stormwater dischargers (MS4, California Department of Transportation (Caltrans), general construction and general industrial dischargers), and other NPDES dischargers. Final load allocations (LAs) are assigned to direct atmospheric deposition and bed sediments in both wet and dry weather. Dominguez Channel freshwater allocations are set for wet weather only because exceedances have only been observed in wet weather. Mass-based allocations have been set where sufficient data was available to calculate mass-based allocations, otherwise, concentration-based allocations have been set.</p> <p>Interim WLA and LA are intended to not allow any decrease in current facility performance. Interim allocations shall be met upon the effective date of the TMDL.</p> <p>Interim and final WLAs and LAs shall be included in permits and/or other Board orders in accordance with state and federal regulations and guidance.</p> <p><u>INTERIM ALLOCATIONS</u></p> <p>1. Dominguez Channel Freshwater Interim Allocations</p> <p>A. <u>Freshwater Toxicity Interim Allocation wet weather</u></p> <p>An interim allocation of 2 TUC applies to each source, including all point sources assigned a WLA and all nonpoint sources assigned a LA. The freshwater toxicity interim allocation is set at 2 TUC based on current monitoring results performed by the Los Angeles County Department of Public Works, which have shown average values of less than 2 TUC. The fresh water interim allocation shall be implemented as a trigger requiring initiation and implementation of the TRE/TIE process as outlined in US EPA's "Understanding and Accounting for Method Variability in Whole Effluent Toxicity Applications Under the National Pollutant Discharge Elimination System Program" (2000) and current NPDES permits. The fresh water interim allocation shall be implemented in accordance with US EPA, State Board and Regional Board resolutions, guidance and policy at the time of permit issuance, modification or renewal.</p> <p>B. <u>Freshwater Metals Interim Allocations - wet weather only</u></p> <p><u>Interim water allocations are assigned to stormwater dischargers (MS4, Caltrans, general construction and general industrial stormwater dischargers) and other NPDES dischargers.</u> Interim water allocations are based on the 95th percentile of total metals data collected from January 2006 to January 2010 using a log-normal distribution. The use of 95th percentile values to develop interim allocations is consistent with NPDES permitting methodology. Regardless of the interim allocations below, permitted dischargers shall ensure that effluent concentrations and mass discharges do not exceed levels that can be attained by performance of the facility's treatment technologies existing at the time of permit issuance, reissuance or modification.</p> <p>Concentration-based Dominguez Channel <u>and Torrance Lateral</u> freshwater interim metal allocations</p> <table border="1" data-bbox="410 1646 1284 1709"> <thead> <tr> <th></th> <th>Total Copper</th> <th>Total Lead</th> <th>Total Zinc</th> </tr> </thead> <tbody> <tr> <td>allocation (µg/L)</td> <td align="center">207.51</td> <td align="center">122.88</td> <td align="center">898.87</td> </tr> </tbody> </table> <p>2. Dominguez Channel Estuary and Greater Los Angeles and Long Beach Harbor Waters:</p> <p>Interim sediment allocations are assigned to stormwater dischargers (MS4, Caltrans, general</p>		Total Copper	Total Lead	Total Zinc	allocation (µg/L)	207.51	122.88	898.87
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REVISITED TENTATIVE

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	<p>Wet-weather allocations are assigned to Dominguez Channel and all upstream reaches and tributaries of Dominguez Channel (above Vermont Avenue).</p> <p>Allocations are assigned to both point (WLA) and nonpoint sources (LA). A mass-based LA has been developed for direct atmospheric deposition. A mass-based waste load allocation (WLA) is divided between the MS4 permittees and Caltrans under its NPDES stormwater permit by subtracting the other stormwater or NPDES <u>waste</u> load allocations, air deposition and the margin of safety from the total loading capacity. Concentration-based WLAs are assigned for the other point sources including but not limited to General Construction, General Industrial, Power Generating stations, minor permits and irregular dischargers, and other NPDES dischargers.</p> <p align="center">Mass-based Dominguez Channel Wet-weather Final Allocations</p> <table border="1"> <thead> <tr> <th></th> <th style="text-align: center;">Total Copper (g/day)</th> <th style="text-align: center;">Total Lead (g/day)</th> <th style="text-align: center;">Total Zinc (g/day)</th> </tr> </thead> <tbody> <tr> <td>TMDL</td> <td style="text-align: center;">1,485.1</td> <td style="text-align: center;">6,548.8</td> <td style="text-align: center;">10,685.5</td> </tr> <tr> <td colspan="4">Waste Load Allocations:</td> </tr> <tr> <td>MS4 – LA County Permittees</td> <td style="text-align: center;">1,300.3</td> <td style="text-align: center;">5,733.7</td> <td style="text-align: center;">9,355.5</td> </tr> <tr> <td>MS4 - Caltrans</td> <td style="text-align: center;">32.3</td> <td style="text-align: center;">142.6</td> <td style="text-align: center;">232.6</td> </tr> <tr> <td colspan="4">Load Allocations:</td> </tr> <tr> <td>Air Deposition</td> <td style="text-align: center;">4.0</td> <td style="text-align: center;">17.7</td> <td style="text-align: center;">28.9</td> </tr> <tr> <td colspan="4">Margin of Safety</td> </tr> <tr> <td>MOS (10%)</td> <td style="text-align: center;">148.5</td> <td style="text-align: center;">654.9</td> <td style="text-align: center;">1,069.6</td> </tr> </tbody> </table> <p>Based on total recoverable metal targets, a hardness of 50 mg/L, and 90% flow rate (62.7 cfs) in Dominguez Channel. Recalculated mass-based allocations using ambient hardness and flow rate at the time of sampling are considered consistent with the assumptions and requirements of these waste load allocations. <u>In addition to the wasteload allocations above, samples collected during flow conditions less than the 90th percentile flow rate must achieve demonstrate that the acute and chronic hardness dependent water quality criteria provided in the CTR are achieved.</u></p> <p align="center">Concentration-based Dominguez Channel Wet-weather Final Allocations (µg/L)</p> <table border="1"> <thead> <tr> <th></th> <th style="text-align: center;">Total Copper</th> <th style="text-align: center;">Total Lead</th> <th style="text-align: center;">Total Zinc</th> </tr> </thead> <tbody> <tr> <td>Other stormwater/NPDES</td> <td style="text-align: center;">9.7</td> <td style="text-align: center;">42.7</td> <td style="text-align: center;">69.7</td> </tr> </tbody> </table> <p>Based on hardness = 50 mg/L. Recalculated concentration-based allocations using ambient hardness at the time of sampling are considered consistent with the assumptions and requirements of these waste load allocations. <u>In addition to the wasteload allocations above, samples samples collected during flow conditions less than the 90th percentile flow rate must achieve demonstrate that the acute and chronic hardness dependent water quality criteria provided in the CTR are achieved.</u></p> <p>2. Torrance Lateral Freshwater and Sediment Allocations</p> <p>Torrance Lateral is a subwatershed that flows directly into Dominguez Channel Estuary. Allocations are assigned to the ExxonMobil Torrance Refinery and all other dischargers. Mass-based sediment allocations are assigned to the ExxonMobil Torrance Refinery. This allocation has been developed based on an average discharge frequency of once every 7 years. If, at the end of Phase I of implementation, due to an increase in discharge frequency or volumes, it appears that the allocations are not supportive of the TMDL, these allocations may be revised. Sediment <u>waste</u> load allocations are assigned to all other dischargers to Torrance Lateral equal to the concentration-based sediment targets.</p>		Total Copper (g/day)	Total Lead (g/day)	Total Zinc (g/day)	TMDL	1,485.1	6,548.8	10,685.5	Waste Load Allocations:				MS4 – LA County Permittees	1,300.3	5,733.7	9,355.5	MS4 - Caltrans	32.3	142.6	232.6	Load Allocations:				Air Deposition	4.0	17.7	28.9	Margin of Safety				MOS (10%)	148.5	654.9	1,069.6		Total Copper	Total Lead	Total Zinc	Other stormwater/NPDES	9.7	42.7	69.7
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Attachment A to Resolution No. R11-XXX

