Substitute Environmental Document for Toxic Pollutants in Marina del Rey Harbor Waters Total Maximum Daily Load

Prepared under the California Environmental Quality Act (CEQA) Requirements of a Certified Regulatory Program

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November 5, 2013

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1. EXECUTIVE SUMMARY

The California Regional Water Quality Control Board – Los Angeles Region (Regional Board) is the Lead Agency for evaluating the environmental impacts of the proposed Total Maximum Daily Load (TMDL) for Toxic Pollutants in Marina del Rey Harbor Waters (hereafter referred as the Toxic Pollutants TMDL). This Substitute Environmental Document (SED) analyzes environmental impacts that may occur from reasonably foreseeable methods of implementing a Toxic Pollutants TMDL. This SED is based on a proposed Toxic Pollutants TMDL in that will be considered by the Regional Board, and if approved by the Regional Board, implemented through an amendment to the Water Quality Control Plan, Los Angeles Region (Basin Plan). The proposed Toxic Pollutants TMDL is described in the Staff Report, Tentative Board Resolution and Tentative Basin Plan Amendment available on the Regional Board's website. This SED analyzes foreseeable methods of compliance with the Toxic Pollutants TMDL and provides the public information regarding environmental impacts, mitigation, and alternatives in accordance with the California Environmental Quality Act (CEQA).

The SED will be considered by the Regional Board when the Regional Board considers adoption of the Toxic Pollutants TMDL as a Basin Plan amendment. Approval of the SED is separate from approval of a specific project alternative or a component of an alternative. Approval of the SED refers to the process of: (1) addressing comments, (2) confirming that the Regional Board considered the information in the SED, and (3) affirming that the SED reflects independent judgment and analysis by the Regional Board (Section 15090 of CEQA Guidelines (Title 14 of California Code of Regulations)).

The Regional Board has identified Marina del Rey Harbor as impaired due to copper, lead, zinc, chlordane, PCBs, DDT, fish consumption advisory, and sediment toxicity. The beneficial uses most likely to be impaired by these toxic pollutants are those associated with aquatic life, including wildlife habitat (WILD) and marine habitat (MAR). In addition, human beneficial uses impaired by the metals and organics are shellfish harvesting (SHELL), commercial and sport fishing (COMM), and water contact recreation (REC-1).

The Toxic Pollutants TMDL was originally adopted by the Regional Board on October 6, 2005 (Regional Board Resolution No. R05-2012), approved by the State Water Resources Control Board (State Board) on January 13, 2006 (State Board Resolution No. 2006-0006), and approved by U.S. EPA on March 16, 2006. The original Toxic Pollutants TMDL included substitute environmental documentation, which was filed with the Resources Agency on March 22, 2006. The proposed project is a revision of the original Toxic Pollutants TMDL, including changes such as the extension of the geographical area of the TMDL, the addition of a TMDL for DDT in the sediments, the addition of load allocations for the sediment impairments, and the addition of a copper water column TMDL.

These TMDL revisions alter the environmental analysis that was previously prepared for the establishment of the Toxic pollutants TMDL because the TMDL revisions will result in different implementation actions than those previously analyzed and different effects upon the environment. Moreover, additional reasonably foreseeable methods of compliance warrant environmental analysis pursuant to Public Resources Code section 21159 and California Code of Regulations, Title 14, section 15187.

The objective of the Toxic Pollutants TMDL is to restore the beneficial uses of Marina Del Rey Harbor Waters that are currently impaired by heavy metals and organic pollutants, in accordance with Clean Water Act section 303(d). Beneficial uses designated in these waters to protect aquatic life and wildlife include the marine habitat use (MAR) and the wildlife habitat (WILD). Beneficial uses associated with human use of these waters include recreational use for water contact (REC1), non-contact water recreation (REC2), commercial and sport fishing (COMM),

and shellfish harvesting (SHELL). Because of the impairments, these waterbodies fail to fully support the designated beneficial uses. The goal of the TMDL is to protect and restore fish tissue, water quality, and sediment quality in Marina del Rey Harbor Waters by reducing discharges of dissolved copper, removing contaminated sediment and controlling the sediment loading and accumulation of contaminated sediment in the Harbor.

The potential sources of a variety of toxic pollutants to Marina del Rey Harbor Waters include both point sources and nonpoint sources. The strategy for attaining water quality standards focuses on assigning Waste Load Allocations (WLAs) for point sources and Load Allocations (LAs) for nonpoint sources to designated responsible parties. The Toxic Pollutants TMDL establishes WLAs to point sources and LAs to nonpoint sources, and provides a 20-year implementation schedule. Stormwater WLAs will be implemented through the County of Los Angeles Municipal Separate Storm Sewer System (MS4) permits, the California Department of Transportation (Caltrans), Statewide Stormwater permit, general industrial storm water permits, general construction storm water permits, minor NPDES permits, and general NPDES permits. The implementation plan will be implemented directly at the harbor and throughout the watershed, including diversion or control of stormwater runoff during wet weather to reduce heavy metals and organic pollutants loadings to the Marina del Rey Waters. Potential adverse impacts to the environment stem principally from the removal of sediment from the harbor bottom, the removal of copper-based paints from boat hulls, the low-flow and storm first flush diversions, and the installation of infiltration systems, vegetated swales, stormwater capture systems, sand/media filters, oil/water separators, and catch basin inserts.

This SED analyzes three Program Alternatives and both Structural and Non-structural Implementation Alternatives (see Sections 4 and 5 of this SED for a description of the alternatives) that encompass actions within the jurisdiction of the Regional Board and implementing municipalities and agencies. A No Project Alternative is analyzed to allow decision makers to compare the impacts of approving a proposed alternative and its components compared with the impacts of not approving the proposed alternative. The SED analyzes the potential environmental impacts in accordance with significance criteria.

CEQA requires the Regional Board to conduct a program-level analysis of environmental impacts (Public Resources Code §21159(d)). This analysis is a program-level analysis. Public Resources Code Section 21159(c) requires that the Environmental Analysis take into account a reasonable range of:

(1) Environmental, economic, and technical factors,

(2) Population and geographic areas, and

(3) Specific sites.

A "reasonable range" does not require an examination of every site, but a reasonably representative sample of them. The statute specifically states that the section shall not require the agency to conduct a "project-level analysis" (Public Resources Code § 21159(d)). Rather, a project-level analysis must be performed by the local agencies that are required to implement the requirements of the TMDL (Public Resources Code §21159.2). Notably, the Regional Board is prohibited from specifying the manner of compliance with its regulations (Water Code §13360), and accordingly, the actual environmental impacts will necessarily depend upon the compliance strategy selected by the local agencies and other permittees.

Municipalities and agencies that will implement specific projects and Best Management Practices (BMPs) may use this SED to help with the selection and approval of project alternatives. The implementing municipality or agency will be the lead agency and has responsibility for environmental review of the projects to determine necessary strategies to implement this TMDL.

Approval of projects (i.e., project alternatives or components of project alternatives) refers to the decision of either the implementing municipalities or agencies to select and carry out an alternative or a component of an alternative. (Section 5 of this SED summarizes the components that comprise the project alternatives analyzed in this SED). The components assessed at a project level have specific locations that will be determined by implementing municipalities and agencies. The project level components will be subject to additional environmental review, including review by cities and municipalities implementing Toxic Pollutants TMDL projects.

Many of the specific projects and BMPs analyzed in this SED will involve small infrastructure maintenance and construction projects. Infrastructure maintenance and urban construction projects generate varying degrees of environmental impacts. The potential impacts can include, for example, noise associated with construction, air emissions associated with vehicles to deliver materials during construction, traffic associated with increased vehicle trips and where construction or attendant activities occur near or in thoroughfares. These foreseeable impacts are analyzed in detail in Section 6 of this SED.

To address the environmental impacts from routine and essential activities, responsible parties can employ a variety of techniques, BMPs, and other mitigation measures to minimize potential impacts on the environment. Mitigation measures for construction projects for maintenance projects include varying construction activities for certain times of the day to reduce the duration of traffic and noise impacts, developing detailed traffic plans in coordination with police or fire protection authorities, using less noisy equipment, using sound barriers, and using lower emission vehicles to reduce air pollutant emissions.

Many of the mitigation measures identified in the SED are common practices currently employed by agencies when planning and implementing stormwater BMPs. Agencies such as the California Stormwater Quality Association (CASQA), and the Water Environment Research Foundation (WERF) publish handbooks containing guidance on the selection, siting, design, installation, monitoring, and evaluation of stormwater BMPs (CASQA, 2003a, CASQA, 2003b, WERF, 2005). Manuals are also available, which describe engineering and administration policies and procedures for construction projects. These mitigation methods and BMPs are discussed in detail in Section 6 of this SED. Mitigation measures are suggested to minimize site specific impacts to less than significant levels. Mitigation of adverse environmental impacts is strictly within the discretion of the individual implementing agency. It is the obligation of responsible parties to mitigate adverse environmental impacts associated with reasonably foreseeable means of compliance when impacts are deemed significant (Title 14, California Code of Regulations, Section 15091(a)(2).)

This SED finds foreseeable methods to comply with the Toxic Pollutants TMDL to include both non-structural and structural BMPs in the Marina del Rey Waters. Most of these BMPs do not cause significant impacts that cannot be mitigated through commonly used construction and maintenance practices. The SED identifies mitigation methods for impacts with potentially significant effects and finds that these methods can mitigate potentially significant impacts to levels that are less than significant. To the extent that there are significant adverse effects on the environment due to the implementation of this TMDL, there are feasible alternatives and/or feasible mitigation measures that would substantially lessen significant adverse impacts. The SED can be used by implementing municipalities and agencies to expedite any additional environmental analysis of specific projects required to comply with the TMDL.

The implementation actions represent a range of activities that could be conducted to control the release of polluted stormwater and contaminated sediments to the Marina del Rey Harbor Waters, attain water and sediment quality standards, and protect beneficial uses. The lead agencies for proposed and subsequent projects would be obligated to mitigate any impacts they identify.

Many of the proposed actions, such as installation of infiltration systems, vegetated swales, sand/media filters, and oil/water separators, removal of contaminated sediment by dredging, diversion of low flows to sewer lines, monitoring natural attenuation of contaminants, capping of contaminated sediments, replacing of copper-based antifouling paints, and installation of catch basin inserts will improve water and sediment quality in Marina del Rey Waters.

The regulatory requirements and the program objectives for the Toxic Pollutants TMDL are provided in Section 2 and Section 3, respectively. Section 4 discusses the program level alternatives for this TMDL and presents implementation alternatives to achieve compliance with the final waste load allocations for copper, lead, zinc, chlordane, DDT, and PCBs. Section 5 provides a detailed description of implementation alternatives. Section 6 discusses environmental setting, impacts, and mitigation (Section 6.1), and the CEQA Checklist and Determination with in-depth analysis of each alternative (Section 6.2). Other environmental considerations are discussed in Section 7. The Statement of Overriding Considerations and Determination is discussed in Section 8. A list of references is included in Section 9 of this SED.

2. REGULATORY REQUIREMENTS FOR ENVIRONMENTAL IMPACT ANALYSIS OF THE TMDL

This section presents the regulatory requirements for assessing environmental impacts of a TMDL implemented through a Basin Plan amendment at the Regional Board. This TMDL for toxic pollutants in Marina del Rey Harbor Waters is evaluated at a program level of detail under a *Certified Regulatory Program* and the information and analyses are presented in this Substitute Environmental Document (SED) as discussed in this section.

2.1 EXEMPTION FROM CERTAIN CEQA REQUIREMENTS

The California Secretary of Resources has certified the State and Regional Boards' basin planning process as exempt from certain requirements of the California Environmental Quality Act (CEQA), including preparation of an initial study, negative declaration, and environmental impact report (California Code of Regulations, Title 14, Section 15251(g)). As the proposed amendment to the Basin Plan is part of the basin planning process, the environmental information developed for and included with the amendment is considered a substitute for an initial study, negative declaration, and/or environmental impact report.

2.2 CALIFORNIA CODE OF REGULATIONS AND PUBLIC RESOURCES CODE REQUIREMENTS

While the "certified regulatory program" of the Regional Board is exempt from certain CEQA requirements, it is subject to the substantive requirements of California Code of Regulations, Title 23, Section 3777(a), which requires a written report that includes a description of the proposed activity, an analysis of reasonable alternatives, and an identification of mitigation measures to minimize any significant adverse environmental impacts. Section 3777(a) also requires the Regional Board to complete an environmental checklist as part of its substitute environmental document. This checklist is provided in section 6 of this document.

In addition, the Regional Board must fulfill substantive obligations when adopting performance standards such as TMDLs, as described in Public Resources Code section 21159. Section 21159, which allows expedited environmental review for mandated projects, provides that an agency shall perform, at the time of the adoption of a rule or regulation requiring the installation of pollution control equipment, or a performance standard or treatment requirement, an Environmental Analysis of the reasonably foreseeable methods of compliance. The statute further requires that the environmental analysis at a minimum, include, all of the following:

(1) An analysis of the reasonably foreseeable environmental impacts of the methods of compliance.

(2) An analysis of reasonably foreseeable feasible mitigation measures to lessen the adverse environmental impacts.

(3) An analysis of reasonably foreseeable alternative means of compliance with the rule or regulation that would have less significant adverse impacts. (Pub. Resources Code, § 21159(a).)

Section 21159(c) requires that the Environmental Analysis take into account a reasonable range of:

(1) Environmental, economic, and technical factors,

(2) Population and geographic areas, and

(3) Specific sites.

2.3 PROGRAM AND PROJECT LEVEL ANALYSES

Public Resources Code § 21159(d) specifically states that the public agency is not required to conduct a "project level analysis." Rather, a project level analysis must be performed by the local agencies that are required to implement the requirements of the TMDL (Pub. Res. Code § 21159.2.) Notably, ***the Regional Board is prohibited from specifying the manner of compliance with its orders*** (Water Code § 13360), and accordingly, the ***actual*** environmental impacts will necessarily depend upon the compliance strategy selected by the local agencies and other permittees.

This Substitute Environmental Document identifies the reasonably foreseeable environmental impacts of the ***reasonably foreseeable*** methods of compliance (Pub. Res. Code, § 21159(a)(1).), based on information developed before, during, and after the CEQA scoping process that is specified in California Public Resources Code section 21083.9. This analysis is a program level (i.e., macroscopic) analysis. CEQA requires the Regional Board to conduct a program level analysis of environmental impacts. (Pub. Res. Code, § 21159(d).) Similarly, the CEQA substitute document does not engage in speculation or conjecture (Pub. Res. Code, § 21159(a).) When the CEQA analysis identifies a potentially significant environmental impact, the accompanying analysis identifies reasonably foreseeable feasible mitigation measures. (Pub. Res. Code, § 21159(a)(2).) Because responsible agencies will most likely use a combination of structural and non-structural BMPs, the SED has identified the reasonably foreseeable alternative means of compliance. (Pub. Res. Code, § 21159(a)(3).)

2.4 PURPOSE OF CEQA

CEQA's basic purposes are to: 1) inform the decision makers and public about the potential significant environmental effects of a proposed project, 2) identify ways that environmental damage may be mitigated, 3) prevent significant, avoidable damage to the environment by requiring changes in projects, through the use of alternative or mitigation measures when feasible, and 4) disclose to the public why an agency approved a project if significant effects are involved. (Cal. Code Regs., tit. 14, § 15002(a).)

To fulfill these functions, a CEQA review need not be exhaustive, and CEQA documents need not be perfect. They need only be adequate, complete, and good faith efforts at full disclosure. (Cal. Code Regs., tit.14, § 15151.) The Court stated in River Valley Preservation Project v. Metropolitan Transit Development Board (1995) 37 Cal.App.4th 154, 178:

"[a]s we have stated previously, "[our] limited function is consistent with the principle that [t]he purpose of CEQA is not to generate paper, but to compel government at all levels to make decisions with environmental consequences in mind..." (City of Santee v. County of San Diego (1989) 214 Cal.App.3d 1438, 1448 [263 Cal. Rptr. 340]; quoting Laurel Heights I, supra, 47 Cal.3d at p. 393.) "We look 'not for perfection but for adequacy, completeness, and a good faith effort at full disclosure.' (Guidelines, §§ 15151.)" (City of Fremont v. San Francisco Bay Area Rapid Transit Dist., supra, 34 Cal.App.4th at p. 1786.)

Nor does a CEQA require unanimity of opinion among experts. The analysis is satisfactory as long as those opinions are considered. (Cal. Code Regs., tit. 14, § 15151.)