TMDL Element	Regulatory Provisions																				
	<p>Torrance Lateral <u>Wet-weather Waste Load Allocations and Sediment Waste Load Allocations, concentration-based</u></p> <table border="1" data-bbox="488 352 1386 449"> <thead> <tr> <th>Media</th> <th>Total Copper</th> <th>Total Lead</th> <th>Total Zinc</th> </tr> </thead> <tbody> <tr> <td>Water (unfiltered) (µg/L)</td> <td>9.7</td> <td>42.7</td> <td>69.7</td> </tr> <tr> <td>Sediment (mg/kg dry)</td> <td>31.6</td> <td>35.8</td> <td>121</td> </tr> </tbody> </table> <p>Hardness = 50 mg/L. Recalculated concentration-based allocations using ambient hardness at the time of sampling are considered consistent with the assumptions and requirements of these waste load allocations. <u>In addition to the wasteload allocations above, samples collected during flow conditions less than the 90th percentile flow rate must demonstrate that the acute and chronic hardness dependent water quality criteria provided in the CTR are achieved.</u></p> <p>Waste Load Allocations for ExxonMobil Torrance Refinery into Torrance Lateral, mass-based</p> <table border="1" data-bbox="391 726 1273 793"> <thead> <tr> <th>Media</th> <th>Total Copper</th> <th>Total Lead</th> <th>Total Zinc</th> </tr> </thead> <tbody> <tr> <td>Water (unfiltered) (kg/yr)</td> <td>1.36</td> <td>5.98</td> <td>9.75</td> </tr> </tbody> </table> <p>Based on Q = 3.7 MGD for 7 days/year; and total metals targets No allocation for PAHs is assigned to ExxonMobil; however, dischargers should not exceed existing water quality criteria for those compounds and monitoring shall continue.</p> <p>Compliance with the freshwater metals allocations for Dominguez Channel and Torrance Lateral may be demonstrated via any one of three different means:</p> <ol style="list-style-type: none"> Final allocations are met. CTR total metals criteria are met instream. CTR total metals criteria are met in the discharge. <p>3. Dominguez Channel Estuary and Greater Harbor Waters Allocations</p> <p>A. <u>Concentration-based WLAs for point sources in Dominguez Channel Estuary and Greater Harbor Waters (including refineries) for metals, PAHs, and bioaccumulative compounds in water.</u></p> <p>Non-MS4 point sources such as General Construction, General Industrial, individual industrial permittees, including power generating stations, minor permits and irregular dischargers into Dominguez Channel Estuary and Greater Harbor Waters are assigned concentration-based allocations. Mass-based WLA for other refineries based on appropriate data maybe considered during the TMDL reconsideration. (Refineries which have provided discharge flow data along with monitoring results are assigned mass-based allocations, whereas other refineries are assigned concentration-based allocations because no discharge flow data has been provided.) Any future minor NPDES permits or enrollees under a general NPDES permit are also assigned the concentration-based waste load allocations. The allocations are set equal to the saltwater targets for metals and equal to the human health targets for the organic compounds in CTR. The averaging period for the concentration-based WLAs shall be consistent with that specified in the regulation establishing the criterion or objective or relevant implementation guidance published by the establishing agency.</p>	Media	Total Copper	Total Lead	Total Zinc	Water (unfiltered) (µg/L)	9.7	42.7	69.7	Sediment (mg/kg dry)	31.6	35.8	121	Media	Total Copper	Total Lead	Total Zinc	Water (unfiltered) (kg/yr)	1.36	5.98	9.75
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TMDL Element	Regulatory Provisions									
	Receiving (salt) Water Column Concentration-Based Waste Load Allocations									
	Constituents	Copper* (µg/L)	Lead* (µg/L)	Zinc* (µg/L)	PAHs (µg/L)	Chlordane (µg/L)	4,4'- DDT (µg/L)	Dieldrin (µg/L)	Total PCBs (µg/L)	R E V I S E D T E N T A T I V E
	Dominguez Channel Estuary	3.73	8.52	85.6	0.049**	0.00059	0.00059	0.00014	0.00017	
Inner Greater Harbor Waters	3.73	8.52	85.6			0.00059		0.00017		
* Total Concentration-based WLAs for metals are converted from saltwater dissolved CTR criteria using CTR saltwater default translators.										
** CTR human health criteria were not established for total PAHs. Therefore, the CTR criterion for individual PAHs of 0.049 µg/L is applied individually to benzo(a)anthracene, benzo(a)pyrene, and chrysene. The CTR criterion for Pyrene of 11,000 µg/L is assigned as an individual WLA to Pyrene. Other PAH compounds in the CTR shall be screened as part of the TMDL monitoring.										
<p align="center">B. <u>Mass-based allocations for metals and PAHs compounds</u></p> <p>Mass-based WLAs are assigned to the Terminal Island Water Reclamation Plant (TIWRP) (based on current discharge volume) and other point sources that have sufficient discharge flow data. Municipal stormwater sources, including the Los Angeles, Long Beach, Caltrans and other MS4 co-permittees, are assigned a mass-based allocation for each permit in place at the time of TMDL adoption, depending on the waterbody. Discharges from the Port of Los Angeles (POLA) and Port of Long Beach (POLB) are grouped with the MS4 dischargers. Mass-based WLAs are applied as annual limits. Individual mass-based WLAs for an individual MS4 Permittee will be calculated based on its share, on an area basis, of the mass-based WLA or other approved approach available at the time final mass-based WLAs are in effect and incorporated into the permit. TMDLs and allocations were developed based on existing sediment concentrations in the active sediment layer defined herein as the top 5 cm of bed sediment concentrations.</p> <p>Load Allocations are assigned to existing sediments and direct air deposition. All allocations assigned to point sources and non-point sources are subtracted from the loading capacity and the remaining allocatable amount is assigned to the bed sediments. Direct air deposition allocations have been set equal to existing load estimates for Cu, Zn and PAHs based on atmospheric monitoring results collected in 2006. The Pb air deposition allocation has been developed by using the SCAQMD air quality Pb criteria (2010) multiplied by the surface area of each waterbody to produce direct air deposition allocations. Future changes to Cu, Zn and PAH air quality criteria, other regulation such as brake pad requirements, or other improvement in air quality may allow for re-calculations of air deposition allocations in future revisions to the TMDL. If, at some point in the future, a nonpoint source is considered subject to NPDES or WDR regulations, then the corresponding load allocation established herein may be considered a waste load allocation for purposes of implementation and enforcement through a permit or other Board order.</p> <p>Air deposition allocations for copper and zinc are based on existing loads; by assuming no direct deposition reductions, this consumes or partially consumes the available loading capacity. As a result, copper and zinc load allocations for bed sediments are negative values, in Inner and Outer Harbor, indicating that copper and zinc loads must be reduced. (Each negative copper and</p>										

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	<p>zinc bed sediment allocation may alternatively be interpreted as zero, or not adversely affecting benthic organisms.) The amount of copper and zinc load reduction may be revised based on future monitoring results. If future air deposition studies show lower existing air deposition copper and zinc loads, or if future copper and zinc sediment characterization studies show lower bed sediment copper and zinc loads, then copper and zinc allocations may be adjusted.</p> <p>The bed sediment LA is assigned to the City of Los Angeles (including the Port of Los Angeles), the City of Long Beach (including the Port of Long Beach) and the State Lands Commission. After remediation activities that address existing sediment contamination are complete and when LAs are attained, if bed sediments are recontaminated as a result of continued polluted discharge from the surrounding watersheds, the WLA compliance monitoring data will be used, along with other available information, to assess the relative contribution of watershed dischargers and determine their responsibility and allocations for secondary remediation activities.</p>																																																																																																																																
	<p>Final, mass-based TMDLs and Allocations for metals and PAHs (Kg/year)</p>																																																																																																																																
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TMDL</i></u>	84	115.4	370.5	9.94	<i>WLAs</i>					<i>MS4- LA County et al.</i>	22.4	54.2	271.8	0.134	<i>MS4- City of Long Beach</i>	0.6	1.52	7.6	0.0038	<i>MS4- CalTrans</i>	0.384	0.93	4.7	0.0023	<i>LAs</i>					<i>Air deposition</i>	4.6	0.031	33.2	0.051	<i>Bed sediments</i>	56.0	58.7	53.3	9.7	<i>Current Load</i>	327.6	457.9	1799.0	28.1	<i>Overall reduction</i>	74%	75%	79%	65%	<u><i>Consolidated Slip - TMDL</i></u>	12.1	16.6	53.3	1.43	<i>WLAs</i>					<i>MS4- LA County et al.</i>	2.73	3.63	28.7	0.0058	<i>MS4 CalTrans</i>	0.043	0.058	0.5	0.00009	<i>LAs</i>					<i>Air deposition</i>	1.2	0.008	8.6	0.013	<i>Bed sediments</i>	8.13	12.9	15.57	1.41	<i>Current Load</i>	92.1	127.3	398.9	11.5	<i>Overall reduction</i>	87%	87%	87%	88%	<u><i>Inner Harbor - TMDL</i></u>	76.7	105.3	338.3	9.1	<i>WLAs</i>					<i>MS4- LA County et al.</i>	1.7	34.0	115.9	0.088	<i>MS4 City of Long Beach</i>	0.463	9.31	31.71	0.024	<i>MS4 CalTrans</i>	0.032	0.641	2.18	0.0017
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<i>Overall reduction</i>	87%	87%	87%	88%																																																																																																																													
<u><i>Inner Harbor - TMDL</i></u>	76.7	105.3	338.3	9.1																																																																																																																													
<i>WLAs</i>																																																																																																																																	
<i>MS4- LA County et al.</i>	1.7	34.0	115.9	0.088																																																																																																																													
<i>MS4 City of Long Beach</i>	0.463	9.31	31.71	0.024																																																																																																																													
<i>MS4 CalTrans</i>	0.032	0.641	2.18	0.0017																																																																																																																													

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TMDL Element	Regulatory Provisions			
<i>Las</i>				
<i>Air deposition</i>	97.6	0.67	710	1.08
<i>Bed sediments</i>	(23.1)	60.7	(521.3)	7.88
<i>Current Load</i>	178.4	105.9	542.1	3.524
<i>Overall reduction</i>	57%	1%	38%	0%
<u>Outer Harbor - TMDL</u>	81.6	112.1	360.1	9.7
<i>WLAs</i>				
<i>MS4- LA County et al.</i>	0.91	26.1	81.5	0.105
<i>MS4 City of Long Beach</i>	0.63	18.1	56.4	0.073
<i>MS4 CalTrans</i>	0.0018	0.052	0.162	0.00021
<i>TIWRP = POTW (CTR & MGD^{***})</i>	80.4	183.6	1845	1.056
<i>Las</i>				
<i>Air deposition</i>	17.9	0.9	108.1	1.5
<i>Bed sediments</i>	(18.2)	(116)	(1731)	6.964
<i>Current Load</i>	119.0	66.7	403.4	0.626
<i>Overall reduction</i>	31%	0%	11%	0%
<u>Fish Harbor - TMDL</u>	1.04	1.43	4.59	0.123
<i>WLAs</i>				
<i>MS4- LA County et al. (POLA)</i>	0.00017	0.54	1.62	0.007
<i>MS4 CalTrans</i>	0.0000005	0.00175	0.0053	0.000021
<i>Las</i>				
<i>Air deposition</i>	0.4	0.02	2.4	0.033
<i>Bed sediments</i>	0.636	0.87	0.5	0.084
<i>Current Load</i>	1.43	0.60	4.2	0.003
<i>Overall reduction</i>	27%	0%	0%	0%
<u>Cabrillo Marina -TMDL</u>	1.32	1.81	5.8	0.156
<i>WLAs</i>				
<i>MS4- LA County et al. (POLA)</i>	0.0196	0.289	0.74	0.00016
<i>MS4 CalTrans</i>	0.00019	0.0028	0.007	0.0000016
<i>Las</i>				
<i>Air deposition</i>	0.34	0.017	2.05	0.028
<i>Bed sediments</i>	1.0	1.506	3.03	0.1285
<i>Current Load</i>	9.2	2.3	9.14	0.236
<i>Overall reduction</i>	86%	21%	36%	34%
<u>San Pedro Bay - TMDL</u>	648	890	2858	76.6
<i>WLAs</i>				
<i>MS4- LA County et al.</i>	20.3	54.7	213.1	1.76

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TMDL Element	Regulatory Provisions													
	<i>MS4 City of Long Beach</i>	137.9	372.2	1449.7	12.0									
	<i>MS4 CalTrans</i>	0.88	2.39	9.29	0.077									
	<i>MS4 Orange County**</i>	9.8	26.4	102.9	0.85									
	LAs													
	<i>Air deposition</i>	36	1.8	219	2.9									
	<i>Bed sediments</i>	442.9	432	865	59.0									
	<i>Current Load</i>	1251	1737	8167	3.63									
	<i>Overall reduction</i>	48%	49%	65%	0%									
	<u>LA River Estuary - TMDL</u>	735	1009	3242	86.9									
	WLAs													
	<i>LAR Estuary dischargers*</i>	[Cu SQV]	[Pb SQV]	[Zn SQV]	[PAH SQV]									
	<i>MS4- LA County et al.</i>	35.3	65.7	242.0	2.31									
	<i>MS4 City of Long Beach</i>	375.8	698.9	2572.7	24.56									
	<i>MS4 CalTrans</i>	5.1	9.5	34.8	0.333									
	LAs													
	<i>Air deposition</i>	6.7	0.046	48.9	0.075									
	<i>Bed sediments</i>	311.8	235.0	343.0	59.6									
	<i>Current Load</i>	1612	2641	20096	8.72									
	<i>Overall reduction</i>	54%	62%	84%	0%									
<p>Note: Cu and Zn air deposition load allocations are set equal to existing load with no reductions anticipated. Negative (values) for bed sediments indicate that bed sediment loads are expected to be reduced; the amount of reduction may be revised with additional monitoring results.</p> <p>*SQVs are currently set at ERLs **Orange County MS4 Permit is issued by the Santa Ana Regional Board. The allocations included, here, for the Seal Beach nearshore area, are for TMDL calculation purposes only, and an allocation is not assigned. ***For TIWRP, the discharge volume at the time of permit modification or reissuance shall be used to calculate the mass-based effluent limitations consistent with the assumptions and requirements of these WLAs. <u>Studies may be conducted to determine the portion of the discharged pollutants that is deposited on bed sediment. The results of any such Executive Officer approved studies shall be evaluated at the TMDL reconsideration to modify these WLAs as appropriate.</u></p> <p>Consolidated Slip and Fish Harbor are impaired for mercury in sediments and the average sediment concentration (1.1 mg/kg dry) is significantly higher than the target concentration (0.15 mg/kg dry). Consolidated Slip and Dominguez Channel Estuary are impaired for cadmium in sediments, and Consolidated Slip is also impaired for chromium in sediments.</p> <p>Final Concentration-Based Sediment WLAs for metals in Dominguez Channel Estuary, Consolidated Slip and Fish Harbor</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="3">Concentration-based Sediment WLAs (mg/kg dry sediment)</th> </tr> <tr> <th>Cadmium</th> <th>Chromium</th> <th>Mercury</th> </tr> </thead> <tbody> <tr> <td align="center">1.2</td> <td align="center">81</td> <td align="center">0.15</td> </tr> </tbody> </table> <p>Mercury applies to both Consolidated Slip and Fish Harbor; Cd applies to Dominguez Channel Estuary and Consolidated Slip, and Cr applies to Consolidated Slip only.</p> <p>Compliance with these sediment TMDLs for Cu, Pb, Zn, Cd, Cr, Hg and total PAHs may be</p>						Concentration-based Sediment WLAs (mg/kg dry sediment)			Cadmium	Chromium	Mercury	1.2	81	0.15
Concentration-based Sediment WLAs (mg/kg dry sediment)														
Cadmium	Chromium	Mercury												
1.2	81	0.15												

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TMDL Element	Regulatory Provisions
	<p>demonstrated via any one of three different means:</p> <ol style="list-style-type: none"> a. Final sediment allocations, as presented above, are met. b. The qualitative sediment condition of Unimpacted or Likely Unimpacted via the interpretation and integration of multiple lines of evidence as defined in the SQO Part 1, is met, with the exception of Cr, which is not included in the SQO Part 1. c. Sediment numeric targets are met in bed sediments <u>over a three-year averaging period.</u> <p>Compliance with mass-based WLAs shall be measured at designated discharge points. Compliance with concentration-based WLAs for existing sediment shall be determined by pollutant concentrations in ambient sediment in each waterbody. The average ambient bulk sediment level within a waterbody at or below the sediment quality target is considered compliance with these TMDLs.</p> <p>C. <u>Mass-based Allocations for Bioaccumulative Compounds</u></p> <p>Fish tissue levels of certain bioaccumulative compounds are above desired numeric targets. These TMDLs are designed to reduce contaminated sediment levels, which will result in lower corresponding pollutant levels in fish tissue. These sediment allocations have been derived to support lowering fish tissue levels using biota-sediment accumulation factors (BSAFs) or ERLs, whichever is more protective. For chlordane and dieldrin, the ERL values are lower and more protective than BSAF values. The DDT sediment values are comparable (ERL = 1.58, BSAF = 1.9); the more stringent one was used for calculation. The PCBs sediment value associated with fish tissue is more stringent than the ERL sediment value for PCBs.</p> <p>Mass-based WLAs are assigned for TIWRTP and other point sources that have sufficient discharge flow data. Municipal stormwater sources, including the Los Angeles, Long Beach, Caltrans and other MS4 co-permittees, are assigned a single, mass-based allocation by permit, depending on the waterbody. Discharges from the Port of Los Angeles (POLA) and Port of Long Beach (POLB) are grouped with the MS4 dischargers. Mass-based WLAs are applied as annual limits.</p> <p>Individual mass-based WLAs for an individual MS4 Permittee will be calculated based on its share, on an area basis, of the mass based WLA or other approved approach available at the time final mass-based WLAs are in effect and incorporated into the permit. Mass-based LAs are identified for bed sediments and direct air deposition. Direct air deposition allocations for total DDT are based on estimates of existing loads using atmospheric monitoring results collected close to Los Angeles/Long Beach Harbor at SCAQMD Wilmington Station in 2006. Pollutant-specific air deposition values (DDT = 29 ng/m²/day) were multiplied by the surface area of each waterbody to produce direct deposition allocations. Direct deposition allocations for PCBs are not included since air deposition has been measured to be less than water-to-air fluxes.</p> <p>DDT load allocations for bed sediments are negative values, with the exception of those for the Los Angeles River Estuary, indicating that DDT loads must be reduced. (Each negative DDT bed sediment allocation may alternatively be interpreted as zero, or interpreted as minimal bioaccumulation into the food web.) The amount of DDT load reduction may be revised based on future monitoring results. If future air deposition studies show lower existing air deposition DDT loads, or if future DDT sediment characterization studies show lower bed sediment DDT loads, then DDT load allocations may be adjusted.</p> <p>The <u>Greater Harbor Waters (excluding LA River Estuary and Consolidated Slip) bed sediment</u></p>