In this document, the Regional Board staff has performed a good faith effort at full disclosure of the reasonably foreseeable environmental impacts that could be attendant with the proposed Toxic Pollutants TMDL.

3. TMDL OVERVIEW AND PROGRAM OBJECTIVES

3.1 INTRODUCTION – LEGAL BACKGROUND

The Total Maximum Daily Load (TMDL) for toxic pollutants in Marina del Rey Harbor Waters sets forth an implementation plan to attain the water quality standards for a variety of toxic pollutants in these waterbodies. The TMDL was prepared pursuant to state and federal requirements to preserve and enhance water quality in Marina del Rey Harbor Waters. The adoption of a TMDL is not discretionary and is compelled both by section 303(d) of the federal Clean Water Act (33 USC 1313(d)) and by a federal consent decree, Heal the Bay Inc., et al. v. Browner, et al. C 98-4825 SBA (United States District Court, Northern District of California, 1999) approved on March 22, 1999.

The California Water Quality Control Plan, Los Angeles Region, also known as the *Basin Plan*, sets water quality standards for surface waters and ground waters in the region. These standards are comprised of designated beneficial uses for surface and ground waters, and numeric and narrative objectives necessary to support beneficial uses and the state's antidegradation policy. Such standards are mandated for all waterbodies within the state under the Porter-Cologne Water Quality Act. In addition, the Basin Plan describes implementation programs to protect all waters in the region. The Basin Plan implements the Porter-Cologne Water Quality Control Act (commencing at Section 1300 of the "California Water Code") and serves as the State Water Quality Control Plan applicable to Marina del Rey Harbor Waters, also requiring water quality standards for all surface waters as required pursuant to the federal Clean Water Act (CWA).

Section 305(b) of the CWA mandates biennial assessments of the nation's water resources. These water quality assessments are used, with any other available data and information, to identify and prioritize waters not attaining water quality standards. The resulting amalgamation of waters is referred to as the "303(d) list" or the "Impaired Waters List." CWA section 303(d)(1)(C) and (d)(1)(D) require that the state establish TMDLs for each listed water. Those TMDLs, and the 303(d) list itself, must be submitted to USEPA for approval under section 303(d)(2). Section 303(d)(3) requires that the state also develop TMDLs for all waters that are not on the 303(d) list as well, however TMDLs for waters that do not meet the criteria for listing are not subject to approval by USEPA.

TMDLs must be established at a level necessary to attain water quality standards, considering seasonal variations and a margin of safety. TMDLs must also include an allocation of parts of the total allowable load (or loading capacity) to all point sources, nonpoint sources, and natural background in the form of waste load and load allocations, accordingly. Waste load and load allocations must be assigned for all sources of the impairing pollutant, irrespective of whether they are discharged to the impaired reach or to an upstream tributary. TMDLs are generally established in California through the basin planning process, i.e., an amendment to the basin plan to incorporate a new or revised program of implementation of the water quality standards, pursuant to Water Code section 13242. The process that the Regional Board uses for establishing TMDLs is the same whether under section 303(d)(1) or 303(d)(3).

USEPA's authority over the 303(d) program includes the obligation to approve or disapprove the identification of impaired waters. If any list or TMDL is disapproved, USEPA must establish its own list or TMDL.

As part of California's 1996, 1998, 2002, 2006, and 2008 303(d) list submittals, the Regional Board identified Marina del Rey Harbor Waters as being impaired due to toxic pollutants. More specifically, each of these water bodies are included on the 303(d) list for one or more of the following pollutants: copper, lead, zinc, chlordane, DDT, and PCBs. These impairments may exist in one or more environmental media—water, sediments, or tissue.

The Toxic Pollutants TMDL for Marina del Rey Harbor Waters is a Basin Plan amendment and is subject to the provision of the Public Resources Code Section 21083.9 that requires a CEQA Scoping to be conducted for Regional Projects. CEQA Scoping involves identifying a range of project/program related actions, alternatives, mitigation measures, and significant effects to be analyzed in an EIR or its functionally equivalent document.

The Toxic Pollutants TMDL was originally adopted by the Regional Board on October 6, 2005 (Regional Board Resolution No. R05-2012), approved by the State Board on January 13, 2006 (State Board Resolution No. 2006-0006), and approved by U.S. EPA on March 16, 2006. The original Toxic Pollutants TMDL included substitute environmental documentation, which was filed with the Resources Agency on March 22, 2006. The proposed project is a revision of the original Toxic Pollutants TMDL, including changes such as the extension of the geographical area of the TMDL, the addition of a TMDL for DDT in the sediments, the addition of load allocations for the sediment impairments, and the addition of a copper water column TMDL.

These TMDL revisions alter the environmental analysis that was previously prepared for the establishment of the Marina del Rey Harbor Toxics TMDL because the TMDL revisions will result in different implementation actions than those previously analyzed and different effects upon the environment. Moreover, additional reasonably foreseeable methods of compliance warrant environmental analysis pursuant to Public Resources Code section 21159 and California Code of Regulations, Title 14, section 15187.

This SED is being released for public comments accompanying the TMDL staff report, Basin Plan amendment, and tentative resolution for adoption by the Regional Board; these documents should be considered as a whole when evaluating the environmental impacts of implementing the TMDL. Regional Board staff will respond to public comments received on these documents and these comments and responses and the documents will all be considered by the Regional Board when considering whether to adopt the TMDL.

3.2 PROJECT PURPOSE, TMDL GOALS, AND WATER QUALITY OBJECTIVES

3.2.1 PROJECT PURPOSE

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board) proposes an amendment to the Water Quality Control Plan for the Los Angeles Region to incorporate a Total Maximum Daily Load (TMDL) to reduce toxic pollutants such copper, lead, zinc, chlordane, DDT, and PCBs in Marina del Rey Harbor Waters.

As further set forth herein, this project's purpose is twofold:

- To adopt a regulation that will guide Regional Board permitting, enforcement, and other actions to require responsible parties to take appropriate measures to restore and maintain applicable water quality standards pertaining to toxic pollutants throughout the Marina del Rey Harbor Waters; and
- To establish a Toxic Pollutants TMDL in compliance with the requirements of CWA section 303(d).

Section 303(d) of the CWA requires states to identify waters not meeting state water quality standards, and establish TMDLs for those waters, at levels necessary to resolve the impairments and maintain water quality standards. The purpose of this project is to both comply with the requirements of section 303(d) and to resolve the impairments and maintain compliance with water quality standards in the relevant water bodies.

3.2.2 TMDL GOALS

The Basin Plan designates beneficial uses of waterbodies, establishes water quality objectives for the protection of these beneficial uses, and outlines a plan of implementation for maintaining and enhancing water quality. The proposed amendment would incorporate into the Basin Plan a TMDL for toxic pollutants in Marina del Rey Harbor Waters.

The beneficial uses likely to be impaired by toxic pollutants include: Water Contact Recreation (REC-1), Non-contact Water Recreation (REC-2), Commercial and Sport Fishing (COMM), Marine Habitat (MAR), Wildlife Habitat (WILD), and Shellfish Harvesting (SHELL).

The Regional Board's goals in adopting the TMDL are to eliminate the significant water quality impacts caused by toxic pollutants in water, sediment, and/or fish tissue.

3.2.3 WATER QUALITY OBJECTIVES

As stated in the Basin Plan, Water Quality Objectives (WQOs) are intended to protect the public health and welfare and to maintain or enhance water quality in relation to the designated existing and potential beneficial uses of the water. The Basin Plan specifies both narrative and numeric WQOs. The following narrative WQOs are most pertinent to the Toxic Pollutants TMDL.

Chemical Constituents: *Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use.*

Bioaccumulation: *Toxic pollutants shall not be present at levels that will bioaccumulate in aquatic life to levels, which are harmful to aquatic life or human health.*

Pesticides: *No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life.*

Toxicity: *All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life.*

The protocols used for this assessment are consistent with those outlined in the State's 303(d) listing policy (SWRCB, 2004). The benchmarks used in this assessment are consistent with those identified in the policy's supporting Functional Equivalency Document (FED) document. The state's policy was developed by the State for purposes of water quality assessments, and the State applied this policy to develop its decisions for the 303(d) list. This assessment builds on the data record evaluated by the State and compiled in the 303(d) list factsheets; it also includes more recent information. This is consistent with procedures provided in the State's Impaired Waters Guidance (SWRCB, 2005, section 2) to produce an assessment more accurately reflecting current water conditions. As described above, this assessment is generally consistent with protocols and benchmarks provided in the State's 303(d) listing policy and supporting (FED) document.

4. DESCRIPTION OF ALTERNATIVES

This substitute environmental document analyzes three program alternatives that encompass actions within the jurisdiction of the Regional Board and implementing municipalities and agencies. The program alternatives include (1) the revised Toxic Pollutants TMDL as it is proposed for Regional Board adoption; (2) a revised Toxic Pollutants TMDL with only reconsideration elements specified in the original TMDL; and (3) a No Program Alternative in which the Toxic Pollutants TMDL is not revised. The specifics of the many projects which would make up a program alternative are discussed in detail in Section 5 and include structural and non-structural Best Management Practices (BMPs) that are reasonably foreseeable to be implemented under the Toxic Pollutants TMDL program alternatives.

The components assessed at a program level generally are program elements that would be implemented as part of the Toxic Pollutants TMDL, but these elements do not have specific locations or design details identified. The components assessed at a project level have specific locations which will be determined by implementing municipalities and agencies. The project level components will be subject to additional future environmental review, including review by cities and municipalities implementing Toxic Pollutants TMDL projects.

4.1 PROGRAM ALTERNATIVES

4.1.1 ALTERNATIVE1 - REVISED TMDL AS PROPOSED

The Toxic Pollutants TMDL was originally adopted by the Regional Board on October 6, 2005 (Regional Board Resolution No. R05-2012), approved by the State Board on January 13, 2006 (State Board Resolution No. 2006-0006), and approved by U.S. EPA on March 16, 2006. The proposed project includes several changes to the original Toxic Pollutants TMDL, including the extension of the geographical area of the TMDL, the addition of a TMDL for DDT in the sediments, the addition of load allocations for the sediment impairments, and the addition of a copper water column TMDL.

This program alternative is based on the TMDL revision that is presently proposed for Regional Board consideration. The proposed TMDL focuses on the reduction of toxic pollutants in Marina del Rey Waters.

The TMDL waste load allocations (WLAs) and load allocations (LAs) are established through an amendment to the Basin Plan. The WLAs focus on reductions in sources of heavy metals and organic pollutants from municipal storm drains and discharges associated with regional, state, and federal discharge permittees. The TMDL LAs focus on reductions of local sources associated with runoff and drainage, copper-based antifouling paints, and contaminated sediments. The LAs will be implemented primarily through regulatory mechanisms that implement the State Board's 2004 Nonpoint Source Policy, including Conditional Waivers, Waste Discharge Requirements (WDRs), or Discharge Prohibitions.

This alternative provides a program for addressing the adverse impacts of toxic pollutants through progressive controls in discharges to Marina del Rey Harbor Waters through a 20-year schedule. This schedule is both reasonable and as short as practicable. The WLAs and the implementation schedule, once they are incorporated into the Basin Plan, will be considered by NPDES permit writers when developing permit limits that are adopted in separate subsequent actions by the Regional Board.

Although the Regional Board cannot mandate the manner of compliance, foreseeable environmental impacts from methods of compliance are well known. They include structural methods such as installing infiltration systems, vegetated swales, stormwater capture systems,

sand/media filters, and oil/water separators; replacing copper-based antifouling paints; removing contaminated sediments in the harbor by dredging; and upgrading storm drains.

This TMDL program alternative anticipates compliance through installation of structural BMPs, and non-structural BMPs as discussed in Section 5. Potential adverse impacts to the environment stem principally from the installation, operation, and maintenance of these structural BMPs. This document analyzes these impacts and concludes that installation of implementation projects are of relatively short duration and typical of "baseline" construction and maintenance projects that occur presently in the TMDL area. It also concludes that significant impacts can be mitigated or there are alternative means of compliance available, and the addition of a copper water column TMDL, the revision of final water column, fish tissue, and sediment numeric targets for PCBs.

4.1.2 Alternative 2 – Revised TMDL with Only Reconsideration Elements Specified in Original TMDL

The implementation plan that was adopted as a part of the original TMDL includes a mandatory reconsideration six years after the effective date of the TMDL to re-evaluate waste load allocations and the implementation schedule. The two specific components required to be addressed by the Regional Board are Sediment Quality Objectives and toxicity hotspots.

This alternative would focus only on the reconsideration items specified in the original TMDL, and would not include the extension of the geographical area of the TMDL to include the front basins, the addition of a TMDL for DDT in the sediments, or the addition of a copper water column TMDL.

The WLAs and LAs that would be implemented are similar to those in Alternative 1, and the implementation schedule would remain the same. However, this alternative would not include additional implementation measures in the front basins, or the replacement of copper-based antifouling paints. Thus, the environmental impacts would be less under this alternative. However, this alternative does not accomplish the project's purposes of restoring and maintaining water quality standards throughout the Marina del Rey waters. The TMDL identifies additional impairments in the sediment in the front basins and additional impairments due to copper in the water column. All waterbodies identified as impaired whether or not they are listed on the 303(d) List require a TMDL pursuant to the CWA under section 303(d)(1)(C). Furthermore, Alternative 2 amounts to the unlawful segmenting or piecemealing of the project to ostensibly lessen environmental impacts. If Alternative 2 were adopted, and a smaller project occurred as a result, the remainder of the project would eventually be required when TMDLs are established to implement standards related to the newly identified impairments. Piecemealing a project to contend it will result in fewer impacts is unlawful under CEQA, and is therefore not a legal or feasible alternative. Since section 303(d) will require the state to establish TMDLs for the impaired but not yet listed reaches, the impacts delayed by focusing only upon the listed reaches will still occur when TMDLs for them are subsequently implemented. Accordingly, this alternative is not recommended.

4.1.3 Alternative 3 –No Program Alternative

This program alternative assumes that the original Toxic Pollutants TMDL remains unchanged. While cities and municipalities would implement BMPs according to the original TMDL, this CEQA analysis is based on the assumption that no additional toxic pollutants reduction BMPs would be implemented.

While impacts to the environment from additional construction or maintenance of structural BMPs, remediation of sediments, and removal of copper-based antifouling paints would be avoided in this No Program alternative, No Program would not fully restore beneficial uses in Marina del Rey Waters. Alternative 1 will fully restore beneficial uses and attain water quality standards by removing toxic pollutants from Marina del Rey Waters and represents a benefit to the environment.

4.1.3 RECOMMENDED PROGRAM ALTERNATIVE

This environmental analysis finds that program alternative 1 is the most environmentally feasible alternative.

Alternatives 2 and 3 are not feasible alternatives. Because while they would avoid impacts due to additional implementation projects associated with the extension of the geographical area of the TMDL, the addition of a TMDL for DDT in the sediments, the addition of load allocations for the sediment impairments, and the addition of a copper water column TMDL, toxic pollutants impairment of the Marina del Rey Harbor Waters will continue. Alternatives 1 will comply with the law and remove the toxic pollutants impairment from Marina del Rey Harbor Waters.

4.2 PROJECT LEVEL ALTERNATIVES

The program alternatives above present many alternatives and options, but do not require any specific projects to achieve compliance. Rather, a project level analysis must be performed by the local agencies that are required to implement the requirements of the TMDL. (Pub. Res. Code § 21159.2.) Notably, the Regional Board is prohibited from specifying the manner of compliance with its regulations (Water Code § 13360), and accordingly, the actual environmental impacts will necessarily depend upon the compliance strategy selected by the local agencies and other permittees.

Although the Regional Board cannot mandate the manner of compliance, foreseeable environmental impacts from methods of compliance are well known, as are feasible mitigation measures. Structural implementation alternatives include: installing infiltration systems, vegetated swales, sand/media filters, and oil/water separators, and catch basin inserts; removing contaminated sediments in the harbor by dredging; upgrading storm drains, monitoring natural attenuation of contaminants, capping of contaminated sediments, replacing of copper-based antifouling paints, and diverting the low flow runoff. Non-structural BMPs include housekeeping practices, public education and outreach, trash collection/street sweeping, reducing effects of Copper –Based paints, conducting boater education program, imposing controls on Marina del Rey boat owners, implementing financial incentives, storm drain cleaning and commercial demonstrations and scientific studies.

The components assessed at a project level have specific locations which will be determined by implementing municipalities and agencies. The project level components will be subject to additional future environmental review, including review by cities and municipalities implementing Toxic Pollutants TMDL projects. Section 5 of this SED includes an extensive discussion of the project alternatives.