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TMDL Element	Regulatory Provisions																																																																																					
	<p>LA is assigned to the City of Los Angeles (including the Port of Los Angeles), the City of Long Beach (including the Port of Long Beach) and the State Lands Commission. After remediation activities that address existing sediment contamination are complete and when LAs are attained, if bed sediments are recontaminated as a result of continued polluted discharge from the surrounding watersheds, the WLA compliance monitoring data will be used, along with other available information, to assess the relative contribution of watershed dischargers and determine their responsibility and allocations for secondary remediation activities.</p> <p>DDT and PCBs (total) TMDLs apply to all estuarine and marine waters in Greater Harbor area, including Inner Cabrillo Beach, Los Angeles River Estuary and Eastern San Pedro Bay.</p> <p>Final mass-based TMDLs and Allocations for total DDT and total PCBs (g/yr)</p> <table border="1"> <thead> <tr> <th><i>Waterbody/source</i></th> <th><i>DDT total</i></th> <th><i>PCBs total</i></th> </tr> </thead> <tbody> <tr> <td><u>DomCh Estuary – TMDL</u></td> <td align="center">3.90</td> <td align="center">7.90</td> </tr> <tr> <td align="center" colspan="3">WLAs</td> </tr> <tr> <td><i>MS4- LA County et al</i></td> <td align="center">0.250</td> <td align="center">0.207</td> </tr> <tr> <td><i>MS4 City of Long Beach</i></td> <td align="center">0.007</td> <td align="center">0.006</td> </tr> <tr> <td><i>MS4 CalTrans</i></td> <td align="center">0.004</td> <td align="center">0.004</td> </tr> <tr> <td align="center" colspan="3">LAs</td> </tr> <tr> <td><i>Air deposition</i></td> <td align="center">6.01</td> <td align="center">n/a</td> </tr> <tr> <td><i>Bed sediments</i></td> <td align="center">(2.4)</td> <td align="center">7.7</td> </tr> <tr> <td><i>Current Load</i></td> <td align="center">54.0</td> <td align="center">57.5</td> </tr> <tr> <td><i>Overall reduction</i></td> <td align="center">93%</td> <td align="center">86%</td> </tr> <tr> <td><u>Consolidated Slip - TMDL</u></td> <td align="center">0.56</td> <td align="center">1.14</td> </tr> <tr> <td align="center" colspan="3">WLAs</td> </tr> <tr> <td><i>MS4- LA County et al</i></td> <td align="center">0.009</td> <td align="center">0.004</td> </tr> <tr> <td><i>MS4 CalTrans</i></td> <td align="center">0.00014</td> <td align="center">0.00006</td> </tr> <tr> <td align="center" colspan="3">LAs</td> </tr> <tr> <td><i>Air deposition</i></td> <td align="center">1.56</td> <td align="center">n/a</td> </tr> <tr> <td><i>Bed sediments</i></td> <td align="center">(1.00)</td> <td align="center">1.13</td> </tr> <tr> <td><i>Current Load</i></td> <td align="center">49.0</td> <td align="center">83.9</td> </tr> <tr> <td><i>Overall reduction</i></td> <td align="center">99%</td> <td align="center">99%</td> </tr> <tr> <td><u>Inner Harbor - TMDL</u></td> <td align="center">3.56</td> <td align="center">7.22</td> </tr> <tr> <td align="center" colspan="3">WLAs</td> </tr> <tr> <td><i>MS4- LA County et al</i></td> <td align="center">0.051</td> <td align="center">0.059</td> </tr> <tr> <td><i>MS4 City of Long Beach</i></td> <td align="center">0.014</td> <td align="center">0.016</td> </tr> <tr> <td><i>MS4 CalTrans</i></td> <td align="center">0.0010</td> <td align="center">0.0011</td> </tr> <tr> <td align="center" colspan="3">LAs</td> </tr> <tr> <td><i>Air deposition</i></td> <td align="center">129</td> <td align="center">n/a</td> </tr> <tr> <td><i>Bed sediments</i></td> <td align="center">(125)</td> <td align="center">7.14</td> </tr> </tbody> </table>		<i>Waterbody/source</i>	<i>DDT total</i>	<i>PCBs total</i>	<u>DomCh Estuary – TMDL</u>	3.90	7.90	WLAs			<i>MS4- LA County et al</i>	0.250	0.207	<i>MS4 City of Long Beach</i>	0.007	0.006	<i>MS4 CalTrans</i>	0.004	0.004	LAs			<i>Air deposition</i>	6.01	n/a	<i>Bed sediments</i>	(2.4)	7.7	<i>Current Load</i>	54.0	57.5	<i>Overall reduction</i>	93%	86%	<u>Consolidated Slip - TMDL</u>	0.56	1.14	WLAs			<i>MS4- LA County et al</i>	0.009	0.004	<i>MS4 CalTrans</i>	0.00014	0.00006	LAs			<i>Air deposition</i>	1.56	n/a	<i>Bed sediments</i>	(1.00)	1.13	<i>Current Load</i>	49.0	83.9	<i>Overall reduction</i>	99%	99%	<u>Inner Harbor - TMDL</u>	3.56	7.22	WLAs			<i>MS4- LA County et al</i>	0.051	0.059	<i>MS4 City of Long Beach</i>	0.014	0.016	<i>MS4 CalTrans</i>	0.0010	0.0011	LAs			<i>Air deposition</i>	129	n/a	<i>Bed sediments</i>	(125)	7.14
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TMDL Element	Regulatory Provisions		
	<i>Current Load</i>	21.67	29.51
	<i>Overall reduction</i>	84%	76%
	<u>Outer Harbor - TMDL</u>	3.79	7.68
	<i>WLAs</i>		
	<i>MS4- LA County et al</i>	0.005	0.020
	<i>MS4 City of Long Beach</i>	0.004	0.014
	<i>MS4 CalTrans</i>	0.000010	0.00004
	<i>TIWRP = POTW (CTR & MGD^{***})</i>	12.7	0.37
	<i>LAs</i>		
	<i>Air deposition</i>	173	n/a
	<i>Bed sediments</i>	(182)	7.28
	<i>Current Load</i>	30.8	34.7
	<i>Overall reduction</i>	88%	78%
	<u>Fish Harbor - TMDL</u>	0.048	0.098
	<i>WLAs</i>		
	<i>MS4- LA County et al</i>	0.0003	0.0019
	<i>MS4 CalTrans</i>	0.0000010	0.000006
	<i>LAs</i>		
	<i>Air deposition</i>	3.9	n/a
	<i>Bed sediments</i>	(3.85)	0.10
	<i>Current Load</i>	0.168	0.075
	<i>Overall reduction</i>	71%	0%
	<u>Cabrillo Marina -TMDL</u>	0.061	0.124
	<i>WLAs</i>		
	<i>MS4- LA County et al</i>	0.000028	0.000025
	<i>MS4 CalTrans</i>	0.00000028	0.00000024
	<i>LAs</i>		
	<i>Air deposition</i>	3.3	n/a
	<i>Bed sediments</i>	(3.22)	0.12
	<i>Current Load</i>	1.66	1.06
	<i>Overall reduction</i>	96%	88%
	<u>Inner Cabrillo Beach - TMDL</u>	0.04	0.09
	<i>WLAs</i>		
	<i>MS4- LA County et al</i>	0.0001	0.0003
	<i>LAs</i>		
	<i>Air deposition</i>	3.5	n/a
	<i>Bed sediments</i>	(3.5)	0.09

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TMDL Element	Regulatory Provisions	
<i>Current Load</i>	0.98	0.31
<i>Overall reduction</i>	96%	72%
<u>San Pedro Bay - TMDL</u>	30.1	61.0
WLAs		
<i>MS4- LA County et al</i>	0.049	0.44
<i>MS4 City of Long Beach</i>	0.333	3.01
<i>MS4 CalTrans</i>	0.002	0.019
<i>MS4 Orange County**</i>	0.024	0.213
LAs		
<i>Air deposition</i>	350	n/a
<i>Bed sediments</i>	(320)	57.3
<i>Current Load</i>	205.2	110.7
<i>Overall reduction</i>	85%	45%
<u>LA River Estuary - TMDL</u>	34.1	69.2
WLAs		
<i>MS4- LA County et al</i>	0.100	0.324
<i>MS4 City of Long Beach</i>	1.067	3.441
<i>MS4 CalTrans</i>	0.014	0.047
<i>LAR Estuary dischargers</i>	[DDT SQV]	[PCBs SQV]
LAs		
<i>Air deposition</i>	8.9	n/a
<i>Bed sediments</i>	24.09	65.3
<i>Current Load</i>	231.6	402.2
<i>Overall reduction</i>	85%	83%
<p>Note: DDT air deposition load allocation is set equal to existing load with no reductions anticipated. Negative values for bed sediments indicate that DDT bed sediment loads are expected to be reduced; the amount of reduction may be revised with additional monitoring results.</p> <p>*SQVs are currently set at the more protective of ERLs or fish tissue associated sediment targets.</p> <p>**Orange County MS4 Permit is issued by the Santa Ana Regional Board. The allocations included, here, for the Seal Beach nearshore area, are for TMDL calculation purposes only, and an allocation is not assigned.</p> <p>***For TIWRP, the discharge volume at the time of permit modification or reissuance shall be used to calculate the mass-based effluent limitations consistent with the assumptions and requirements of these WLAs. <u>Studies may be conducted to determine the portion of the discharged pollutants that is deposited on bed sediment. The results of any such Executive Officer approved studies shall be evaluated at the TMDL reconsideration to modify these WLAs as appropriate.</u></p> <p>In addition, bed sediment concentration-based allocations are assigned for chlordane in Dominguez Channel Estuary, Consolidated Slip, Fish Harbor, Los Angeles River Estuary and Eastern San Pedro Bay. Bed sediment concentration-based allocations are also assigned for dieldrin in Dominguez Channel Estuary and Consolidated Slip. Bed sediment concentration allocations are also assigned for toxaphene in Consolidated Slip. The TMDLs and allocations are set at target sediment concentrations: chlordane = 0.5, dieldrin = 0.02, toxaphene = 0.10 µg/kg dry sediment.</p> <p>Compliance with these bioaccumulative TMDLs may be demonstrated via either any of two</p>		