5. DESCRIPTION OF IMPLEMENTATION ALTERNATIVES

This Section of the SED provides a description of structural and non-structural implementation alternatives and the type of sites where they might be placed in compliance with the Toxic Pollutants TMDL.

The Regional Board is prohibited from specifying the manner of compliance with its orders (Water Code § 13360), and accordingly, the actual compliance strategies will be selected by the local agencies and other permittees. Although the Regional Board does not mandate the manner of compliance, foreseeable methods of compliance are well known. The most likely measures of compliance include structural BMPs such as 1) infiltration systems, 2) vegetated swales, 3) stormwater capture and reuse, 4) sand/media filters, 5) oil/water separators, 6) sediment dredging, 7) sediment capping, 8) switching from copper-based antifouling paints. 9) low flow diversions, and 10) catch basin inserts; as well as non-structural BMPs such as monitored natural attenuation. housekeeping practices, public education, street cleaning, and storm drain cleaning.

The project level components will be subject to additional future environmental review. A project level environmental analysis must be performed by the local agencies that are required to implement the requirements of the TMDL (Pub. Res. Code § 21159.2.).

5.1 STRUCTURAL IMPLEMENATION ALTERNATIVES (BMPS)

Structural BMPs involve the use of engineered systems and methods to treat or divert water at either the point of generation or point of discharge to either the storm system or to receiving waters. These controls can require construction and operation activities that create potentially significant environmental impacts.

5.1.1 INFILTRATION SYSTEMS

Infiltration is the process where water enters the ground and moves downward through the unsaturated soil zone. Infiltration is ideal for management and conservation of runoff because it filters pollutants through the soil and restores natural flows to groundwater and downstream water bodies. For example, an infiltration trench is a long, narrow, rock-filled trench with no outlet that receives stormwater runoff. Runoff is stored in the void space between the stones and infiltrates through the bottom and into the soil matrix. Infiltration trenches perform well for removal of fine sediment and associated pollutants. Pretreatment using buffer strips, swales, or detention basins is important for limiting amounts of coarse sediment entering the trench which can clog and render the trench ineffective (CASQA, 2003a).

5.1.2 VEGETATED SWALES

Vegetated bioswales are constructed drainage ways used to convey stormwater runoff. Vegetation in bioswales allows for the filtering of pollutants, and infiltration of runoff into groundwater. Broad swales on flat slopes with dense vegetation are the most effective at reducing the volume of runoff and pollutant removal. Bioswales planted with native vegetation offer higher resistance to flow and provide a better environment for filtering and trapping pollutants from stormwater. Vegetated bioswales generally have a trapezoidal or parabolic shape with relatively flat side slopes. Individual vegetated bioswales generally treat small drainage areas (five acres or less). A properly designed vegetated swale may achieve a 25 to 50 percent reduction in particulate pollutants conservatively, including sediment and sediment-attached metals. The hydrocarbons, lead, and zinc removal efficiencies for vegetated swales are 62%, 67%, and 71%, respectively (USEPA, 1999).

5.1.3 STORMWATER CAPTURE AND RE-USE

Stormwater capture systems contribute to the control of toxic pollutants in the watershed and harbor by reducing volume of runoff and reducing peak flows. BMPs within this category

include rain barrels, cisterns, and other containers used to hold rainwater for reuse or recharge. These systems are usually designed to capture runoff from relatively clean surfaces such as roofs, such that the water may be reused without treatment. Tank capacities range from around 55 gallons to several thousand cubic feet and can be above or below ground.

5.1.4 SAND/MEDIA FILTERS

A typical sand/media filter system contains two or more chambers. The first is the sedimentation chamber for removing floatables and heavy sediments. The second is the filtration chamber, which removes additional pollutants by filtering the runoff through a sand bed or absorptive filtering media. This type of treatment system provides high removal efficiency for sediment (CASQA, 2003a).

5.1.5 SEDIMENT CAPPING

The objective of sediment capping is to cover contaminated sediments by a layer of clean sediment, clay, gravel, or other material. The cap reduces the mobility of the pollutants and places a physical barrier between the water column and the contaminated sediment. Capping can be an effective remediation action; however it is most effective in large deep waterbodies under certain conditions. For example, the bottom sediments of the waterbody must be able to support the cap and the hydrologic conditions of the waterbody must not disturb the cap site. This option would require long term monitoring and maintenance to ensure that the contaminated sediments are not moving and that the cap is still in place.

5.1.6 REPLACEMENT OF COPPER-BASED ANTIFOULING PAINTS

Effective alternatives to copper-based antifouling paints should be considered to reduce copper levels in both sediments and harbor waters. At present, there are a number of available alternatives that have been demonstrated to be both nontoxic in nature and effective at reducing fouling growth. Examples include silicone hull coatings and hard smooth epoxy hull coatings, combined with more frequent underwater hull cleaning. In general, less toxic and non-toxic alternative coatings require more frequent cleaning in order to remove the buildup of fouling growth and prevent increased fuel consumption. If increased frequency of hull cleaning isn't adequate to prevent significant air pollution due to increased drag caused by fouling organisms, additional measures such as putting pollution control devices on boat engines may be necessary.

5.1.7 OIL/WATER SEPARATORS

Oil/water separators may remove oils and greases (and sometimes solids) from industrial waste streams and stormwater discharges. They operate by employing various physical or chemical separation methods, including gravity separation, filters, coagulation/flocculation, and flotation. They are typically installed in industrial and maintenance areas and receive oily wastewater generated during processes such as vehicle and equipment maintenance and washing. The effluent from oil/water separators may be useful for reuse or discharged to a sanitary sewer system.

5.1.8 REMOVE CONTAMINATED SEDIMENT - DREDGING

Dredging is the removal of contaminated sediments from both the Inner and Outer Harbor areas. In general, surface layers of loose rich organic material and contaminated sediments are removed from targeted areas. The dredge area would be separated by a silt curtain to isolate the work area and prevent mixing with other parts of the harbor. Dredges may be used in areas that contain contaminated sediments. Hydraulic dredging involves a dredge that floats on the water and pumps the material through a temporary pipeline to an off-site location or carriers. Grab dredges are typically mounted on crane ships or a dragline. The dredge is lowered into the material and the grab is closed while the bucket is being raised. The material maybe stored temporary within

the harbor or transported by barges and potentially sent to proposed offshore disposal facilities. Dredged-up sediment may also be temporarily stored nearby on the disposal area; once dry, the sediment would be trucked to an appropriate disposal area. This sediment would then be transported to a Class 1 hazardous waste disposal facility, or the dredged sediment may be recycled — beneficially reused within the Marina del Rey to create new land area. In some cases, sites may be capped or a combination of dredging and sediment capping may be used.

5.1.9 LOW FLOW DIVERSION

The redirection of non-stormwater flow will reduce the dry weather pollutant loading into receiving waters. Under this implementation alternative a low flow diversion device would be used to divert non-stormwater flows Marina del Rey Harbor Waters to the sanitary sewer. A low flow diversion is a device that routes non-stormwater runoff away from the storm drain system or waterbody to the sanitary sewer system for treatment. Low flow diversion devices could be installed a short distance upstream from the storm drain discharge point in order to divert flows prior to discharge. The diversion device may be designed with a storm flow bypass, so that stormwater flows may continue to directly discharge into the harbor. As part of this implementation alternative a wet well and pump station would also be constructed in order to temporarily store the diverted flow until it can be conveyed to the sanitary sewer system.

5.1.10 CATCH BASIN AND CATCH BASIN INSERTS

A catch basin or storm drain inlet is an inlet to the storm drain system that typically includes a grate or curb opening where stormwater enters the catch basin and a sump to reduce sediment, debris, and associated pollutants. A catch basin insert is any device that can be inserted into an existing catch basin design to provide some level of runoff contaminant removal. Currently, there are many different catch basin insert models available, with applications ranging from trash and debris removal to carbon adsorption of aliphatic and aromatic hydrocarbons and heavy metals removal. These catch basin inserts should also have an overflow outlet, through which water exceeding the treatment capacity can escape without flooding the adjacent area.

5.1.11 MONITORED NATURAL ATTENUATION

Natural attenuation encompasses the physical, chemical, and biological processes that the sediments may undergo, which over time will attenuate (i.e. reduce concentration and bioavailability) the impacts of contamination. These are natural processes that will occur without other remediation actions. Monitoring would be required, as part of this remediation strategy, to demonstrate that contaminants are in fact attenuating and that human health and the environment are protected. A disadvantage of choosing natural attenuation as a remediation strategy is that it generally requires long periods of time to be effective given the long half-lives of the pollutants of concern.

5.2 NON-STRUCTURAL BMPS

Non-structural BMPs include educational and pollution prevention practices designed to improve water quality by reducing a variety of toxic pollutants, including metals, organic compounds, and sediment toxicity. They do not involve fixed, permanent facilities, and they usually work by changing behavior through control programs that include, but are not limited to prevention, education, and regulation. Less significant adverse impacts on the environment are anticipated for these controls. These programs are described below:

5.2.1 HOUSEKEEPING BMPS

The enhancement or addition of housekeeping BMPs in areas with demonstrated deficiencies in existing BMPs or a high probability of contributing to stormwater pollution may prevent or reduce overall pollutant loading from port activities into harbor waters. Housekeeping BMPs may include: more rigorous spill prevention procedures for mobile fueling operations, equipment maintenance and storage procedures, cargo, and hazardous materials storage; improved hazardous material management procedures; and enhanced dust and runoff control at recyclable metal terminals (POLA and POLB, 2009). New BMPs detailed in the Water Resources Action Plan (POLA and POLB, 2009) to be instituted where appropriate may include: requiring periodic zero-discharge pavement cleaning in key areas; providing covered storage of materials and idle equipment where necessary and feasible; instituting operational controls such as modified cargo storage, cargo loading/unloading, and materials handling and storage protocols; employing dust and runoff controls at auto dismantling and boat yards where they are not already employed; employing sustainable landscaping materials and practices to reduce water, fertilizer, and pesticide use; and introducing sustainable materials and practices in building and structure maintenance.

5.2.2 PUBLIC EDUCATION AND OUTREACH

Education and outreach to residents, port tenants, and trucking firms may minimize the potential for contamination of stormwater runoff by encouraging residents and business operators to pick up litter, minimize runoff from residential and commercial facilities, and control excessive irrigation. The public is often unaware of the fact that contamination is caused by polluted runoff as excess water discharged on streets and lawns ends up in Marina del Rey Harbor Waters.

Local agencies can provide educational materials to the public via signs, internet, television, radio, and other media, and by distributing brochures, flyers, and community newsletters, creating information hotlines to educate the targeted groups, developing community events, and supporting volunteer monitoring and cleanup programs.

5.2.3 TRASH COLLECTION/STREET SWEEPING

Trash collection and street sweeping may minimize trash and pollutants on street surfaces that may impact stormwater and dry-weather runoff. Trash collection includes management of trash receptacles, and removal of trash on land and in water. Street sweeping involves employing pavement cleaning practices such as street sweeping on a regular basis to minimize trash, sediment, debris, and other pollutants that are potential sources of pollution which can end up in receiving waters. There are three types of street sweepers: mechanical, vacuum filter, and regenerative air sweepers (USEPA, 2010).

5.2.4 STORM DRAIN CLEANING

Routine cleaning of the storm drain system reduces the amount of trash entering the receiving waters, prevents clogging, and ensures the flood control capacity of the system. Cleanings may occur manually or with evacuators, vacuums, or bucket loaders. A successful storm drain cleaning program includes regular inspection and cleaning of catch basins and storm drain inlets, increased inspection and cleaning in areas with high trash accumulation, accurate recordkeeping, cleaning immediately prior to the rainy season to remove accumulated trash, and proper storage and disposal of collected material. (CASQA, 2003a)

5.2.5 CONDUCT BOATER EDUCATION PROGRAM

In order to build a consensus supporting the need and rationale for the transition from traditional toxic antifouling paints to nontoxic alternatives that will entail higher costs for initial application, the County of Los Angeles and the marina owner/operators should conduct boater

education programs. The education programs would be designed to educate the Marina del Rey boating community about the water quality problem associated with copper leaching in Marina del Rey and the nontoxic or less toxic coatings and strategies that can be implemented by individual boaters to resolve the problem. The education programs should include information on the economics and tradeoffs between the use of copper-based paints and nontoxic or less toxic alternatives.

5.2.6 Commercial Demonstrations and Scientific Studies

The County of Los Angeles and marina owners/operators in Marina del Rey could coordinate and oversee commercial and scientific studies to confirm and demonstrate the efficacy and longevity of available nontoxic and less toxic boat hull coating products. The demonstrations and studies would also allow boat repair yards and underwater hull cleaners the opportunity to develop expertise and acquire special equipment needed for the application and maintenance of nontoxic and less toxic boat hull coatings. The Regional Board may support efforts by the County of Los Angeles to seek grant funding for the commercial demonstrations and scientific studies from a variety of sources including the State Board, the USEPA, and the California Department of Boating and Waterways (DBW). Scientific research work should be conducted by qualified scientific or academic organizations.

5.2.7 Impose Controls on Marina del Rey Boat Owners

Marina owners/operators in Marina del Rey could impose and enforce controls on boat owners via conditions in lease or license agreements. For example: restrictions on the use of copper-based paints, such as a requirement that all new boats have nontoxic or less toxic coatings, or a requirement that boat owners convert to nontoxic or less toxic coatings during routine stripping; proof of hull coating composition; restrictions on hull cleaning; restrictions on number of boats; and requirements that hull cleaners use BMPs.

5.2.8 Implement Financial Incentives

Marina owners and operators in Marina del Rey could implement financial incentives to encourage the use of nontoxic and less toxic hull coatings. For example, the marina owner/operators could impose differential lease fees for individual boat owners which consider the hull coating composition of boats within the marina leaseholds with higher fees for traditional copper-based antifouling paints and lower fees for less toxic hull bottom coatings.

5.2.9 Impose Controls on Marina del Rey Marina Owners and Operators to Limit Use of Copper-Based Hull Paints

The County of Los Angeles could impose and enforce controls on Marina del Rey marinas via conditions in lease agreements and ordinances. For example, the County of Los Angeles could require restrictions on the use of copper-based paints, such as requiring that all new boats have nontoxic or less toxic coatings and requiring conversion to nontoxic or less toxic coatings during routine stripping; proof of hull coating composition; restrictions on hull cleaning; and/or restrictions on the number of boa

5.2.10 Implement Financial Incentives to Encourage the Use of Alternative Antifouling Strategies

The County of Los Angeles could implement financial incentives to encourage the use of nontoxic and less toxic hull coatings. For example, the County of Los Angeles may impose differential lease fees for Marina del Rey marina owners/operators which control the hull coating composition of boats within the marina leaseholds: higher fees for traditional copper-based antifouling paints and lower fees for less toxic hull bottom coatings. Additionally, the Port could impose the same types of controls and financial incentives on marinas throughout Marina del Rey to "level the economic playing field."

5.2.11 REDUCE EFFECTS OF COPPER-BASED PAINTS THROUGH MANAGEMENT PRACTICES

Efforts should be made to reduce the amount of copper discharged from boat hulls with copper based paints by implementing the BMPs listed below.

- Boat owners could use slip liners to isolate boat hulls from waters;
- Boat owners could use dry storage (e.g., hoists, lifts) or landside boat storage facilities for smaller boats;
- Hull cleaners could use less abrasive hull cleaning methods and materials on boats with copper-based antifouling paints; and
- Hull cleaners could train in the maintenance of nontoxic and less toxic hull coatings and purchase the necessary special equipment

6. SETTING, IMPACTS, AND MITIGATION

6.1 INTRODUCTION

This section presents the environmental setting, impacts, and mitigation, where applicable, for the proposed implementation alternatives evaluated in this draft Substitute Environmental Document (SED). The implementation alternatives for achieving compliance with the Toxic Pollutants TMDL are described in detail in Section 5 of this document and in the TMDL Staff Report. Each of these implementation alternatives has been independently evaluated in this draft SED. The environmental setting for the Toxic Pollutants TMDL is discussed in Section 6.1.3, as well as the installation, operation, and maintenance activities associated with the Toxic Pollutants TMDL. There is also a discussion of the site-specific and device-specific environmental impacts from implementing the Toxic Pollutants TMDL. The environmental checklist, which includes the potential negative environmental impacts of the Implementation Alternatives (see Section 5 for a detailed description of the TMDL Implementation Alternatives), is also included in Section 6.2.

6.1.1 APPROACH TO ENVIRONMENTAL SETTING AND IMPACT ANALYSIS

Any potential environmental impacts associated with the waterbodies of concern in the Toxic Pollutants TMDL depend upon the specific compliance projects selected by the responsible jurisdictions, most of whom are public agencies subject to their own CEQA obligations (see Pub. Res. Code § 21159.2). This CEQA substitute environmental document identifies broad mitigation approaches that could be considered at the program level. Consistent with PRC§21159, the SED does not engage in speculation or conjecture, but rather considers the reasonably foreseeable environmental impacts of the foreseeable methods of compliance, the reasonably foreseeable feasible mitigation measures, and the reasonably foreseeable alternative means of compliance, which would avoid or reduce the identified impacts.

This draft SED evaluates the impacts of each implementation alternative relative to the subject resource area. The physical scope of the environmental setting and the analysis in this SED is the Marina del Rey Harbor area (Figure 6-1). This area is the geographic area for assessing impacts of the different implementation alternatives, because the discharge of heavy metals and organic compounds to this area would be controlled and/or eliminated by any one of or a combination of the implementation alternatives. Also, any potential impacts of implementing the proposed alternatives would be focused in this area.

The implementation alternatives in this draft SED are evaluated at a program level for impacts for each resource area. An assumption is made that a more detailed project level analysis will be conducted by all responsible agencies and jurisdictions once their mode of achieving compliance with the Toxic Pollutants TMDL has been determined. The analysis in this draft SED assumes that, project proponents will design, install, and maintain implementation measures following all applicable laws, regulations, ordinances, and formally adopted municipal and/or agency codes, standards, and practices. Several handbooks are available and currently used by municipal agencies that provide guidance for the selection and implementation of BMPs (Caltrans, 2010, CASQA, 2003a, CASQA, 2003b, WERF, 2005).

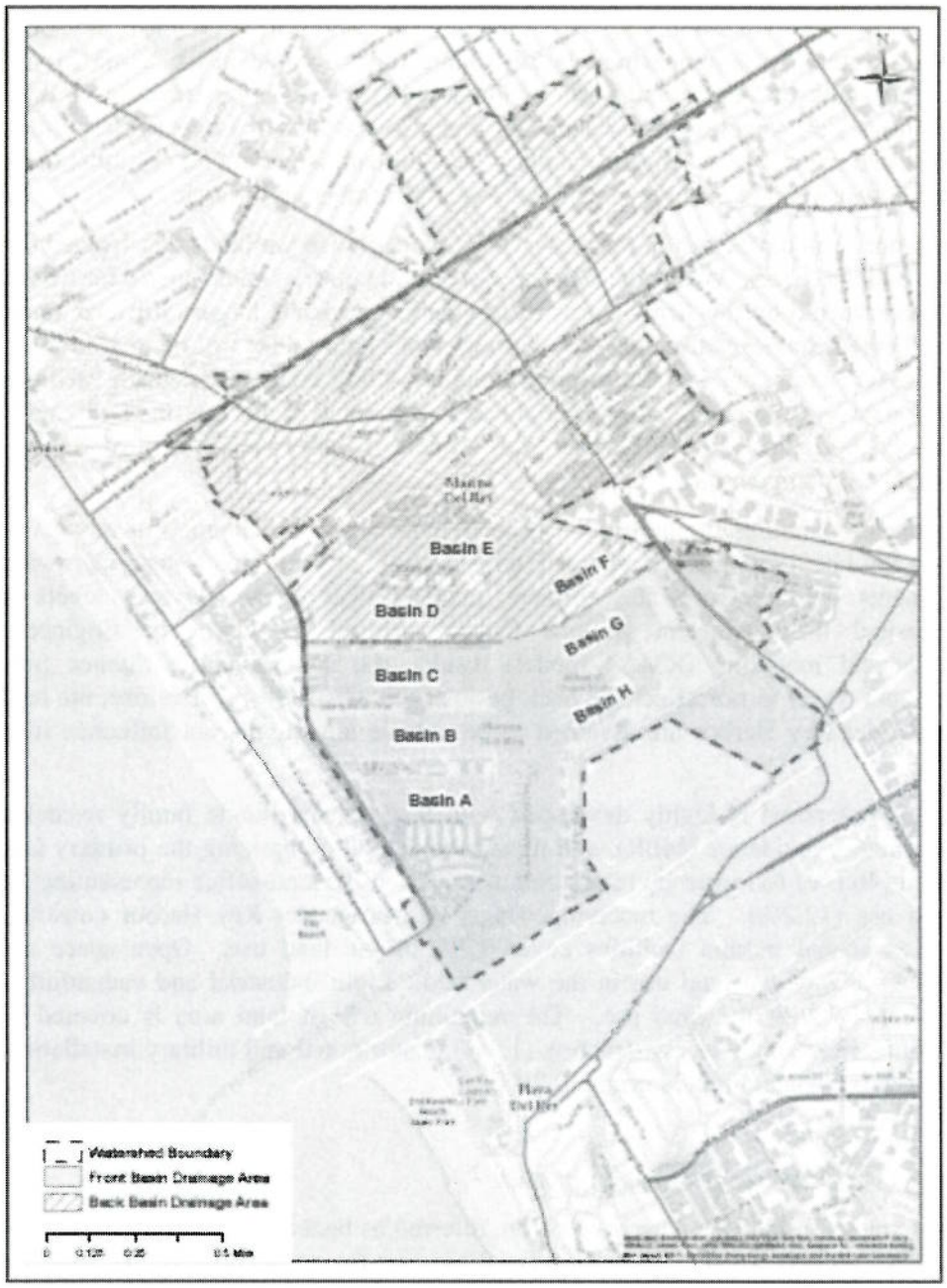

Figure 6- 1. Marina del Rey Watershed

6.1.2 PROGRAM LEVEL VERSUS PROJECT LEVEL ANALYSIS

As previously discussed, the Regional Board is the lead agency for the TMDL program, while the responsible agencies are the lead agencies for any and all projects implemented, within their jurisdiction, to comply with the program. The Regional Board does not specify the actual means of compliance by which responsible agencies choose to comply with the TMDL. Therefore, the implementation alternatives are mostly evaluated at a program level in this draft SED. The alternatives assessed at a program level generally are projects that would be implemented as part of the TMDL compliance. PRC §21159 places the responsibility of project level analysis on the agencies that will implement the Regional Board's TMDL.

6.1.3 ENVIRONMENTAL SETTING

The Marina del Rey watershed is approximately 2.9 square miles located in the Santa Monica Bay, California. It is south of Venice and north of Playa del Rey, and approximately 15 miles southwest of downtown Los Angeles. The watershed includes the City of Los Angeles, Culver City and unincorporated areas of Los Angeles County. The climate is warm and dry most of the year with intermittent wet weather events typically between November and March.

Marina del Rey Harbor was developed in the early 1960s on degraded wetlands that formed part of the estuary of Ballona Creek Wetlands. Marina del Rey Harbor, which opens into Santa Monica Bay, was constructed by the Army Corps of Engineers and is the largest artificial small-craft harbor in the United States. Marina del Rey harbors more than 6,000 wet berthed slips for privately owned pleasure craft, dry storage of approximately 3,000 boats, and launch facilities, which can accommodate approximately 240 trailered boats. The back basins (Basins D, E and F) house approximately 2,000 slips (Joseph Chesler, Los Angeles County Department of Beaches and Harbors, personal communication).

The Corps of Engineers maintains the harbor entrance channel and main channel for navigation by dredging. Since the late 1980's, the Corps of Engineers has not been able to use open water disposal for sediments dredged from the entrance channel due to the elevated levels of contaminants deposited from adjacent Ballona Creek. Based on Corps of Engineers' hydrodynamic numerical modeling (RMA4 model) results, the contaminant influence from Ballona Creek does not travel to nor affect the back basins (USACE 1999). Therefore, the back basins of the Marina del Rey Harbor are assumed to be outside any significant influence from Ballona Creek.

The Marina del Rey watershed is highly developed with high-density single family residence (HDSFR), multiple family residence (MFR), and mixed residential comprising the primary land use in the watershed (46.6%) followed by retail, commercial, and general office representing the second largest land use (12.2%). The receiving waters of Marina del Rey Harbor constitute 11.6% of the land area and marina facilities cover 9.2% of the land use. Open space and recreation represents 4.8% of the land use in the watershed. Light industrial and vacant/urban vacant each represent 4.7% of the land use. The remaining 6% of land area is covered by educational institutions (3.8%), under construction (1.2%), institutional and military installations (0.6%), transportation (0.3%), and mixed urban (0.2%).

6.1.4 BENEFICIAL USES OF MARINA DEL REY HARBOR WATERS

The various uses of waters in the Los Angeles Region, referred as beneficial uses, are designated in the Basin Plan (LARWQCB, 1994). These beneficial uses are the cornerstone of the State and Los Angeles Regional Water Quality Control Board's effort to protect water quality, as water quality objectives are set at levels that will protect the most sensitive beneficial use of a waterbody. Brief descriptions of the beneficial uses most likely to be impaired due to heavy metals and organic pollutants in Marina del Rey Harbor Waters are provided in this section.

The Basin Plan for the Los Angeles Regional Board (CRWQCB, 1994) defines 7 existing (E), beneficial uses for Marina del Rey Harbor (Table 6-1).

- **Navigation (NAV)**
  Navigation (NAV) beneficial uses are defined as uses of water for shipping, traveling, or other transportation by privet, military, or commercial vessels.

- **Habitat-Related Uses (MAR and WILD)**
  Several habitat-related beneficial uses are designated for Marina del Rey Harbor Waters. These uses include: the marine (MAR) habitat; estuarine habitat (EST); wetland land habitat (WET); rare, threatened, or endangered species habitat (RARE); warm freshwater habitat (WARM); and wildlife habitat (WILD).

- **Human Consumption of Aquatic Organisms (COMM and SHELL)**
  Beneficial uses of Marina del Rey Harbor Waters include commercial or recreational collection of fish, shellfish, or other organisms including, but not limited to, uses involving organisms intended for human consumption or bait purposes.

- **Recreational Uses (REC-1 and REC-2)**
  Water Contact Recreation (REC-1) and Non-Contact Water Recreation (REC-2) are defined as uses of water for recreational activities involving body contact and proximity to water. Some of these activities include swimming and fishing, and where the ingestion of water is reasonably possible.

Table 6- 1. Beneficial Uses of Marina del Rey Harbor Waters (LARWQCB, 2005)

Coastal Feature	Hydro Unit #	NAV	REC1	REC2	COMM	MAR	WILD	SHELL
Marina del Rey Harbor	405.13	E	E	E	E	E	E	E

Beneficial use designations apply to all tributaries to the indicated waterbody, if not listed separately.
E: Existing beneficial use

6.2. CEQA CHECKLIST AND DETERMINATION

6.2.1 ENVIRONMENTAL CHECKLIST

	ENVIRONMENTAL CHECKLIST	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant	No Impact
1.	**Earth. Will the proposal result in:**				
	a. Unstable earth conditions or in changes in geologic substructures?	X			
	b. Disruptions, displacements, compaction or overcoming of the soil?	X			
	c. Change in topography or ground surface relief features?				X
	d. The destruction, covering or modification of any unique geologic or physical features?				X
	e. Any increase in wind or water erosion of soils, either on or off the site?	X			
	f. Changes in deposition or erosion of beach sands, or changes in siltation, deposition or erosion which may modify the channel of a river or stream or the bed of the ocean or any bay, inlet or lake?	X			
	g. Exposure of people or property to geologic hazards, such as earthquakes, landslides, mudslides, ground failure, or similar hazards?				X
2.	**Air. Will the proposal result in:**				
	a. Substantial air emissions or deterioration of ambient air quality?	X			
	b. The creation of objectionable odors?	X			
	c. Alteration of air movement, moisture or temperature, or any change in climate, either locally or regionally?	X			
3.	**Water. Will the proposal result in:**				
	a. Changes in currents, or the course of direction or water movements, in either marine or fresh waters?	X			

	ENVIRONMENTAL CHECKLIST	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant	No Impact
	b. Changes in absorption rates, drainage patterns, or the rate and amount of surface water runoff?	X			
	c. Alterations to the course of flow of flood waters?	X			
	d. Change in the amount of surface water in any water body?	X			
	e. Discharge into surface waters, or in any alteration of surface water quality, including but not limited to temperature, dissolved oxygen, or turbidity?	X			
	f. Alteration of the direction or rate of flow of ground waters?	X			
	g. Change in the quantity or quality of ground waters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations?	X			
	h. Substantial reduction in the amount of water otherwise available for public water supplies?				X
	i. Exposure of people or property to water related hazards such as flooding or tidal waves?	X			
4.	**Plant Life. Will the proposal result in:**				
	a. Change in the diversity of species, or number of any species of plants (including trees, shrubs, grass, crops, microflora and aquatic plants)?	X			
	b. Reduction of the numbers of any unique, rare or endangered species of plants?	X			
	c. Introduction of new species of plants into an area, or in a barrier to the normal replenishment of existing species?	X			
	d. Reduction in acreage of any agricultural crop?				X
5.	**Animal Life. Will the proposal result in:**				

	ENVIRONMENTAL CHECKLIST	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant	No Impact
	a. Change in the diversity of species, or numbers of any species of animals (birds, land animals including reptiles, fish and shellfish, benthic organisms, insects or microfauna)?	X			
	b. Reduction of the numbers of any unique, rare or endangered species of animals?	X			
	c. Introduction of new species of animals into an area, or result in a barrier to the migration or movement of animals?	X			
	d. Deterioration to existing fish or wildlife habitat?	X			
6.	**Noise. Will the proposal result in:**				
	a. Increases in existing noise levels?	X			
	b. Exposure of people to severe noise levels?	X			
7.	**Light and Glare. Will the proposal:**				
	a. Produce new light or glare?	X			
8.	**Land Use. Will the proposal result in:**				
	a. Substantial alteration of the present or planned land use of an area?	X			
9.	**Natural Resources. Will the proposal result in:**				
	a. Increase in the rate of use of any natural resources?				X
	b. Substantial depletion of any nonrenewable natural resource?				X

	ENVIRONMENTAL CHECKLIST	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant	No Impact
10.	**Risk of Upset. Will the proposal involve:**				
	a. A risk of an explosion or the release of hazardous substances (including, but not limited to: oil, pesticides, chemicals or radiation) in the event of an accident or upset conditions?	X			
11.	**Population. Will the proposal:**				
	a. Alter the location, distribution, density, or growth rate of the human population of an area?				X
12.	**Housing. Will the proposal:**				
	a. Affect existing housing, or create a demand for additional housing?				X
13.	**Transportation/Circulation. Will the proposal result in:**				
	a. Generation of substantial additional vehicular movement?	X			
	b. Effects on existing parking facilities, or demand for new parking?	X			
	c. Substantial impact upon existing transportation systems?	X			
	d. Alterations to present patterns of circulation or movement of people and/or goods?	X			
	e. Alterations to waterborne, rail or air traffic?	X			
	f. Increase in traffic hazards to motor vehicles, bicyclists or pedestrians?	X			
14.	**Public Service. Will the proposal have an effect upon, or result in a need for new or altered governmental services in any of the following areas:**				

	ENVIRONMENTAL CHECKLIST	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant	No Impact
	a. Fire protection?	X			
	b. Police protection?	X			
	c. Schools?				X
	d. Parks or other recreational facilities?	X			
	e. Maintenance of public facilities, including roads?	X			
	f. Other governmental services?	X			
15.	**Energy. Will the proposal result in:**				
	a. Use of substantial amounts of fuel or energy?	X			
	b. Substantial increase in demand upon existing sources of energy, or require the development of new sources of energy?	X			
16.	**Utilities and Service Systems. Will the proposal result in a need for new systems, or substantial alterations to the following utilities:**				
	a. Power or natural gas?	X			
	b. Communications systems?				X
	c. Water?				X
	d. Sewer or septic tanks?	X			
	e. Storm water drainage?	X			
	f. Solid waste and disposal?	X			
17.	**Human Health. Will the proposal result in:**				
	a. Creation of any health hazard or potential health hazard (excluding mental health)?	X			
	b. Exposure of people to potential health hazards?	X			

	ENVIRONMENTAL CHECKLIST	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant	No Impact
18.	**Aesthetics. Will the proposal result in:**				
	a. The obstruction of any scenic vista or view open to the public?	X			
	b. The creation of an aesthetically offensive site open to public view?	X			
19.	**Recreation. Will the proposal result in:**				
	a. Impact upon the quality or quantity of existing recreational opportunities?	X			
20.	**Archeological/Historical. Will the proposal:**				
	a. Result in the alteration of a significant archeological or historical site structure, object or building?	X			
21.	**Mandatory Findings of Significance**				
	Potential to degrade: Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	X			
	Short-term: Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? (A short-term impact on the environment is one which occurs in a relatively brief, definitive period of time, while long-term impacts will endure well into the future.)				X

	ENVIRONMENTAL CHECKLIST	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant	No Impact
	Cumulative: Does the project have impacts which are individually limited, but cumulatively considerable? (A project may impact on two or more separate resources where the impact on each resource is relatively small, but where the effect of the total of those impacts on the environment is significant.)	X			
	Substantial adverse: Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	X			

6.2.2 Discussion of Environmental Evaluation

The analysis of potential environmental impacts is based on the numerous alternative means of compliance available for controlling toxic pollutants in Marina del Rey Harbor Waters in response to the proposed Basin Plan amendment. These structural BMPs include installing infiltration systems, vegetated swales, sand/media filter, oil/water separators, and catch basin inserts; removing contaminated sediments in the harbor, monitoring natural attenuation of contaminants, capping of contaminated sediments, replacing of copper-based antifouling paints; and diverting the low flow runoff. Non-structural BMPs include housekeeping BMPs, public education and outreach, trash collection/street sweeping, storm drain cleaning, reducing effects of copper-based paints through management practices, commercial demonstrations and scientific studies, imposing controls on marina del Rey boat owners, implementing financial incentives, imposing controls on marina del Rey marina owners and operators to limit use of copper-based hull paints, implementing financial incentives to encourage the use of alternative antifouling strategies, and conducting boater education programs. Potential impacts are discussed below. Many of the mitigation measures identified are common practices currently employed by agencies when planning and implementing storm water BMPs. Agencies such as Caltrans, CASQA, and WERF publish handbooks containing guidance on the selection, siting, design, installation, monitoring, and evaluation of stormwater BMPs (Caltrans, 2010, CASQA, 2003a, CASQA, 2003b, WERF, 2005).