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TMDL Element	Regulatory Provisions
	<p><u>four different means:</u></p> <ul style="list-style-type: none"> a. Fish tissue targets are met in species resident to the TMDL waterbodies³. b. Final sediment allocations, as presented above, are met. c. <u>Sediment numeric targets to protect fish tissue are met in bed sediments over a three-year averaging period.</u> d. <u>Demonstrate that the sediment quality condition protective of fish tissue is achieved per the Statewide Enclosed Bays and Estuaries Plan, as amended to address contaminants in resident finfish and wildlife.</u> <p>4. <u>Diazinon</u></p> <p>Los Angeles County monitoring data in Dominguez Channel freshwaters show diazinon exceedences from 2002-2005, but none from 2006-2010. This timing is concurrent with EPA's ban on urban use of diazinon, effective Dec. 31, 2005. Based these results, no diazinon TMDLs are developed at this time.</p>
Margin of Safety	<p>The Dominguez Channel freshwater allocations included an explicit margin of safety (MOS) equal to 10% of the loading capacity or existing load to account for any additional uncertainty in the wet-weather TMDLs. The 10% MOS was subtracted from the loading capacity or existing load, whichever was smaller. Applying an explicit margin of safety is reasonable because a number of uncertain estimates are offset by the explicit margin of safety. While the observed dissolved-to-total metals ratios are not similar to CTR default conversion values, there appears to be very poor correlation between the fraction of particulate metals and TSS. Also, there is added uncertainty regarding stream flow rates during wet weather conditions, when the highest metal loads occur, thus an explicit margin of safety is justified.</p> <p>An implicit margin of safety exists in the final allocations to Dominguez Channel Estuary and Greater Harbor waters. The implicit margin of safety is based on the selection of multiple numeric targets, including targets for water, fish tissue and sediment among other conservative modeling assumptions. An additional explicit margin of safety must be considered and may be applied if any chemical-specific sediment quality target is revised or updated contingent on future sediment quality studies. That is, there may be uncertainty associated with revised sediment quality values, which may warrant including an additional explicit margin of safety.</p>
Seasonal Variations and Critical Conditions	<p>Wet weather events may produce extensive sediment redistribution and transport sediments to the harbors and the CTR-based water column targets are protective of this condition. This would be considered the critical condition for loading.</p> <p>No correlation with flow or seasonality (wet vs. dry season) was found to exist in sediment or tissue data. Given that allocations for this TMDL are expressed in terms pesticides, PCBs, PAHs, and metals concentrations in sediment, a critical condition is not identified based upon flow or seasonality.</p> <p>Because the adverse effects of pesticides, PCBs, PAHs, and metals are related to sediment accumulation and bioaccumulation in the food chain over long periods of time, short term variations in concentrations are less likely to cause significant impacts upon beneficial uses.</p>
Monitoring Plan	<p>Monitoring by assigned responsible parties is required in three waterbody areas:</p> <ol style="list-style-type: none"> 1. Dominguez Channel, Torrance Lateral, and Dominguez Channel Estuary 2. Greater Los Angeles and Long Beach Harbor Waters (including Consolidated Slip) 3. Los Angeles River and San Gabriel River

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

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TMDL Element	Regulatory Provisions
	<p>Monitoring shall be conducted under technically appropriate Monitoring and Reporting Plans (MRPs) and Quality Assurance Project Plans (QAPPs). The MRPs shall include a requirement that the responsible parties report compliance and non-compliance with waste load and load allocations as part of annual reports submitted to the Regional Board. The QAPPs shall include protocols for sample collection, standard analytical procedures, and laboratory certification. All samples shall be collected in accordance with SWAMP protocols. Monitoring Plans shall be submitted nine (9) months after the effective date of the TMDL for public review and, subsequently, Executive Officer approval.</p> <p>Monitoring shall begin six months after the monitoring plan is approved by the Executive Officer. Responsible parties assigned both WLAs and LAs may submit one document that addresses the monitoring requirements (as described below) and implementation activities for both WLAs and LAs. Responsible parties shall submit annual monitoring reports.</p> <p>The Regional Board Executive Officer may reduce, increase, or modify monitoring and reporting requirements, as necessary, based on the results of the TMDL monitoring program. Currently, several of the constituents of concern have numeric targets that are lower than the readily available detection limits. As analytical methods and detection limits continue to improve (i.e., development of lower detection limits) and become more environmentally relevant, responsible parties shall incorporate new method detection limits in the MRP and QAPP.</p> <p>1. Dominguez Channel, Torrance Lateral, and Dominguez Channel Estuary Compliance Monitoring Program</p> <p>For Dominguez Channel, Dominguez Channel Estuary, and Torrance Lateral, water and total suspended solids samples shall be collected at the outlet of the storm drains discharging to the channel and the estuary. Fish tissue samples shall be collected in receiving waters of the Dominguez Channel Estuary. Sediment samples shall also be collected in the estuary.</p> <ul style="list-style-type: none"> • Water Column Monitoring <p>Water samples and total suspended solids samples shall be collected during two wet weather events and one dry weather event each year. The first large storm event of the season shall be included as one of the wet weather monitoring events. Water samples and total suspended solid samples shall be analyzed for a suite of compounds including, at a minimum, metals, including lead, zinc, and copper, DDT, PCBs, Benzo[a] anthracene, Benzo[a]pyrene, Chrysene, Phenanthrene, and Pyrene. Sampling shall be designed to collected sufficient volumes of suspended solids to allow for analysis of the pollutants in the bulk sediment.</p> <p>In addition to TMDL constituents, general water chemistry (temperature, dissolved oxygen, pH, and electrical conductivity) and a flow measurement will be required at each sampling event. General chemistry measurements may be taken in the laboratory immediately following sample collection, if auto samplers are used for sample collection or if weather conditions are unsuitable for field measurements. In addition, toxicity shall be tested for in the freshwater portion of Dominguez Channel.</p>

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TMDL Element	Regulatory Provisions
	<ul style="list-style-type: none"> • Sediment Monitoring A sediment monitoring program shall be developed consistent with the selected method for compliance and all samples shall be collected in accordance with SWAMP protocols. <ul style="list-style-type: none"> a) If compliance will be determined based on achieving sediment quality targets, sediment chemistry samples shall be collected every two years for analysis of general sediment quality constituents and the full chemical suite as specified in SQO Part 1. In addition, benthic community effects shall be assessed in the Dominguez Channel Estuary. b) If compliance will be determined based on the SQO compliance method, sediment chemistry samples shall also be collected every five years (in addition to, and in between, the sediment triad sampling events as described below), beginning after the first sediment triad event, to evaluate trends in general sediment quality constituents and listed constituents relative to sediment quality targets. Chemistry data without accompanying sediment triad data shall be used to assess sediment chemistry trends and shall not be used to determine compliance. <p>Sediment quality objective evaluation as detailed in the SQO Part 1 (sediment triad sampling) shall be performed every five years in coordination with the Biological Baseline and Bight regional monitoring programs, if possible. Sampling and analysis for the full chemical suite, two toxicity tests and four benthic indices as specified in SQO Part 1 shall be conducted and evaluated. If moderate toxicity as defined in the SQO Part 1 is observed, results shall be highlighted in annual reports and further analysis and evaluation to determine causes and remedies shall be required in accordance with the EO approved monitoring plan. Locations for sediment triad assessment <u>and the methodology for combining results from sampling locations to determine sediment conditions</u> shall be specified in the MRP to be approved by the Executive Officer. The sampling design shall be in compliance with the SQO Part 1 Sediment Monitoring section (VII.E.).</p> <ul style="list-style-type: none"> • Fish Tissue Monitoring Fish tissue samples shall be collected every two years from the Dominguez Channel Estuary and analyzed for chlordane, dieldrin, toxaphene, DDT, and PCBs. The target species in the Dominguez Channel Estuary shall be selected based on residency, local abundance and fish size at the time of field collection. Tissues analyzed shall be based on the most common preparation for the selected fish species. <p>The Dominguez Channel responsible parties are each individually responsible for conducting water, sediment, and fish tissue monitoring. However, they are encouraged to collaborate or coordinate their efforts to avoid duplication and reduce associated costs. Dischargers interested in coordinated monitoring shall submit a coordinated MRP that identifies monitoring to be implemented by the responsible parties. Under the coordinated monitoring option, the compliance point for the stormwater WLAs shall be storm drain outfalls or a point(s) in the receiving water that suitably represents the combined discharge of cooperating parties.</p> <p>The details of the monitoring program including sampling locations and all methods shall be specified in the MRP to be approved by the Executive Officer.</p> <p>2. Greater Los Angeles and Long Beach Harbor Waters Compliance Monitoring Program</p> <p>At a minimum, compliance monitoring shall be conducted at the locations and for the</p>