Pursuant to section 13360 of the Water Code, the Regional Board cannot dictate which compliance measures responsible agencies may choose to adopt or which mitigation measures they would employ to implement the Toxic Pollutants TMDL. However, the Regional Board does recommend that appropriate compliance and mitigation measures as discussed herein, which are readily available and generally considered to be consistent with industry standards, be applied in order to reduce, and if possible avoid, potential environmental impacts, such that there is no significant impact. Since the decision to perform these measures is strictly within the responsibility and jurisdiction of the individual implementing agencies, such measures can and should be adopted by these agencies. (Title 14, California Code of Regulations, Section 15091(a)(2).)

Potential reasonably foreseeable impacts were evaluated with respect to earth, air, water, plant life, animal life, noise, light, land use, natural resources, risk of upset, population, housing, transportation, public services, energy, utilities and services systems, human health, aesthetics, recreation, and archeological/historical concerns. Additionally, mandatory findings of significance regarding short-term, long-term, cumulative and substantial impacts were evaluated. The evaluation considered whether the construction or implementation of the BMPs would cause a substantial, adverse change in any of the physical conditions within the area affected by the BMP. In addition, the evaluation considered environmental effects in proportion to their severity and probability of occurrence.

The following analysis considers a range of structural and non-structural BMPs that might be used, but is by no means an exhaustive list of available BMPs. When BMPs are selected for implementation, a project level and site-specific CEQA analysis must be performed by the responsible agencies.

1. **Earth. a.** Will the proposal result in unstable earth conditions or in changes in geologic substructures?

Answer: Potentially Significant Impact

Infiltration Systems and Vegetated Swales

These implementation alternatives could potentially result in unstable earth conditions if loose or compressible soils are present, or if such BMPs were to be located where infiltrated stormwater flowing as groundwater could destabilize existing slopes. Proper sizing and siting is necessary to ensure that BMPs are installed away from areas with loose or compressible soils, areas with slopes that could destabilize from increased groundwater flow. Geological surveys can be conducted prior to installation to aid in siting the devices.

Stormwater Capture Systems

Installation of stormwater capture systems would not be of the size or scale to result in unstable earth conditions or in changes in geologic substructures (tank capacities range from around 55 gallons to several thousand cubic feet).

Sand/Media Filters

Media filters would not be of the size or scale to result in unstable earth conditions or in changes in geologic substructures (see Section 5.1.4). Media filters, including those with underground storage vaults, require relatively shallow earthwork, as they are typically less than 10 feet deep and have a footprint of approximately 700 square feet (to treat 2 acres).

Sediment Capping

Sediment capping would not be of the depth or scale to result in unstable conditions or changes in the geological substructures.

Replacement of copper-based antifouling paints

Replacement of copper-based antifouling paints is not anticipated to result in adverse impacts to geologic substructures or result in unstable earth conditions.

Oil/Water Separators

Oil/Water Separators would not be of the size or scale to result in unstable earth conditions or in changes in geologic substructures.

Remove Contaminated Sediments - Dredging

Dredging involves the removal of contaminated sediments from the harbor, but would not be to the depth or scale which would cause unstable conditions or changes in the geological substructures. At this depth and scale, dredging should not result in unstable earth conditions.

Low Flow Diversion

Construction of diversion and treatment facilities requires relatively shallow earthwork, as they are surface structures and would not cause changes in geologic substructures. However, the installation of diversion and/or treatment devices may potentially result in unstable earth conditions, if loose or compressible soils are present. These impacts can be avoided by proper studying, monitoring, and siting measures of compliance away from areas with loose or compressible sands.

Catch Basin Inserts

Catch basin inserts fit directly into curbside catch basins in urbanized areas and require no construction or ground disturbance. There is therefore no potential to impact earth conditions or geologic substructures from this alternative means of compliance.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not anticipated to result in adverse impacts to geologic substructures or result in unstable earth conditions.

Non-Structural BMPs

Non-structural BMPs would involve no change to the physical environment either directly or indirectly and would have no impact on earth conditions or geologic substructures.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

1. Earth. b. Will the proposal result in disruptions, displacements, compaction or overcoming of the soil?

Answer: Potentially Significant Impact

Infiltration Systems, Vegetated Swales, Stormwater Capture Systems, Media Filters, and Oil/Water Separators

These implementation alternatives may involve soil excavation or ground disturbance that may potentially cause disruptions, displacements, compaction or overcoming of the soil. Notably, the project areas have already suffered soil compaction and hardscaping. Impacts would be similar to those caused by typical temporary capital improvement construction and maintenance activities currently performed by responsible agencies, and no long-term impacts to the soil are expected. However, to the extent that any soil is disturbed during construction, the impacts can be minimized by proper siting, design, and construction practices. Standard construction techniques, including but not limited to, shoring, piling, and soil stabilization can also mitigate potential short-term impacts. It is anticipated that the potential impact may be mitigated by adhering to seismic and geotechnical codes and requirements for the TMDL area.

Sediment Capping

Sediment capping would not be of the depth or scale to result in disruptions, compaction or overcoming of the soil. Contaminated layers of sediment and soil in the harbor bottom will be covered; however, this displacement is considered a positive impact.

Replacement of copper-based antifouling paints

Replacement of copper-based antifouling paints is not anticipated to result in disruptions, compaction or overcoming of the soil.

Remove Contaminated Sediments - Dredging

Dredging will involve the removal of the top layers of contaminated sediment; however this will not be to the depth or scale which would result in disruptions, compactions, or overcoming on the soil. Contaminated layers of sediment and soil in the harbor bottom will be removed and displaced. However, this displacement is considered a positive impact.

Low Flow Diversion

Diversion and/or treatment facilities would be sited in the urbanized portions of the watershed, which have already suffered soil compaction and hardscaping. However, to the extent that any soil is disturbed during construction, the impacts can be minimized by proper siting, design, and standard construction techniques, including but not limited to, shoring, piling and soil stabilization.

Catch Basin Inserts

Catch basin inserts fit directly into curbside catch basins in urbanized areas and require no construction or ground disturbance. There is therefore no potential to cause disruptions, displacements, compaction or overcoming of the soil from this alternative means of compliance.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not expected to result in disruptions, displacements, compaction, or overcoming of the soil.

Non-Structural BMPs

Non-structural BMPs would involve no change to the physical environment either directly or indirectly and would have no potential to cause disruptions, displacements, compaction or overcoming of the soil.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

1. **Earth. c.** Will the proposal result in change in topography or ground surface relief features?

Answer: No Impact

Infiltration Systems, Vegetated Swales, Stormwater Capture Systems, Media Filters, and Oil/Water Separators

These alternatives will require soil excavation or ground disturbance. However, it is not expected that they would be of the size or scale that would impact topography or ground surface relief features.

Sediment Capping

Sediment capping would not be of the depth or scale to result in an impact to topography or ground surface relief features.

Replacement of copper-based antifouling paints

Replacement of copper-based antifouling paints is not expected to result in change in topography or ground surface relief features.

Remove Contaminated Sediment - Dredging

Dredging and sediment disposal operations will require sediment excavation or ground disturbance. However, it is not expected that they would be of the size or scale that would impact topography or ground surface relief features.

Low Flow Diversion

BMPs associated with diverting and or treating runoff would not be of the size or scale to result in unstable earth conditions, changes in geologic substructures, topography or ground surface relief features.

Catch Basin Inserts

Catch basin inserts fit directly into curbside catch basins in urbanized areas and require no construction or ground disturbance. Therefore, there is no potential to impact topography or ground surface relief features from this alternative means of compliance.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not expected to result in change in topography or ground surface relief features.

Non-Structural BMPs

Non-structural BMPs would involve no change to the physical environment either directly or indirectly and would have no impact on topography or ground surface relief features.

1. Earth d. Will the proposal result in the destruction, covering or modification of any unique geologic or physical features?

Answer: No Impact

Infiltration Systems, Vegetated Swales, Stormwater Capture Systems, Media Filters, Sediment Capping, and Oil/Water Separators.

These alternatives would not be of the size or scale to result in destruction, covering or modification of any unique geologic or physical features.

Remove Contaminated Sediment - Dredging

Dredging will remove contaminated sediments from the harbor bottom and will also require temporary storage of the dredge material near the harbor prior to disposal. However, these activities are not expected to be of the size or scale that would result in the destruction, covering, or modification of any unique geological or physical features. Moreover, dredging will be a temporary activity taking place in the harbor; it will not permanently change the features of the landscape in the area.

Low Flow Diversion

BMPs associated with diverting and or treating runoff would not be of the size or scale to result in destruction, covering or modification of any unique geologic or physical features.

Catch Basin Inserts

Catch basin inserts fit directly into curbside catch basins in urbanized areas and require no construction or ground disturbance. Therefore, there is no potential to result in the destruction, covering or modification of any unique geologic or physical features from this alternative means of compliance.

Non-Structural BMPs

Non-structural BMPs would involve no change to the physical environment either directly or indirectly and would have no potential to result in the destruction, covering or modification of any unique geologic or physical features.

1. Earth. e. Will the proposal result in any increase in wind or water erosion of soils, either on or off the site?

Answer: Potentially Significant Impact

There is the potential for soil erosion to occur under the implementation alternatives. Large volumes of soils and sediments may be dredged and excavated, which will expose areas of soil to wind and water erosion. However, upon the completion of dredging, installation of the infiltration systems, vegetated swale, stormwater capture systems, media filters, and/or oil/water separators, erosion potential will be minimal. The potential for soil erosion will be temporary and is expected to cease with the cessation of construction and dredging activities. To mitigate soil erosion once projects are completed, all soils used in the project should be properly compacted in accordance with the County's specifications, dredge material should be properly disposed, and slopes of the open channel can be stabilized with native vegetation. The implementation alternatives are subject to Standard Urban Storm Water Mitigation Plan (SUSMP) requirements for erosion and sedimentation control during construction. BMPs should be undertaken to control runoff and erosion from earth-moving activities such as excavation, recontouring, and compaction. All trenching and recontouring activities should be performed under the observation of a qualified engineer. These measures will reduce the potential for wind or water erosion of soil from the area.

Infiltration Systems, Vegetated Swales, Stormwater Capture Systems, Media Filters, and Oil/Water Separators

These implementation alternatives may result in soil excavation during construction, which could introduce the potential for soil to be eroded. Erosion of soils may occur as a short-term impact during construction. Construction BMPs should be used to minimize sediment runoff. Responsible agencies may plant cover crops or buffer strips to increase soil infiltration and reduce runoff in order to reduce soil erosion. Construction plans should also minimize clearing and grading activities and phase construction to limit soil exposure, stabilize exposed soils immediately, protect steep slopes and cuts, and install sediment controls. Greater utilization of low impact development (LID) can further mitigation the potential for erosion. Construction sites are required to retain sediment on site, both under general construction storm water permits and through the construction program of the applicable MS4, both of which are designed to minimize or eliminate erosion impacts on receiving water.

Replacement of copper-based antifouling paints

Replacement of copper-based antifouling paints is not expected to result in any increase in wind or water erosion of soils, either on or off the site.

Remove Contaminated Sediments – Dredging and Sediment Capping

Dredging or sediment capping will include the temporary storage of dredge materials prior to disposal, and these materials may be subject to erosion processes. This can be mitigated by covering the dredge materials during rainy or windy conditions. Once the dredge material is dry and disposed of, the potential for erosion at the site will cease. Erosion may occur as a short-term impact but can be mitigated.

Low Flow Diversion

Diversion and/or treatment BMPs may result in soil excavation during construction which could introduce the potential for soil to be eroded. Wind or water erosion of soils may occur as a potential short-term impact. In urbanized areas, on-site soil erosion during construction activities will be similar to typical temporary capital improvement projects and maintenance activities currently performed by the municipalities. Typical established construction BMPs should be used during implementation to minimize offsite sediment runoff. Construction sites are required to retain sediment on site, both under general construction storm water permits and through the construction program of the applicable MS4 permits, both of which are designed to minimize or eliminate erosion impacts on receiving water. Over the long term, off-site erosion of natural channels could potentially be reduced if the structural BMPs divert storm water from entering the receiving waters, or reduce the runoff flow velocity, which may be considered a beneficial impact.

Catch Basin Inserts

Catch basin inserts fit directly into curbside catch basins in urbanized areas and require no construction or ground disturbance. There is therefore no potential to result in any increase in wind or water erosion of soils, either on or off the site from this alternative means of compliance.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not expected to result in any increase in wind or water erosion of soils, either on or off the site.

Non-Structural BMPs

Non-structural BMPs would involve no change to the physical environment either directly or indirectly and would not result in increase in wind or water erosion of soils, either on or off the site.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

1. Earth. f. Will the proposal result in changes in deposition or erosion of beach sands, or changes in siltation, deposition or erosion which may modify the channel of a river or stream or the bed of the ocean or any bay, inlet or lake?

Answer: Potentially Significant Impact

Infiltration Systems and Vegetated Swales

Deposition of significant volumes of sediment to the Marina del Rey Harbor Waters occurs mostly during wet-weather flows. Infiltration systems, vegetated swales, and media filters that remove sediment load could impact deposition of sand in the Marina del Rey harbors. These facilities are designed to treat, retain, filter, and or infiltrate runoff. Therefore, these BMPs that capture sediment, resulting in possible changes in deposition or erosion, can be mitigated if it becomes necessary through sand replacement and importation.

Stormwater Capture Systems

Stormwater Capture Systems are small on-site systems used to capture rainwater and on-site runoff and would not result in changes in siltation, deposition or erosion.

Sand/Media Filters

Media filters may impact siltation or deposition of sand in the Harbors. Reduction in siltation in the Marina del Rey Harbors may be considered a positive impact as fine sediments may contain pollutants. However, sediment release is important for beach replenishment. Impacts to deposition of beach sand may be mitigated by further study at the project level and by on-going monitoring to determine the amount and quality of sediment retained by filters that would otherwise enter the Marina del Rey Harbors.

Replacement of copper-based antifouling paints

Replacement of copper-based antifouling paints is not expected to result in changes in or erosion of beach sands, or changes in siltation, deposition or erosion which may modify the bed of the ocean or the bay.

Remove Contaminated Sediments – Dredging and Sediment Capping

Dredging or sediment capping will modify the harbor bed by removing or adding material that has been deposited in the harbor from years of sedimentation processes. Dredging will not increase sedimentation in the harbor. There will be a change in the harbor bed under this implementation alternative, but it is a positive change and improves the harbor by removing contaminated sediments. There may be increased sediment resuspension in the harbor during the actual dredging or capping process. However, this impact is considered short term and temporary.

Low Flow Diversion

BMPs that divert and/or treat are designed to divert low-flows from urbanized areas to treatment facilities rather than directly discharging into surface waters. Low-flows do not carry much sediment or silt. Therefore, these BMPs would not result in changes in deposition or erosion of beach sands, or changes in siltation, deposition or erosion.

Catch Basin Inserts

Catch basin inserts fit directly into curbside catch basins in urbanized areas. There is no potential to result in changes in siltation, deposition or erosion which may modify the bed of the channel or harbor.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not expected to result in changes in or erosion of beach sands, or changes in siltation, deposition or erosion which may modify the bed of the ocean or the bay.

Non-Structural BMPs

Non-structural BMPs would involve no change to the physical environment either directly or indirectly and would not result in changes in siltation, deposition, or erosion which may modify the bed of the ocean or bay.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the responsible and jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

1. Earth. g. Will the proposal result in exposure of people or property to geologic hazards, such as earthquakes, landslides, mudslides, ground failure, or similar hazards?

Answer: No Impact

Southern California is recognized as a seismically active area. Reasonably well-established historical records of earthquakes in California have been compiled for approximately the past 200 years. The project site is not expected to experience primary surface fault rupture or related ground deformation.

It is not reasonably foreseeable that responsible agencies would choose to comply with the TMDL through structural means in areas where doing so would result in exposure of people or property to geologic hazards including earthquakes, landslides, mudslides, ground failure, or similar hazards.

2. **Air. a.** Will the proposal result in substantial air emissions or deterioration of ambient air quality?

Answer: Potentially Significant Impact

The Toxic Pollutants TMDL area is located within Los Angeles County. Los Angeles County is part of the South Coast Air Basin (SCAB) and is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The potential implementation alternatives may result in short-term construction impacts related to air quality. Once construction of the project has been completed, the on-site activities would return to preexisting levels. The following analysis focuses on air quality impacts associated with the construction of the potential implementation alternatives.

Infiltration Systems, Vegetated Swales, Stormwater Capture Systems, Media Filters, Oil/Water Separators, and Low Flow Diversion

Short term increases in traffic during the construction and installation of these implementation BMPs, and long-term increases in traffic caused by ongoing maintenance of these devices (e.g., delivery of materials) are potential sources of increased air pollutant emissions, including greenhouse gas emissions. Mitigation measures for increased air emissions due to increased vehicle trips or for construction equipment due to the installation of divert and or treat BMPs may include, but are not limited to, the following: 1) use of construction, and maintenance vehicles with lower-emission engines, 2) use of soot reduction traps or diesel particulate filters, 3) use of emulsified diesel fuel, and 4) proper maintenance of vehicles so they operate cleanly and efficiently.

Replacement of copper-based antifouling paints

Increased growth of fouling organisms could occur as a result of boat owners converting from copper-based antifouling paints to alternative coatings and strategies which may prove to be less effective. Less effective antifoulant coatings may result in increased fouling community growth on boat hulls. Increased fouling community growth will resulted in increased hull bottom drag and corrosion, and a subsequent decrease in safety, maneuverability, and fuel efficiency. A decrease in fuel efficiency would lead to an increase in gasoline consumption for motorized boats, which in turn could have adverse effects on air quality because of increased gasoline combustion. To avoid this potentially significant impact, effective alternatives to copper-based antifouling paints should be considered. At present, there are a number of available alternatives that have been demonstrated to be both nontoxic in nature and effective at reducing fouling growth. Examples include silicone hull coatings and hard smooth epoxy hull coatings, combined with more frequent underwater hull cleaning. In general, less toxic and non-toxic alternative coatings require more frequent cleaning in order to remove the buildup of fouling growth and

prevent increased fuel consumption. If increased frequency of hull cleaning isn't adequate to prevent significant air pollution, additional measures such as putting pollution control devices on engines may be necessary.

In order to replace copper-based paints with non-toxic antifouling coatings, boats will have to be stripped prior to application of the new coatings, which could generate particulate emissions if mechanical stripping is employed. This impact can be mitigated by controlling dust through the use of particle pollution controls and reducing exposure of workers to dust by requiring respirators.

Non-toxic antifouling coatings may pose impacts to air quality due to increased levels of volatile organic compounds in the coatings' formulations, which may be added to improve the application of the non-toxic materials. To avoid this impact, alternative coatings should comply with California requirements for VOC levels in coatings.

Remove Contaminated Sediments – Dredging and Sediment Capping

Dredging or sediment capping requires the use of heavy equipment (i.e., the dredge itself and trucks to transport dredge material). The adverse impacts to ambient air quality may result from short-term operation of the dredge and an increase in truck and boat traffic for dredge material transportation. These impacts are temporary and can be mitigated. Mitigation measures for increased air emissions due to increased aquatic and terrestrial vehicle trips or for heavy equipment due to dredging operations may include, but are not limited to, the following: 1) use of construction and maintenance vehicles with lower-emission engines, 2) use of soot reduction traps or diesel particulate filters, 3) use of emulsified diesel fuel, 4) proper maintenance of vehicles and equipment so they operate cleanly and efficiently, 5) construction equipment should be turned off when not in use 6) use of electric dredging equipment whenever possible.

Catch Basin Inserts

Long-term increases in traffic caused by ongoing maintenance of catch basin inserts (e.g., delivery of materials, street sweeping) are potential sources of increased air pollutant emissions. Potential impacts that result in substantial air emissions or deterioration of ambient air quality could occur where facilities are located. Nonetheless, mitigation measures are available to mitigate any potential impacts to air quality due to increased traffic. Mitigation measures could include 1) use of construction, maintenance, and street sweeper vehicles with lower-emission engines, 2) use of soot reduction traps or diesel particulate filters, 3) use of emulsified diesel fuel, 4) use of vacuum-assisted street sweepers to eliminate potential re-suspension of sediments during sweeping activity, and 5) the design of trash removal devices to minimize the frequency of maintenance trips (e.g., design for smaller drainage areas and adjusting screen size to prevent clogging).

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not expected to result in substantial air emissions or deterioration of ambient air quality.

The generation of fugitive dust and particulate matter during construction or maintenance activities could also impact ambient air quality. An operation plan for the specific construction and/or maintenance activities could be completed to address the variety of available measures to limit the ambient air quality impacts. These could include vapor barriers and moisture control to reduce the transfer of particulates and dust to air. These impacts are temporary and localized to construction activities alone. Construction BMPs can be implemented to mitigate air quality

impacts along with the use low emission vehicles as well as other SCAQMD recommended mitigation measures.

Non-structural BMPs

It is possible that workers and vehicles may be required to implement non-structural BMPs. However, other non-structural BMPs are not expected to have significant impact on air quality for the level of effort that would be required.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

2. Air. b. Will the proposal result in creation of objectionable odors?

Answer: Potentially Significant Impact

Infiltration Systems, Vegetated Swales, Stormwater Capture Systems, Media Filters, Oil/Water Separators, and Low Flow Diversion

Construction and installation of these implementation alternatives may result in objectionable odors in the short-term due to exhaust from construction equipment and vehicles. Implementation BMPs may also be a source of objectionable odors if they allow for water stagnation or collection of water with sulfur-containing compounds. Storm water runoff is not likely to contain sulfur containing compounds, but stagnant water could create objectionable odors. For example, improper design or maintenance of Vegetated Swales may lead to clogging and stagnation of water creating objectionable odors. Vegetated systems require inspection and maintenance, replacing diseased and dead or dying plants to prevent build-up of detritus, and replacement of existing plants to increase efficiency.

Mitigation measures to eliminate odors caused by stagnation could include proper BMP design to eliminate standing water with covers, aeration, filters, barriers, and/or odor suppressing chemical additives. BMPs should be inspected regularly to ensure that systems are not clogged, pooling water, or odorous. During maintenance, odorous sources should be uncovered for as short of a time period as possible. Systems should be designed to minimize stagnation of water and installed in such a way so as to increase the distance to sensitive receptors in the event of any stagnation. To the extent possible, BMPs could be designed to minimize stagnation of water (e.g., allow for complete drainage within 48 hours) and installed to increase the distance to sensitive receptors in the event of any stagnation.

Sediment Capping

Sediment capping will require the use of heavy equipment; for example, capping equipment and trucks to transport capping material. Objectionable odors may be created due to exhaust from the operation of equipment and vehicles, but these impacts are temporary and localized to the area of operation of heavy equipment. BMPs such as those recommended by the SCAQMD can be implemented to mitigate air quality impacts.

Replacement of copper-based antifouling paints

Replacement of copper-based antifouling paints is not expected to result in creation of objectionable odors.

Remove Contaminated Sediments – Dredging

Dredging requires the removal of contaminated sediment from the harbor. This may result in objectionable odors due to the anaerobic nature of sediments. The drying of the dredged materials is also part of the overall dredging measures. The dredge sediment will contain organic material and the decomposition of this organic matter may generate unpleasant odors. It is difficult to anticipate the nature or rate of odor emission form organic decomposition and anaerobic sediments; thus this impact may be unavoidable.

Objectionable odors may also be created due to exhaust from the operation of equipment and vehicles for dredging or sediment capping, but these impacts are temporary and localized to the operation of heavy equipment. BMPs such as those recommended by the SCAQMD can be implemented to mitigate air quality impacts. The use of electric dredging equipment whenever possible may help to mitigate ground-level odors.

Catch Basin Inserts

To the extent improper disposal of, for instance, household or food wastes result in them being kept on the street or in inserts, and potentially allowing a release of odors, local residents could be exposed to those effects. On balance, however, it is not unfair that the residents of the localities where improper disposal of such materials occurs should suffer those risks rather than allowing the wastes to be conveyed to expose downstream citizens to the cumulative risks of them instead. Nevertheless, to the extent the locality that originated the risk would become newly potentially exposed instead of downstream receptors, those impacts could be potentially significant in those locales. Such impacts could be avoided or mitigated by educating the local community of the effects of improper disposal of such wastes, enforcing litter ordinances, and timely cleaning out inserts.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not expected to result in creation of objectionable odors.

Non-Structural BMPs

It is possible that workers and vehicles may be required to implement other non-structural BMPs. However, non-structural BMPs are not expected to have noticeable impact on air quality for the level of effort that would be required for this waterbody.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

2. Air. c. Will the proposal result in alteration of air movement, moisture or temperature, or any change in climate, either locally or regionally?

Answer: Potentially Significant Impact

It is not anticipated that reasonably foreseeable methods of compliance with non-structural and structural BMPs will result in an impact to air in the alteration of air movement, moisture or temperature, or any change in climate, either locally or regionally. Installation, construction, and maintenance of various structural and non-structural BMPs could cause an increase in air pollutant emissions, including greenhouse gas emissions, but these activities would be the same as typical construction and maintenance activities in urbanized areas, such as ordinary road and infrastructure maintenance and building activities, and would not be significant to cause climate change.

In 2006, California passed AB 32, the Global Warming Solutions Act of 2006, which set the 2020 greenhouse gas emissions reduction goal into law. In December 2007, CARB approved the 2020 emission limit of 427 million metric tons of CO_2 equivalents (CO_2e) of greenhouse gases. The 2020 target of 427 million metric tons of CO_2e requires the reduction of 169 million metric tons of CO_2e, or approximately 30 percent, from the State's projected 2020 emissions of 596 million metric tons of CO_2e.

Also in December 2007, CARB adopted regulations which require mandatory reporting for certain types of facilities that make up the bulk of the stationary source emissions in California. Currently, the draft regulation language identifies major facilities as those that generate more than 25,000 metric tons/year of CO_2e. Cement plants, oil refineries, fossil-fueled electric-generating facilities/providers, cogeneration facilities, and hydrogen plants and other stationary combustion sources that emit more than 25,000 metric tons/year CO_2e, make up 94 percent of the point source CO_2e emissions in California. In June, 2008, CARB published its Climate Change Scoping Plan (CARB, 2008). The Proposed Scoping Plan proposes a comprehensive set of actions designed to reduce overall carbon emissions in California.

Several of the reasonable foreseeable methods of compliance will require the production of energy. The production of the energy will create greenhouse gases that might contribute to climate changes.

When compared to the estimated greenhouse gas reduction goal of 174 million tons CO_2e by 2020 (and in comparison to major facilities that are required to report greenhouse gas emissions (25,000 metric tons of CO_2e/year)), the relative contributions of the implementation program are small and would not conflict with the state's ability to meet the AB32 goals.

In addition, the implementation of this TMDL will not conflict with implementation of State's recommended greenhouse gas reduction measures (CARB, 2008) and emissions from implementation will not have a significant negative effect on global climate change.

3. Water. a. Will the proposal result in changes in currents, or the course of direction or water movements, in either marine or fresh waters?

Answer: Potentially Significant Impact

Infiltration Systems, Vegetated Swales, Media Filters, and Oil/Water Separators

These implementation measures may impede or slow overland flow to storm drains if not properly designed and maintained. Devices should be designed to allow adequate drainage of water and maintained to remove clogged material to mitigate this impact.

Stormwater Capture Systems

Stormwater capture systems are designed to reduce runoff thereby decreasing stormwater flow. However, the affects are not significant enough to result in changes in currents, or the course of direction or water movements, in either marine or fresh waters. No impact is anticipated. No mitigation measures are required.

Replacement of copper-based antifouling paints

Replacement of copper-based antifouling paints is not expected to result in changes in currents, or the course of direction or water movements in either marine or freshwaters.

Remove Contaminated Sediments – Dredging and Sediment Capping

Dredging or sediment capping in the harbor to remove or cover sediment could potentially alter the direction of water movement. Dredging operations may promote additional mixing in the vicinity of dredging activity. Changes in the shape of the bottom of the harbor may change circulation patterns within the harbor, resulting in uncertain impacts. Adequate modeling, siting, and planning can help mitigate any possible negative impacts.

Low Flow Diversion

Diversions of dry and wet-weather flow from storm drains to the wastewater treatment plant could have potential negative impacts on minimum flows required to support aquatic life in the Marina del Rey Harbor Waters. Potential impacts to dry and wet-weather flow should be considered at the project level. Mitigation measures to maintain minimal flow to support habitat related beneficial uses should be reviewed and approved by the California Department of Fish and Wildlife (CDFW) and United States Fish and Wild Life Service (USFWS). Diverted run-off can be discharged back into the Marina del Rey Harbor Waters following treatment to maintain minimum flow. Adequate modeling and planning can help mitigate any possible negative impacts.

Catch Basin Inserts

Catch basin inserts are manufactured frames that typically incorporate filters or fabric and placed in a curb opening or drop inlet to remove trash, sediment, or debris. They can also be perforated metal screens placed horizontally or vertically within a catch basin. The impacts that result in changes in currents, or the course of direction or water movements, in fresh waters are not significant. Overland flow in the urbanized portion of the watershed is directed primarily to storm drains. Catch basin inserts may alter overland flow to storm drains, but this impact can be mitigated through proper design and maintenance of these inserts.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not expected to result in changes in currents, or the course of direction or water movements in either marine or freshwaters.

Non-Structural BMPs

Non-structural BMPs would involve no change to the physical environment either directly or indirectly and would not result in changes in currents, or the course of direction or water movements, in marine or fresh waters. No impact is anticipated. No mitigation measures are required.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However,

implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

3. Water. b. Will the proposal result in changes in absorption rates, drainage patterns, or the rate and amount of surface water runoff?

Answer: Potentially Significant Impact

Infiltration Systems and Vegetated Swales

These implementation measures collect and/or inhibit stormwater flow, which would likely alter drainage patterns, and also decrease the rate and amount of surface water runoff. For example, vegetated swales would change drainage patterns by increasing absorption rates, which would reduce the amount of surface runoff to the receiving waters. However, increased imperviousness in the watersheds has increased stormwater flows, so a partial reduction in stormwater flow would not be a negative environmental effect.

Stormwater Capture Systems

Stormwater capture systems collect and/or inhibit stormwater flow, which would likely alter drainage patterns, and also decrease the rate and amount of surface water runoff. For example, capture systems such as rain barrels would change drainage patterns by collecting stormwater, which would reduce the amount of surface runoff to receiving waters.

Media Filters and Oil/Water Separators

Media filters and oil/water separators are flow-through devices that may cause a change in the rate of surface water runoff. These units may impede or slow overland flow to the storm drain system. Any device installed on-line, especially an older, under-capacity storm drain could have a negative effect on the drain's ability to convey surface waters, including flood waters. This negative impact can be mitigated through design of media filters or separators with overflow/bypass structures and by performing regular maintenance of these devices and if necessary enlargement of the storm drain upstream of the device.

Remove Contaminated Sediments –Dredging and Sediment Capping

Dredging operation involves the removal of contaminated sediments from the harbor bottom and has minimal affect on surface sediments. Temporary staging, use of construction equipment, and maintenance or other vehicles for dredging or sediment capping may cause significant compaction, which may impact absorption rates of surface water runoff. Construction BMPs and mitigation measures are available to mitigate the potential impact.