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TMDL Element	Regulatory Provisions																																																
	<p>constituents listed in the table below for water column, total suspended solids, and sediment. The exact locations of monitoring sites shall be specified in the MRP to be approved by the Executive Officer. During aspects of the remedial action(s) for the Montrose Superfund Site that may mobilize sediments and associated pollutants from the on- or near-property soils or "Neighborhood Areas", it is recommended that US EPA, as the regulatory oversight agency, require that Potentially Responsible Parties (PRP) implement monitoring to evaluate pollutant loads and concentrations leaving the site and surrounding area, as well as pollutant concentrations in the bed sediments of Dominguez Channel Estuary and Consolidated Slip and coordinate such monitoring with other TMDL compliance monitoring.</p> <ul style="list-style-type: none"> Water Column Monitoring Water samples and total suspended solids samples shall be collected during two wet weather events and one dry weather event each year. TSS shall be collected at several depths during wet weather events. The first large storm event of the season shall be included as one of the wet weather monitoring events. General water chemistry (temperature, dissolved oxygen, pH, and salinity) and a flow measurement shall be required at each sampling event. Sediment Monitoring Sediment chemistry samples shall be collected every five years (in addition to, and in between, the sediment triad sampling events as described below), beginning after the first sediment triad event, to evaluate trends in general sediment quality constituents and listed constituents relative to sediment quality targets. Chemistry data without accompanying sediment triad data shall be used to assess sediment chemistry trends and shall not be used to determine compliance. <p align="center">Sediment chemistry monitoring requirements</p> <table border="1"> <thead> <tr> <th rowspan="2">Water Body Name</th> <th rowspan="2">Station Id</th> <th rowspan="2">Station Location</th> <th colspan="2">Sample Media</th> </tr> <tr> <th>WATER/TSS</th> <th>SEDIMENT</th> </tr> </thead> <tbody> <tr> <td>Consolidated Slip</td> <td>01</td> <td>Center of Consolidated Slip</td> <td>Metals, PCBs, DDT</td> <td>Metals, Chlordane, DDT PCBs, PAHs</td> </tr> <tr> <td rowspan="4">Los Angeles Inner Harbor</td> <td>02</td> <td>East Turning Basin</td> <td>Metals, PCBs, DDT</td> <td rowspan="4">Metals, Toxicity, Benthic Community Effect</td> </tr> <tr> <td>03</td> <td>Center of the POLA West Basin</td> <td>Metals, PCBs, DDT</td> </tr> <tr> <td>04</td> <td>Main Turning Basin north of Vincent Thomas Bridge</td> <td>Metals, PCBs, DDT</td> </tr> <tr> <td>05</td> <td>Between Pier 300 and Pier 400</td> <td>Metals, PCBs, DDT</td> </tr> <tr> <td rowspan="2">Fish Harbor</td> <td rowspan="2">07</td> <td>Center of inner portion of Fish Harbor</td> <td>Metals, PCBs, DDT</td> <td>Metals, Toxicity, PCBs, DDT, Chlordane, PAHs</td> </tr> <tr> <td>Los Angeles Outer Harbor between Pier 400 and middle breakwater</td> <td>Metals, PCBs, DDT</td> <td>Toxicity</td> </tr> <tr> <td>Los Angeles Outer Harbor</td> <td>08</td> <td>Los Angeles Outer Harbor between Pier 400 and middle breakwater</td> <td>Metals, PCBs, DDT</td> <td>Toxicity</td> </tr> <tr> <td></td> <td>09</td> <td>Los Angeles Outer</td> <td>Metals, PCBs,</td> <td>Toxicity</td> </tr> </tbody> </table>					Water Body Name	Station Id	Station Location	Sample Media		WATER/TSS	SEDIMENT	Consolidated Slip	01	Center of Consolidated Slip	Metals, PCBs, DDT	Metals, Chlordane, DDT PCBs, PAHs	Los Angeles Inner Harbor	02	East Turning Basin	Metals, PCBs, DDT	Metals, Toxicity, Benthic Community Effect	03	Center of the POLA West Basin	Metals, PCBs, DDT	04	Main Turning Basin north of Vincent Thomas Bridge	Metals, PCBs, DDT	05	Between Pier 300 and Pier 400	Metals, PCBs, DDT	Fish Harbor	07	Center of inner portion of Fish Harbor	Metals, PCBs, DDT	Metals, Toxicity, PCBs, DDT, Chlordane, PAHs	Los Angeles Outer Harbor between Pier 400 and middle breakwater	Metals, PCBs, DDT	Toxicity	Los Angeles Outer Harbor	08	Los Angeles Outer Harbor between Pier 400 and middle breakwater	Metals, PCBs, DDT	Toxicity		09	Los Angeles Outer	Metals, PCBs,	Toxicity
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		Harbor between the southern end of the reservation point and the San Pedro breakwater	DDT	
Cabrillo Marine	10	Center of west Channel	Metals, PCBs, DDT	
Inner Cabrillo Beach	11	Center of Inner Cabrillo Beach Cerritos Channel	Metals, PCBs, DDT	Metals
Long Beach Inner Harbor	12	between the Heim Bridge and the Turning Basin	Metals, PCBs, DDT	Metals, Toxicity, Benthic Community Effect
	13	Back Channel between Turning Basin and West Basin	Metals, PCBs, DDT	Metals, Toxicity, Benthic Community Effect
	14	Center of West Basin	Metals, PCBs, DDT	Metals, Toxicity, Benthic Community Effect
	15	Center of Southeast Basin	Metals, PCBs, DDT	Metals, Toxicity, Benthic Community Effect
Long Beach Outer Harbor	16	Center of Long Beach Outer Harbor	Metals, PCBs, DDT	Toxicity
	17	Between the southern end of Pier J and the Queens Gate	Metals, PCBs, DDT	Toxicity
San Pedro Bay	18	Northwest of San Pedro Bay near Los Angeles River Estuary	Metals, PCBs, DDT	Metals, Chlordane, PAHs, Toxicity
	19	East of San Pedro Bay	Metals, PCBs, DDT	Metals, Chlordane, PAHs, Toxicity
	20	South of San Pedro Bay inside breakwater	Metals, PCBs, DDT	Metals, Chlordane, PAHs, Toxicity
Los Angeles River Estuary	21	Los Angeles River Estuary Queensway Bay	Metals, PCBs, DDT	Metals, Chlordane, DDT, PCBs
	22	Los Angeles River Estuary	Metals, PCBs, DDT	Metals, Chlordane, DDT, PCBs
<p>Sediment quality objective evaluation as detailed in the SQO Part 1 (sediment triad sampling) shall be performed every five years in coordination with the Biological Baseline and Bight regional monitoring programs, if possible. Sampling and analysis for the full chemical suite, two toxicity tests and four benthic indices as specified in SQO Part 1 shall be conducted and evaluated. If moderate toxicity as defined in the SQO Part 1 is observed, results shall be highlighted in annual reports and further analysis and evaluation to determine causes and remedies shall be required in accordance with the EO approved monitoring plan. Locations for sediment triad assessment <u>and the methodology for combining results from sampling locations to determine sediment conditions</u> shall be specified in the MRP to be approved by the Executive Officer. The sampling design shall</p>				

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	<p>be in compliance with the SQO Part 1 Sediment Monitoring section (VII.E.).</p> <ul style="list-style-type: none"> • Fish Tissue Monitoring Fish tissue samples shall be collected every two years in San Pedro Bay, Los Angeles Harbor, and Long Beach Harbor, and analyzed for chlordane, dieldrin, toxaphene, DDT, and PCBs. At a minimum, three species shall be collected, including white croaker, a sport fish, and a prey fish. <p>The Greater Los Angeles and Long Beach Harbors³ responsible parties are each individually responsible for conducting water, sediment, and fish tissue monitoring. However, they are encouraged to collaborate or coordinate their efforts to avoid duplication and reduce associated costs. Dischargers interested in coordinated compliance monitoring shall submit a coordinated MRP that identifies monitoring to be conducted by the responsible parties. Under the coordinated compliance monitoring option, the compliance point for the stormwater WLAs shall be storm drain outfalls or a point(s) in the receiving water that suitably represents the combined discharge of cooperating parties.</p> <p>The Consolidated Slip sub-group responsible parties are responsible for conducting water, sediment, and fish tissue monitoring in Consolidated Slip.</p> <p>The details of the monitoring program including sampling locations and all methods shall be specified in the MRP to be approved by the Executive Officer.</p> <p>3. Los Angeles River and San Gabriel River Compliance Monitoring Program</p> <p>Los Angeles River Watershed and San Gabriel River Watershed responsible parties identified in effective metals TMDLs for Los Angeles River and San Gabriel River are responsible for conducting water and sediment monitoring above the Los Angeles River Estuary and at the mouth of the San Gabriel River, respectively, to determine the Rivers' contribution to the impairments in the Greater Harbor waters.</p> <ul style="list-style-type: none"> • Water Column Monitoring Water samples and total suspended solids samples shall be collected at, at least one site during two wet weather events and one dry weather event each year. The first large storm event of the season shall be included as one of the wet weather monitoring events. Water samples and total suspended solid samples shall be analyzed for metals, DDT, PCBs, and PAHs. Sampling shall be designed to collect sufficient volumes of suspended solids to allow for analysis of the listed pollutants in the bulk sediment. <p>General water chemistry (temperature, dissolved oxygen, pH, and electrical conductivity) and a flow measurement shall be required at each sampling event. General chemistry measurements may be taken in the laboratory immediately following sample collection if auto samplers are used for sample collection or if weather conditions are unsuitable for field measurements.</p> <ul style="list-style-type: none"> • Sediment Monitoring For sediment chemistry, sediment samples shall be collected at, at least one site every two years for analysis of general sediment quality constituents and the full chemical suite as specified in SQO Part 1. All samples shall be collected in accordance with SWAMP