Replacement of copper-based antifouling paints

Replacement of copper-based antifouling paint is not expected to change the adsorption rate, drainage pattern, or rate and amount of surface runoff.

Low Flow Diversion

Flow diversions have the potential to impact the amount of surface water runoff. These diversions are designed for dry-weather and wet-weather flows. Any device installed in a storm drain, especially an older, under-capacity drain could have a negative effect on the drain's ability to convey surface waters, including flood waters. This negative impact can be mitigated by

designing the diversion units with overflow/bypass structures, by performing regular maintenance of these devices, and if necessary, by enlarging the storm drain upstream of the device.

Catch Basin Inserts

Catch basin inserts are manufactured frames that typically incorporate filters or fabric and placed in a curb opening or drop inlet to remove trash, sediment, or debris. They can also be perforated metal screens placed horizontally or vertically within a catch basin. These units may impede or slow overland flow to the storm drain system. Any device installed in a storm drain, especially an older, under-capacity drain could have a negative effect on the drain's ability to convey surface waters including flood waters. This negative impact can be mitigated through design of the catch basin inserts with overflow/ bypass structures and by performing regular maintenance of these devices and if necessary enlargement of the storm drain upstream of the device.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not expected to change the adsorption rate, drainage pattern, or rate and amount of surface runoff.

Non-Structural BMPs

Non-structural BMPs would involve no change to the physical environment either directly or indirectly, and would not result in changes in the drainage patterns, or the rate and amount of surface water runoff. No impact is anticipated. No mitigation measures are required.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

3. Water. c. Will the proposal result in alterations to the course of flow of flood waters?

Answer: Potentially Significant Impact

Infiltration Systems and Vegetated Swales

Infiltration systems and vegetated swales could alter the volume of flood waters by diverting a portion of the flood waters, but this is unlikely to alter the course of flood waters. Potential effects can be mitigated through proper design (including flood water bypass systems), sizing, and maintenance of these types of vegetated treatment and infiltration systems. Installation of these implementation measures could result in positive environmental benefits like flood mitigation and upstream flow volume reduction.

Stormwater Capture Systems

Stormwater capture systems would not result in altering the course of flow of flood waters because installation of these BMPs would not introduce any physical change to the river channel that could impact the flow of flood waters. No mitigation measures are required.

Media Filters

Alterations to the course of flow of flood waters will occur if a portion of stormwater is treated with media filters. Any device into a storm drain, especially an older, under-capacity drain could have a negative effect on the drain's ability to convey waters, including flood waters. This

negative impact can be mitigated through proper design and maintenance of these devices. The size of the contributing drainage area should not exceed standard specifications (e.g., surface sand filters should treat no more than 25 acres and underground sand filters should treat no more than 2 acres (CASQA, 2003b). Devices should be designed to allow bypass of flows that exceed the design capacity. Enlargement of the drain upstream of the device may be required.

Oil/Water Separators

Oil/water separators would not result in altering the course of flow of flood waters because installation of these BMPs would not introduce any physical change to the river channel that could impact the flow of flood waters. No mitigation measures are required.

Remove Contaminated Sediments – Dredging and Sediment Capping

Dredging operations or capping affect circulation and waters in the harbor, and do not affect flood waters. This would not result in altering the course of flow of flood waters. No mitigation measures are required.

Replacement of copper-based antifouling paints

Replacement of copper-based antifouling paint is not expected to result in alterations to the course of flow of flood waters.

Low Flow Diversion

BMPs designed to divert and/or treat have the potential to impact the course of flow of flood waters. These structural BMPs are designed to divert low-flow water to local Publicly Owned Treatment Works (POTWs). Impacts to the flow of flood waters can be mitigated with proper design and siting. Flow diversions should all be designed with high flow bypasses. During high flow events, usually during storms, waters entering the storm drain will bypass the diversion to prevent flooding and overtaxing of the POTWs treatment capacity.

Catch Basin Inserts

Catch basin inserts have less hydraulic effect than in-line treatment devices, however, flooding is still a potential hazard if the filters or screens became blocked by trash and debris and prevent the discharge of storm water. This would be of particular concern in areas susceptible to high leaf-litter rates. This potential impact can be mitigated through the use of inserts that are designed with automatic release mechanisms or retractable screens that allow flow-through during wet-weather and by performing regular maintenance to prevent the build up of trash and debris. Any device into a storm drain, especially an older, under-capacity drain could have a negative effect on the drain's ability to convey waters including flood waters. Enlargement of the drain upstream of the device may be required. Certain devices such as trash racks or mesh screens may have less hydraulic effect than in-line treatment devices.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants paint is not expected to result in alterations to the course of flow of flood waters.

Non-Structural BMPs

Non-structural BMPs would involve no change to the physical environment either directly or indirectly and would not result in alterations to the course of flow of flood waters. No impact is anticipated. No mitigation measures are required.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However,

implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

3. Water. d. Will the proposal result in change in the amount of surface water in any water body?

Answer: Potentially Significant Impact

Infiltration Systems and Vegetated Swales

Stormwater runoff may be retained and/or diverted for groundwater infiltration and/or to vegetated swales or bioretention areas. Water that is retained or diverted would not flow into the Marina del Rey Harbor Waters. Reduction in the amount of water in the stream channels may affect the ecology of the streams; these affects can be mitigated as discussed below in the answers to questions 4 and 5 on Plant Life and Animal Life.

Stormwater Capture Systems

Stormwater capture systems are designed to collect stormwater runoff. Because the reduction of nuisance flows would return the watersheds to a more natural, predevelopment condition, this impact is not significant.

Media Filters and Oil/Water Separators

Media filters and oil/water separators may impede or slow overland flow to storm drains if not properly designed and maintained and could change the amount of surface water. Devices should be designed to allow adequate drainage of water and maintained to remove clogged material to mitigate this impact.

Sediment Capping

Sediment capping may reduce ocean depth and would result in a change in the amount of surface water in the harbor. This impact could be mitigated by conducting studies to determine the harbor water level needed to support the navigation, aquatic, wildlife, and recreational uses of the harbor waters and to design any potential capping project accordingly.

Replacement of copper-based antifouling paints

Replacement of copper-based antifouling paints is not expected to result in change in the amount of surface water in any waterbody.

Remove Contaminated Sediments - Dredging

The goal of hydraulic dredging is to remove sediment and restore the harbor to a level that will improve water quality. The increase in harbor depth would provide greater storage area for water in the harbor. This would be considered to be a positive impact and would help to improve water quality. Sediment capping would not be of a scale to result in change in the amount of surface water in any water body

Low Flow Diversion

Flow diversions are designed to divert dry-weather and wet-weather flows in storm drains to local Publicly Owned Treatment Works (POTWs). Reductions in dry and wet-weather flows could have potential negative impacts on minimum flows required to support aquatic life. Potential impacts to dry and wet-weather flow should be considered at the project level. Mitigation measures to maintain minimal flow to support habitat related beneficial uses should be reviewed

and approved by the California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS).

Catch Basin Inserts

Catch basin inserts do not divert water for other uses and the amount of water in storm drains is not changed.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not expected to result in change in the amount of surface water in any waterbody.

Non-Structural BMPs

Non-structural BMPs would involve no change to the physical environment either directly or indirectly and would not result in change in the amount of surface water in any water body.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

3. Water. e. Will the proposal result in discharge to surface waters, or in any alteration of surface water quality, including but not limited to temperature, dissolved oxygen, or turbidity?

Answer: Potentially Significant Impact

Infiltration Systems and Vegetated Swales

During wet-weather discharges, infiltration and vegetated swale BMPs would reduce turbidity and increase dissolved oxygen, because these BMPs would remove sediment and bioavailable oxygen demanding substances from the surface water. Reduced turbidity and increased dissolved oxygen are beneficial to the environment. No mitigation measures are required.

Stormwater Capture Systems

Stormwater capture systems would not result in discharge to surface waters, or in any negative change to surface water quality. No mitigation measures are required.

Media Filters and Oil/Water Separators

The use of media filtration or oil/water separators to treat dry-weather and stormwater runoff will result in a change in the quality of surface water. This will positively impact water quality and associated aquatic life and water supply beneficial uses of surface waters.

Sediment Capping

Sediment capping does disturb the sediments and can cause increased turbidity during capping activities. However, this is a generally a localized effect. Sediment capping will not create permanent increased turbidity conditions and will improve harbor water quality in the long term.

Replacement of copper-based antifouling paints

An increase in the use of alternatives coatings to copper-based antifouling paints is anticipated because of the required reduction in emissions of dissolved copper to harbor waters. Alternative

coatings currently available consist of both "nontoxic" and "less toxic" coatings. In order to accurately evaluate the potential environmental impacts of these coatings, scientific studies are needed to accurately characterize the toxicity of the coatings. Because of these potential implications, caution should be exercised when alternatives to copper based antifouling paints are selected. At present, there are a number of available alternatives that have been demonstrated to be nontoxic in nature. Additionally, an increase in the demand for alternatives to copper-based antifouling paints will probably result. The alternative coatings could prove as toxic or more toxic than copper-based paints. This could potentially lead to violations of the water quality standards for the antifouling agent in the alternative coating.
In addition, there is a potential for the future transport of dissolved copper from sediment to the water column as a result of TMDL implementation. Although sediment may currently act as a net sink for copper in the water column, it has the potential to act as a net source in the future. During a period of low external loading, sediment that once acted as a net sink for copper can become a long-term net source through exchange with historically contaminated sediment that are re-suspended in the water column. As copper in sediment is re-suspended, it may act as a buffer to slow down the reductions in copper concentrations in the water column that would be expected from decreased loading of other sources to Marina del Rey Harbor Waters. However, the overall result of decreasing copper loading to the harbor should result in both the water column and the sediment over time.

In order to replace copper-based paints with non-toxic antifouling coatings, boats will have to be stripped prior to application of the new coatings. Wastes (e.g., blasting residue, paint chips, spillage, sanding, sand blasting, or scraping) generated from paint removal can have negative impacts on the environment.. Lead and other compounds from the waste may be discharged into nearby surface waters or may contaminate the soil at a facility (USEPA, 2000).To avoid this impact, waste generated from paint stripping should be properly contained and disposed of.

Remove Contaminated Sediments - Dredging

Dredging and sediment disposal operations are expected to degrade water quality in the harbor. Dredging or capping would disturb and resuspended bottom sediments in the vicinity of the dredging activity. This would increase the turbidity of the water above background levels. If enough decayed organic matter is suspended or dissolved in the water column, it may produce odors or change the chemical composition of the water, including decreasing pH and oxygen concentrations, increasing nitrogen and sulfide concentrations, and causing other chemical changes. During dredging activities, sediment, pesticides, metals, and other pollutants may be suspended in the water column and degrade water quality. The use of small cutterhead dredges designed for minimizing sediment disturbance would reduce the impacts of turbidity. Sediment curtains or other barriers would be used, as needed, to isolate areas being dredged from ambient conditions. Water quality monitoring will be conducted during dredging and placement of dredging materials to reduce adverse effects. However, these impacts would be temporary during dredging operations.

Low Flow Diversion

Flow diversions are designed to divert low flows in storm drains to the sanitary sewer systems. Reductions in low flows could have potential positive impacts on surface water quality. No mitigation measures are required.

Catch Basin Inserts

Catch basin inserts will alter surface water quality by reducing the amount of trash that enters the Marina del Rey Harbor Waters. This reduction will positively impact water quality and associated recreational beneficial uses of surface waters, including water contact and non-contact recreation,

and other beneficial uses. Catch basin inserts will not foreseeably result in negative impacts to temperature, dissolved oxygen, or turbidity.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not expected to result in discharge into surface waters, or any alteration of surface water quality, including but not limited to temperature, dissolved oxygen, or turbidity. However, it would allow continued contamination of the waters.

Non-Structural BMPs

Non-structural BMPs would involve no change to the physical environment either directly or indirectly and would not result in discharge to surface waters, or in any alteration of surface water quality.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

3. Water. f. Will the proposal result in alteration of the direction or rate of flow of ground waters?

Answer: Potentially Significant Impact

Infiltration Systems and Vegetated Swales

Over the long term, infiltration of stormwater runoff via vegetated treatment and infiltration systems such as permeable paving and vegetated swales could alter the direction or rate of flow of groundwater. This could result in unstable earth conditions if such BMPs were to be located where infiltrated stormwater flowing as groundwater could destabilize existing slopes. Also, infiltration could alter groundwater movement and cause a change of hydrology by redistributing areas of recharge, which could impact water rights. The impacts can be minimized by proper siting, design, and monitoring practices.

Stormwater Capture Systems

Stormwater capture systems would not result in alteration of the direction or rate of flow of ground waters. No mitigation measures are required.

Media Filters

Media filters are flow through devices to treat stormwater and will have no impact on the direction or rate of flow of ground waters. They would be installed in areas that are already developed and installation activities would occur at depths that would not impact ground waters.

Oil/Water Separators

Oil/water separators would not result in alteration of the direction or rate of flow of ground waters. No mitigation measures are required.

Remove Contaminated Sediments – Dredging and Sediment Capping

Dredging or sediment capping activities would not result in alteration of the direction or rate of flow of ground waters. No mitigation measures are required.

Replacement of copper-based antifouling paints

Replacement of copper-based antifouling paints is not expected to result in alteration of the direction or rate of flow of ground waters.

Low Flow Diversion

BMPs associated with diversion and/or treatment would not result in alteration of the direction or rate of flow of ground waters. No mitigation measures are required.

Catch Basin Inserts

Catch basin inserts would not likely change the direction or rate of flow of ground waters because systems would not be installed in areas that are not already developed or at depths that could impact the ground water table.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not expected to result in alteration of the direction or rate of flow of ground waters.

Non-Structural BMPs

Non-structural BMPs would not result in alteration of the direction or rate of flow of ground waters. No mitigation measures are required.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

3. Water. g. Change in the quantity or quality of ground waters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations?

Answer: Potentially Significant Impact

Infiltration Systems and Vegetated Swales

Infiltration systems and vegetated swales involve the infiltration of stormwater runoff into the ground. If infiltration stormwater BMPs are improperly designed, sited, and constructed, ground water quality could be adversely impacted. For instance, flow above designed capacity of biofiltration devices may lead to groundwater contamination from untreated stormwater. Infiltration of stormwater could mobilize groundwater contaminants.

The potential for adverse impacts may be mitigated through proper design and siting of infiltration devices, pretreatment prior to infiltration, and groundwater monitoring. Proper design and siting includes providing adequate groundwater separation with soils suitable for infiltration, and complying with any applicable groundwater permitting requirements. It is recommended that media filters or other treatment devices be used instead of infiltration where soils or groundwater contamination are a concern (CASQA, 2003b). However, where separation to groundwater is adequate, there is a low probability of groundwater contamination by infiltrated runoff because the soils attenuate pollutants and soil amendments can increase metals removal (CASQA, 2003b).

When properly managed, increased groundwater recharge would be considered a positive impact, as it would contribute to replenishing local water supplies and reducing reliance on imported water.

Stormwater Capture Systems

Stormwater capture systems would not result in a change in the quantity or quality of ground waters. No mitigation measures are required.

Media Filters

Media filters are flow through devices to treat stormwater and will have no impact on the quantity or quality of ground waters. They would be installed in areas that are already developed and installation activities would occur at depths that would not impact ground water.

Replacement of copper-based antifouling paints

Replacement of copper-based antifouling paints would not result in a change in the quantity or quality of ground waters.

Oil/Water Separators

Oil/water separators would not result in a change in the quantity or quality of ground waters. No mitigation measures are required.

Remove Contaminated Sediments – Dredging and Sediment Capping

BMPs associated with dredging or capping would not result in a change in the quantity or quality of ground waters. No mitigation measures are required.

Low Flow Diversion

BMPs associated with diversion and/or treatment would not result in a change in the quantity or quality of ground waters. No mitigation measures are required.

Catch Basin Inserts

Catch basin inserts would not result in a change in the quantity or quality of ground waters. No mitigation measures are required.

Monitored Natural Attenuation of Contaminants

Monitored Natural Attenuation of Contaminants would not result in a change in the quantity or quality of ground waters.

Non-Structural BMPs

Non-structural BMPs would not result in a change in the quantity or quality of ground waters. No mitigation measures are required.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

3. Water. h. Will the proposal result in substantial reduction in the amount of water otherwise available for public water supplies?

Answer: No Impact

The structural and non-structural BMPs will not reduce public water supplies. Implementation of the TMDL would result in an increase in the amount of water available for public water supplies if compliance with the TMDL is achieved through significant infiltration of stormwater or treatment and reuse of stormwater.