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TMDL Element	Regulatory Provisions
	<p>protocols.</p> <p>The details of the monitoring program including sampling locations and all methods shall be specified in the MRP to be approved by the Executive Officer.</p>

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<p>Implementation Plan</p>	<p>The regulatory mechanisms to implement the TMDL include, but are not limited to, general NPDES permits, individual NPDES permits, MS4 Permits covering jurisdictions and flood control districts within these waters, the Statewide Industrial Storm Water General Permit, the Statewide Construction Activity Storm Water General Permit, the Statewide Stormwater Permit for Caltrans Activities, and the authority contained in Sections 13263, 13267 and 13383 of the Cal. Water Code. For each discharger assigned a WLA, the appropriate Regional Board Order shall be reopened or amended when the order is reissued, in accordance with applicable laws, to incorporate the applicable WLA(s) as a permit requirement consistent with federal regulation and related guidance (40 CFR 144.22(d)(1)(vii)(B); US EPA Memorandum “Revisions to the November 22, 2002 Memorandum ‘Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs’” (November 12, 2010)). LAs will be implemented in a manner consistent with federal and state laws, regulations and policies, including the Nonpoint Source Implementation and Enforcement Policy.</p> <p>Implementation by assigned responsible parties is required in three waterbody areas:</p> <ol style="list-style-type: none"> 1. Dominguez Channel, Torrance Lateral, and Dominguez Channel Estuary 2. Greater Los Angeles and Long Beach Harbor waters (including Consolidated Slip) 3. Los Angeles River and San Gabriel River <p>Actions to achieve WLA and LA may be implemented in phases with information from each phase being used to inform the implementation of the next phase. These sediment targets are not <u>intended to be used as necessarily</u> ‘clean-up standards’ for <u>navigational, capital or maintenance</u> dredging or capping activities; rather they are long-term sediment concentrations that should be attained after reduction of external loads, targeted actions addressing internal reservoirs of contaminants, and environmental decay of contaminants in sediment. The implementation may be adjusted, as necessary, based on information gained during each phase. Table 7-40.2 contains the schedule for responsible parties to develop and implement TMDL implementation plans and sediment management plans to comply with the TMDL.</p> <p>1. <i>Dominguez Channel, Torrance Lateral, and Dominguez Channel Estuary</i></p> <p>Responsible parties can implement a variety of implementation strategies to meet the required WLAs and LAs, such as non-structural and structural BMPs, diversion and treatment to reduce sediment transport from the watershed to Dominguez Channel and Greater Harbor waters, and sediment removal activities.</p> <p>Nonpoint source elements include legacy sediments and air deposition across Dominguez Channel and Harbor waters. The responsible parties identified in the Allocation section and in part 6. <i>Application of Allocations to Responsible Parties</i> of this section are assigned sediment load allocations and responsibility for remediation of the contaminated sediments to attain the load allocations.</p> <ul style="list-style-type: none"> ▪ Phase I <p>The purpose of the Phase I implementation is to reduce the amount of sediment transport from point sources that directly or indirectly discharge to Dominguez Channel and the Harbor waters. Phase I should include watershed-wide implementation actions. Important components of Phase I should be to secure the relationships and agreements between cooperating parties and to develop a detailed scope of work with priorities.</p>
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Potential watershed-wide non-structural BMPs include more frequent and appropriately timed storm drain catch basin cleaning, improved street cleaning by upgrading to vacuum type sweepers, and educating residents and industries about good housekeeping practices. Structural BMPs may include the placement of stormwater treatment devices designed to reduce sediment loading, such as infiltration trenches, vegetated swales, and/or filter strips at critical points in the watershed. Structural BMPs may also include diversion and treatment facilities to divert runoff directly, or provide capture and storage of runoff and then diversion to a location for treatment. Treatment options to reduce sediment could include sand or media filters.

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

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

▪ Phase II

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

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

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

- Phase III

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

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

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

- Phase I

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

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

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Implementation actions at the Ports should be developed to address different sources that contribute loading to the Harbors such as Port-wide activities and associated control measures for water and sediment, control measures to reduce the discharges from various land uses in the Harbors, nearshore discharges, and on-water discharges. The implementation actions described in the *Water Resources Action Plan (WRAP)* adopted by the Port of Los Angeles and the Port of Long Beach represent a range of activities that could be conducted to control discharges of polluted stormwater and contaminated sediments to the Harbors.

To meet necessary reductions in sediment bed loads, a Sediment Management Plan shall be developed by the dischargers assigned a sediment bed load LA, the Cities of Los Angeles and Long Beach and the State Lands Commission. Phase I implementation elements for the improvement of the Harbors' sediment quality should be conducted through the continuation of source reduction, source control, and sediment management. Below are proposed implementations actions that may be implemented in Phase I to improve sediment quality at the ports:

- *Removal of Contaminated Sediment within Areas of Known Concern.* Planned removal programs are in place for IR Site 7 (former Navy facility in the Port of Long Beach) and Berth 240 (former Southwest Marine facility in the Port of Los Angeles). Contaminated sediment will be removed by Port of Long Beach and Port of Los Angeles.
- *Sediment Management Plan, Prioritization Assessment for Contaminated Sediment Management.* Sediment will be evaluated through the Sediment Quality Objective (SQO) process detailed in the Enclosed Bays and Estuaries Plan (i.e., SQO Part 1 as amended). If chemicals within sediments are contributing to an impaired benthic community or toxicity, or fish tissue, then causative agent(s) will be determined using SQO recommended procedures, including SQO Part I (VII. F.). Impacted sediments will be included in the list of sites to be managed. The sites to be managed by the ~~Ports~~ responsible parties will be prioritized for management and coupled with ~~Port~~ other planned projects when feasible. Prioritized sites shall include known hot spots, including but not limited to Consolidated Slip and Fish Harbor. For these prioritized sites, the sediment management plan shall include concrete actions and milestones, including numeric estimates of load reductions or removal, to remediate these priority areas and shall demonstrate that actions to address prioritized hot spots will be initiated and completed as early as possible during the 20-year TMDL implementation period. This process will prioritize management efforts on sites that have the greatest impact to the overall health of the benthic community and fish tissue, and allow sites with lower risks to be addressed in later phases when opportunities can be coupled to capital projects. As management actions are planned for a contaminated site, site-specific cleanup criteria will be determined following ~~port~~ established protocols that are consistent with state and national policy and guidance. The site will then be managed and the improvements confirmed through a sediment monitoring program.
- *Superfund Sites.* Two Superfund sites are located in Dominguez Channel Watershed: the Montrose Superfund Site (DDT) and the Del Amo Superfund Site (benzene). Montrose Superfund Site includes multiple operable units (OUs), which are identified as investigation areas potentially containing site-related contamination. These Superfund Sites are located in a community known as Harbor Gateway, which is situated mostly in the City of Los Angeles and partially in unincorporated land in Los

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Angeles County. Harbor Gateway lies within the Kenwood Drain subwatershed, which discharges stormwater into Torrance Lateral which flows downstream into saline waters of Dominguez Channel Estuary and Consolidated Slip. The Torrance Lateral, Dominguez Channel Estuary and Consolidated Slip (OU2) contain sediments contaminated with multiple pollutants including DDT (potentially from various sources). The US Environmental Protection Agency (US EPA) has been working with other government agencies and local agencies including the City of Los Angeles and Los Angeles County to ensure the protection of both the environment and public health in the areas surrounding these Superfund sites.

The US EPA has not yet reached a final remedial decision with respect to certain of the Montrose Superfund Site Operable Units (OUs) that remain contaminated with DDT, including the on- and near-property soils (OU1), the current storm water pathway (OU2), and the "Neighborhood Areas" (OU4 and OU6). The TMDL, its waste load and load allocations, and other regulatory provisions of this TMDL may be applicable or relevant and appropriate requirements (ARARs) as set forth in Section 121(d) of the Comprehensive Environmental Response, Compensation, and Liability Act (42 U.S.C. §§ 9621(d)) for those OUs. Whether provisions within the TMDL are ARARs will be determined in accordance with CERCLA when USEPA develops Records of Decision for the Superfund sites. The TMDL for DDT should be taken into account in the course of the remedial decision-making process. US EPA Superfund does not need to make a remedial decision prior to individual or collective action (by City of LA and/or County of LA) to clean up sediments within the OU2 pathway. The City of Los Angeles and/or Los Angeles County, should they decide to take action that impacts one of the OUs, shall consult with US EPA's Superfund Division in advance of such action. The goal of consultation is to ensure the proposed sediment cleanup will not aggravate the situation or further interfere with the OU2 site. Detection of DDT compounds in water or sediment samples collected within Torrance Lateral shall trigger additional monitoring, by parties to be determined by the Executive Officer, in coordination with EPA, to evaluate potential contribution from contaminated soils related to upstream Montrose operable units discharging via the Kenwood storm drain. Upon reconsideration of the TMDL, all monitoring results for DDT compounds collected by responsible parties or other entities shall be considered as part of source analysis and to determine potential future allocation(s) that may be necessary to minimize impacts to downstream waters and restore beneficial uses in TMDL waterbodies.

▪ Phase II

Phase II should include the implementation of additional BMPs and site remedial actions in the nearshore watershed and in the Harbors, as determined to be effective based on the success of upstream source control, TMDL monitoring data evaluations, WRAP activities implemented during Phase I, and targeted source reduction activities as identified in Phase I. Responsible parties should develop, prioritize, and implement Phase II elements based on data from the TMDL monitoring program and other available information from special studies. Possible actions include additional structural and non-structural BMPs throughout the watershed.

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

- Phase III

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

3. Los Angeles River and San Gabriel River

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

- Phase I

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

- Phases II and III

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

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

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

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

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more closely resembling the respective waterbodies will help characterize these loadings. Limited data exist for dry deposition so this study could be extended over longer timeframes. Measurements of wet deposition for each pollutant may also be appropriate to estimate air deposition more completely. Study results could provide data to reconsider pollutant-specific allocations in this TMDL.

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

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

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

5. Compliance with Allocations and Attainment of Numeric Targets

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

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

6. Application of Allocations to Responsible Parties

Responsible parties for monitoring and to attain LAs and WLAs for this TMDL include but are not limited to:

1. Dominguez Channel Responsible Parties

- Dominguez Channel, Torrance Lateral, and Dominguez Channel Estuary MS4 Permittees
 - Los Angeles County

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	<ul style="list-style-type: none">➤ Los Angeles County Flood Control District➤ Caltrans➤ City of Carson➤ City of Compton➤ City of El Segundo➤ City of Gardena➤ City of Hawthorne➤ City of Inglewood➤ City of Lawndale➤ City of Long Beach➤ City of Los Angeles➤ City of Manhattan Beach➤ City of Redondo Beach➤ City of Torrance• Individual and General Stormwater Permit Enrollees• Other Non-stormwater Permittees• Dominguez Channel Estuary Subgroup for bed sediment and fish:<ul style="list-style-type: none">➤ Los Angeles County➤ Los Angeles County Flood Control District➤ Caltrans➤ City of Carson➤ City of Compton➤ City of Gardena➤ City of Los Angeles➤ City of Long Beach➤ City of Torrance <p>2. Greater Los Angeles and Long Beach Harbor Waters Responsible Parties</p> <ul style="list-style-type: none">• Greater Los Angeles and Long Beach Harbor Waters MS4 Permittees<ul style="list-style-type: none">➤ Los Angeles County➤ Los Angeles County Flood Control District➤ Caltrans➤ Bellflower➤ City of Lakewood➤ City of Long Beach➤ City of Los Angeles➤ City of Paramount➤ City of Signal Hill➤ City of Rolling Hills➤ City of Rolling Hills Estates➤ Rancho Palos Verdes• City of Los Angeles (including the Port of Los Angeles)• City of Long Beach (including the Port of Long Beach)• State Lands Commission• Individual and General Stormwater Permit Enrollees• Other Non-stormwater Permittees, including City of Los Angeles (TIWRP)• <u>Los Angeles River Estuary Subgroup for bed sediment and fish:</u><ul style="list-style-type: none">➤ Los Angeles County➤ Los Angeles County Flood Control District➤ City of Long Beach
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	<ul style="list-style-type: none">➤ City of Los Angeles➤ City of Signal Hill➤ Caltrans• Consolidated Slip Responsible Parties subgroup⁴<ul style="list-style-type: none">➤ Consolidated Slip MS4 Permittees<ul style="list-style-type: none">▪ Los Angeles County▪ Los Angeles County Flood Control District▪ City of Los Angeles▪ City of Carson▪ City of Gardena▪ City of Torrance <p>3. Los Angeles River and San Gabriel River Watershed TMDLs Responsible Parties</p> <ul style="list-style-type: none">➤ Los Angeles River and San Gabriel River metals TMDLs responsible parties (For list of responsible parties, see Chapter 7-13 herein and US EPA, “Total Maximum Daily Loads for Metals and Selenium: San Gabriel River and Impaired Tributaries”, March 26, 2007.)
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⁴ US EPA is the regulatory oversight agency pursuant to CERCLA with respect to the two Superfund sites within the Consolidated Slip subarea, but is not identified as a Responsible Party under the TMDL. As the regulatory oversight agency, US EPA is responsible for choosing an appropriate remedy for these sites. Furthermore, under CERCLA, US EPA is responsible for assuring that the CERCLA PRPs clean up the site in compliance with CERCLA and applicable or relevant and appropriate requirements (ARARs) (CERCLA section 121(d)).

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

Task Number	Task	Responsible Party	Deadline
1	Interim allocations are achieved.	All Responsible Parties	Effective date of the TMDL
2	Submit a Monitoring Plan to the Los Angeles Regional Board for Executive Officer approval.	Dominguez Channel Responsible parties; Greater Harbors Responsible Parties; Consolidated Slip Responsible Parties subgroup; Los Angeles and San Gabriel River Responsible Parties	9 months after effective date of the TMDL
3	Implement Monitoring Plan	Dominguez Channel Responsible parties; Greater Harbors Responsible Parties; Consolidated Slip Responsible Parties subgroup; Los Angeles and San Gabriel River Responsible Parties	6 months after monitoring plan approved by Executive Officer.
4	Submit annual monitoring reports to the Los Angeles Regional Board.	All Responsible parties	15 months after monitoring starts and annually thereafter
5	Submit an Implementation Plan and Contaminated Sediment Management Plan (CSMP). The Implementation Plan and CSMP shall be circulated for public review for 30 days. The CSMP shall include concrete milestones <u>with numeric estimates of load reductions or removal, including milestones for remediating hot spots, including but not limited to Dominguez Channel Estuary, Consolidated Slip and Fish Harbor, for Executive Officer approval.</u>	Dominguez Channel Responsible parties; Greater Harbors Responsible Parties; Consolidated Slip Responsible Parties subgroup	2 years after effective date of the TMDL
6	Submit Report of Implementation to the Los Angeles Regional Board.	Los Angeles and San Gabriel River Responsible Parties	2 years after effective date of the TMDL
7	Submit annual implementation reports to the Los Angeles Regional Board. Report on implementation progress and demonstrate progress toward meeting the assigned LAs and WLAs.	All Responsible parties	3 years after effective date of the TMDL and annually thereafter
8	Complete Phase I of TMDL Implementation Plan and Sediment Management Plan.	Dominguez Channel Responsible parties; Greater Harbors Responsible Parties; Consolidated Slip Responsible Parties subgroup	5 years after effective date of the TMDL
9	Submit updated Implementation Plan and	Dominguez Channel	5 years after

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Task Number	Task	Responsible Party	Deadline
	Contaminated Sediment Management Plan.	Responsible parties; Greater Harbors Responsible Parties; Consolidated Slip Responsible Parties subgroup	effective date of the TMDL
10	Regional Board will reconsider targets, WLAs, and LAs based on new policies, data or special studies as necessary . Regional Board will consider requirements for additional implementation or TMDLs for Los Angeles and San Gabriel Rivers and interim targets and allocations for the end of Phase II.	Regional Board	6 years after the effective date of the TMDL
11	Report on status of implementation and scope and schedule of remaining Phase II implementation actions to Regional Board.	All Responsible parties	10 years after the effective date of the TMDL
12	Complete Phase II of TMDL Implementation Plan and Sediment Management Plan.	Dominguez Channel Responsible parties; Greater Harbors Responsible Parties; Consolidated Slip Responsible Parties subgroup	15 years after effective date of the TMDL
13	Complete Phase III of TMDL Implementation Plan and Sediment Management Plan.	Dominguez Channel Responsible parties; Greater Harbors Responsible Parties; Consolidated Slip Responsible Parties subgroup	20 years after effective date of the TMDL
14	Final LAs and WLAs are achieved.	All Responsible parties	20 years after effective date of the TMDL

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PROOF OF SERVICE

I, Brandi Magana, declare:

I am a resident of the state of California and over the age of eighteen years and not a party to the within action. My business address is 355 South Grand Avenue, 40th Floor, Los Angeles, California 90071-3101. On June 3, 2011, I served the within document(s) described as:

PETITION FOR REVIEW

on the interested parties in this action as stated below:

State Water Resources Control Board	California Regional Water Quality
Office of Chief Counsel	Control Board
Office of Chief Counsel	Los Angeles Region
Jeannette L. Bashaw, Legal Analyst	Samuel Unger
1001 "I" Street, 22nd Floor	320 West Fourth Street Suite 200
Sacramento, CA 95814	Los Angeles, CA 90013
<u>jbashaw@waterboards.ca.gov</u>	<u>sunger@waterboards.ca.gov</u>

Facsimile No.: (916) 341-5199

Facsimile No.: (213) 576-6686

(BY OVERNIGHT DELIVERY) By placing the document(s) listed above in a sealed envelope and affixing a pre-paid air bill, and causing the envelope to be delivered to a Federal Express agent for delivery, or deposited in a Federal Express box or other facility regularly maintained by Federal Express, in an envelope or package designated by the express service carrier, with delivery fees paid or provided for, addressed to the person(s) at the address(es) set forth above.

(BY E-MAIL) By transmitting a true copy of the foregoing document(s) to the e-mail addresses set forth above.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed on June 3, 2011, at Los Angeles, California.

Brandi Magana

(Type or print name)

Brandi Magana

(Signature)