3. Water. i. Will the proposal result in exposure of people or property to water related hazards such as flooding or tidal waves?

Answer: Potentially Significant Impact

Infiltration Systems and Vegetated Swales

Infiltration systems and vegetated swales may result in flooding hazards if these devices are not properly designed and constructed to allow for bypass of stormwater during storms that exceed design capacity. This potential impact can be mitigated through proper design. Potential risks of flooding due to clogging of devices with debris can be avoided by regular maintenance and inspection prior to storms. Pretreatment devices such as trash screens and biofiltration strips should be installed to minimize sediment load and clogging potential. Infiltration basins should be equipped with an observation well to monitor drain time and allow access if drainage is required. Bioswale devices may also reduce flooding hazards by reducing the peak storm flows in the watershed by diverting and retaining water on-site.

Stormwater Capture Systems

If stormwater capture systems are not properly designed and constructed, maintained, and regularly emptied to allow for bypass of stormwater during storms that exceed design capacity, local capture systems such as rain barrels can potentially contribute to minor small scale flooding. However, this potential impact can be mitigated through proper maintenance procedures.

Media Filters and Oil/Water Separators

Implementation may result in flooding hazards if media filters or oil/water separators are not properly designed and constructed to allow for bypass of stormwater during storms that exceed design capacity. This potential impact can be mitigated through proper design. Potential risks of flooding due to clogging of devices with debris can be avoided by regular maintenance and inspection prior to storms.

Remove Contaminated Sediments – Dredging and Sediment Capping

Dredging or capping would not be of size or scale to contribute to hazards such as flooding or tidal waves.

Replacement of copper-based antifouling paints

Replacement of copper-based antifouling paints is not expected to contribute to hazards such as flooding or tidal waves.

Low Flow Diversion

If low flow diversions are not properly designed and constructed to allow for bypass of stormwater during storms that exceed design capacity, low-flow diversions can potentially contribute to flooding. However, this potential impact can be mitigated through proper design features such as high-flow bypass, and maintenance procedures such as cleaning out diversions at an appropriate frequency.

Catch Basin Inserts

The devices may result in a potentially significant impact due to flooding hazards if the screens become blocked by trash and debris and prevent the discharge of stormwater to the receiving waters, or if the devices are not properly designed and constructed to allow for bypass of storm water during storm events that exceed the design capacity. This potential impact can be mitigated through the use of inserts that are designed with automatic release mechanisms or retractable screens that allow flow-through during wet-weather and by performing regular maintenance to prevent the build up of trash and debris. Therefore, the exposure of people and property to flooding hazards after mitigation should be less then significant.

Monitored Natural Attenuation of Contaminants

Monitored Natural Attenuation of Contaminants would not contribute to hazards such as flooding or tidal waves.

Non-Structural BMPs

Non-structural BMPs would involve no change to the physical environment either directly or indirectly and would not result in exposure of people or property to water related hazards such as flooding or tidal waves. No impact is anticipated. No mitigation measures are required.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

4. Plant Life. a. Will the proposal result in change in the diversity of species, or number of any species of plants (including trees, shrubs, grass, crops, microflora and aquatic plants)?

Answer: Potentially Significant Impact

Infiltration Systems

The installation of infiltration systems, permeable paving, bioretention areas, or retention ponds could increase the diversity or number of plant species, which is beneficial to the environment by increasing available habitat. However, during storm events, infiltration systems could also divert, reduce, and/or eliminate surface water runoff discharge, which may reduce the number and/or diversity of plant species within the streams, by modifying the hydrology of the channel, which could be adverse. This can be mitigated through proper project modeling, siting, and planning so that the resulting creek hydrology mimics natural conditions.

Vegetated Swales

Vegetated swales will use a variety of vegetation types. Vegetation is required to cover the whole width of the swale, be capable of withstanding design flows and be of sufficient density to prevent preferred flow paths and scour of deposited sediments. Vegetated swales may introduce new species of plants into the area. This results in a change of the diversity of species, or number of any species of plants. In addition, vegetated swales could result in reduced flows, particularly during dry weather, and may adversely impact downstream plant life. Potential impacts to dry-weather flow should be considered at the project level.

Stormwater Capture Systems

Stormwater capture systems would not result in change in the diversity of species, or number of any species of plants. No mitigation measures are required.

Media Filters and Oil/Water Separators

These implementation measures would not result in change in the diversity of species, or number of any species of plants. No mitigation measures are required.

Sediment Capping

Sediment capping may have the potential to reduce aquatic plant species. Particularly in shallow areas, there may impacts to aquatic vegetation. Recolonization of capping areas is typically gradual, but provides the opportunity to improve the vegetative habitat to enhance the ecology of the harbor waters.

Replacement of copper-based antifouling paints

Increased growth of fouling organisms could occur as a result of boat owners switching from copper-based antifouling paints to alternative coatings, which may prove to be less effective. An increase in abundance and species diversity of fouling organisms on a boat previously moored in a different location could lead to the transport of invasive species into the Marina del Rey Harbor Waters. Certain invasive species have been known to cause disruptions in ecosystems by a variety of mechanisms, such as through competition with native biota for food and resources. The natural community, if one exists in the Marina del Rey Harbor, could be negatively affected by the introduction and establishment of invasive species.

To avoid this potentially significant impact, effective alternatives to copper-based antifouling paints should be considered. At present, there are a number of available alternatives that have been demonstrated to be both nontoxic in nature and effective at reducing fouling growth. Examples include silicone hull coatings and hard smooth epoxy hull coatings, combined with more frequent underwater hull cleaning. Furthermore, underwater hull cleaning should be performed particularly on vessels prior to leaving an area known or suspected to support species that could become invasive if brought into the Marina del Rey Harbor Waters. Additionally, the formal mandate for copper load reduction in this TMDL Basin Plan amendment will in and of itself increase the market demand for innovative solutions including nontoxic, effective hull coatings. This in turn will create greater market demand for the development of new products.

Remove Contaminated Sediments - Dredging

Dredging or capping operations may result in change in the diversity of species, or number of any species of plants. Increased dredging activity could temporarily increase turbidity of the water and suspended solids in the vicinity of dredging operation. This would reduce water clarity and decrease light penetration, possibly causing a decline in photosynthesis by nearby aquatic plants and phytoplankton. Dredging does not disturb the shoreline and will not impact aquatic or terrestrial vegetation directly along the shore. Proper project modeling, siting, and planning, such as limiting extent and duration of the dredging, can help mitigate impacts to the plant life. Dredging may also be conducted in portions and phases to allow species to reestablish, recover, and propagate. Use of sediment curtains may help to reduce sediment migration to habitat adjacent to current dredge site.

Low Flow Diversion

Flow diversions, diverting the surface water runoff, may result in a change of the diversity of species, or number of any species of plants, especially in the dry-weather season. A decrease in flow may decrease plant diversity downstream of the diversion by reducing the number of species (including trees, shrubs, grass, crops, microflora, and aquatic plants) of plants that require a more

constant water supply. No adverse impacts are expected because the elimination of nuisance flows would return the stream bed's dry-weather flows to a more natural, pre-development condition. This in turn would facilitate the return of the stream's plant community to a more natural, pre-development condition and could impede the propagation of water-loving nonnative and invasive plant species. Impeding the propagation of invasive species is not a negative impact.

Catch Basin Inserts

Catch basin inserts fit directly into curbside catch basins in urbanized areas where native habitat or special-status species usually are absent. As such, impacts to species diversity and number of species would be avoided. Furthermore, installation of catch basin inserts requires no construction or ground disturbance which could impact species diversity and number of species.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not expected to result in change in the diversity of species, or number of any species of plants.

Non-Structural BMPs

Non-structural BMPs would not result in a change in the diversity of species, or number of any species of plants (including trees, shrubs, grass, crops, microflora and aquatic plants) because these BMPs would not introduce any physical effects that could impact plant life.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

4. Plant life. b. Will the proposal result in reduction of the numbers of any unique, rare or endangered species of plants?

Answer: Potentially Significant Impact

Mitigation measures could be implemented to ensure that potential impacts to unique, rare or endangered plant species are eliminated. When the specific projects are developed and sites identified, a search of the California Natural Diversity Database could be employed to confirm that any potentially sensitive plant species or biological habitats in the site area are properly identified and protected as necessary. Focused protocol plant surveys for special-status-plant species could be conducted at each site location, if appropriate. If sensitive plant species occur on the project site mitigation should be required in accordance with the Endangered Species Act. Mitigation measures should be developed in consultation with the California Department of Fish and Wildlife (CDFW) and the United States Fish and Wildlife Service (USFWS). Responsible agencies should endeavor to avoid compliance measures that could result in reduction of the numbers of any unique, rare or endangered species of plants, and instead opt for such measures and/or identify and install structural BMPs in areas that will not reduce the numbers of such plants.

Infiltration Systems and Vegetated Swales

It is unlikely that activities during and after construction of infiltration systems and vegetated swales in urbanized areas would result in a reduction of the numbers of any unique, rare or endangered species of plants. Mitigation measures, discussed in Plant Life 4.a., could be implemented to ensure that potential impacts on unique, rare or endangered plant species are less than significant.

Stormwater Capture Systems

Stormwater capture systems would involve no change to the physical environment either directly or indirectly and would have no impact to unique, rare or endangered species of plants.

Media Filters and Oil/Water Separators

These implementation measures would not result in reduction of the numbers of any unique, rare or endangered species of plants.

Remove Contaminated Sediments – Dredging and Sediment Capping

Increased dredging or capping activity could temporarily increase turbidity of the water and suspended solids in the vicinity of dredging operation. This would reduce water clarity and decrease light penetration, possibly causing a decline in photosynthesis by nearby aquatic plants and phytoplankton. Dredging does not disturb the shoreline and will not impact aquatic or terrestrial vegetation directly along the shore. Proper project modeling, siting, and planning, such as limiting extent and duration of the dredging, can help mitigate impacts to the plant life. Dredging may also be conducted in portions and phases to allow species to reestablish, recover, and propagate. Use of sediment curtains may help to reduce sediment migration to habitat adjacent to current dredge site.

Replacement of copper-based antifouling paints

Increased growth of fouling organisms could occur as a result of boat owners switching from copper-based antifouling paints to alternative coatings, which may prove to be less effective. An increase in abundance and species diversity of fouling organisms on a boat previously moored in a different location could lead to the transport of invasive species into the Marina del Rey Harbor Waters. Certain invasive species have been known to cause disruptions in ecosystems by a variety of mechanisms, such as through competition with native biota for food and resources. The natural community, if one exists in the Marina del Rey Harbor, could be negatively affected by the introduction and establishment of invasive species.

To avoid this potentially significant impact, effective alternatives to copper-based antifouling paints should be considered. At present, there are a number of available alternatives that have been demonstrated to be both nontoxic in nature and effective at reducing fouling growth. Examples include silicone hull coatings and hard smooth epoxy hull coatings, combined with more frequent underwater hull cleaning. Furthermore, underwater hull cleaning should be performed particularly on vessels prior to leaving an area known or suspected to support species that could become invasive if brought into the Marina del Rey Harbor Waters. Additionally, the formal mandate for copper load reduction in this TMDL Basin Plan amendment will in and of itself increase the market demand for innovative solutions including nontoxic, effective hull coatings. This in turn will create greater market demand for the development of new products.

Low Flow Diversion

Flow diversions could reduce dry-weather flows and may impact downstream plant life. Potential impacts to dry-weather flow should be considered at the project level. Mitigation measures to maintain minimal flow to support downstream plant life-related beneficial uses should be reviewed and approved by the CDFW and National Marine Fisheries Service.

Catch Basin Inserts

Catch basin inserts fit directly into curbside catch basins in urbanized areas where native habitat or special-status species usually are absent. As such, impacts to unique, rare or endangered species of plants would be avoided. Furthermore, installation of catch basin inserts requires no construction or ground disturbance which could impact biological resources.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not expected to result in introduction of new species of plants into an area, or in a barrier to the normal replenishment of existing species.

Non-Structural BMPs

Non-structural BMPs would involve no change to the physical environment either directly or indirectly and would have no impact to unique, rare or endangered species of plants.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

4. Plant life. c. Will the proposal result in introduction of new species of plants into an area, or in a barrier to the normal replenishment of existing species?

Answer: Potentially Significant Impact

Infiltration Systems and Vegetated Swales

For infiltration systems and vegetated swales that may include the use of plants, such as vegetated swales, new species of plants may possibly be introduced into the area. However, in cases where plants or landscaping is incorporated into the specific project design, the possibility of disruption of resident native species could be avoided or minimized by using only plants native to the area. The use of exotic invasive species or other plants listed in the California Invasive Plant Inventory (Cal-IPC, 2006) should be prohibited.

Stormwater Capture Systems

Stormwater capture systems collect stormwater runoff. This would not result in introduction of new species of plants into an area. However, the decrease in flow could be a barrier to the normal replenishment of existing species that require a more constant water supply. No adverse impacts are expected because the reduction of nuisance flows would return the stream bed's dry-weather flows to a more natural, pre-development condition. This in turn would facilitate the return of the stream's plant community to a more natural, pre-development condition and could impede the propagation of water-loving nonnative and invasive plant species. Impeding the propagation of invasive species is not a negative impact. Proper project siting and planning can help mitigate impacts to the plant life.

Remove Contaminated Sediments – Dredging and Sediment Capping

Dredging or capping in the harbors would not result in introduction of new species of plants into an area. However, dredging could potentially cause a minor barrier to the normal replenishment

of existing species. Dredging would temporarily increase turbidity and suspended solids in the water, which would decrease light penetration, causing a decline in photosynthesis by aquatic plants and phytoplankton. Proper project modeling, siting, and planning, such as limiting extent and duration of the dredging, can help mitigate impacts to the plant life. Dredging may also be conducted in portions and phases to allow species to reestablish, recover, and propagate. Use of sediment curtains may help to reduce sediment migration to habitat adjacent to current dredge site. In addition, dredge equipment should be through inspected and proper sanitation and operation should be follow for the prevention and establishment of exotic and invasive species. Aquatic transportation vehicle should also follow existing and proposed federal, state, and regional ordinances, plans, and guidance regarding ballast water and its potential role in the transportation of exotic and invasive species.

Replacement of copper-based antifouling paints

Increased growth of fouling organisms could occur as a result of boat owners switching from copper-based antifouling paints to alternative coatings, which may prove to be less effective. An increase in abundance and species diversity of fouling organisms on a boat previously moored in a different location could lead to the transport of invasive species into the Marina del Rey Harbor Waters. Certain invasive species have been known to cause disruptions in ecosystems by a variety of mechanisms, such as through competition with native biota for food and resources. The natural community, if one exists in the Marina del Rey Harbor, could be negatively affected by the introduction and establishment of invasive species.

To avoid this potentially significant impact, effective alternatives to copper-based antifouling paints should be considered. At present, there are a number of available alternatives that have been demonstrated to be both nontoxic in nature and effective at reducing fouling growth. Examples include silicone hull coatings and hard smooth epoxy hull coatings, combined with more frequent underwater hull cleaning. Furthermore, underwater hull cleaning should be performed particularly on vessels prior to leaving an area known or suspected to support species that could become invasive if brought into the Marina del Rey Harbor Waters. Additionally, the formal mandate for copper load reduction in this TMDL Basin Plan amendment will in and of itself increase the market demand for innovative solutions including nontoxic, effective hull coatings. This in turn will create greater market demand for the development of new products.

Low Flow Diversions

Flow diversions divert the surface water runoff discharge. This would not result in the introduction of new species of plants into an area. However, the decrease in flow could be a barrier to the normal replenishment of existing species that require a more constant water supply. No adverse impacts are expected because the elimination of nuisance flows would return the stream bed's dry weather flows to a more natural, pre-development condition. This in turn would facilitate the return of the stream's plant community to a more natural, pre-development condition and could impede the propagation of water-loving nonnative and invasive plant species. Impeding the propagation of invasive species is not a negative impact. Proper project siting and planning can help mitigate impacts to the plant life.

Catch Basin Inserts

Catch basin inserts fit directly into curbside catch basins in urbanized areas where native habitat or special-status species usually are absent. As such, impacts that result in introduction of new species of plants, or in a barrier to the normal replenishment of existing species would be avoided. Furthermore, installation of catch basin inserts requires no construction or ground disturbance which could result in introduction of new species of plants into an area, or in a barrier to the normal replenishment of existing species.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not expected to result the introduction of new species of plants, or in a barrier to the normal replenishment of existing species.

Non-Structural BMPs

Non-structural BMPs would involve no change to the physical environment either directly or indirectly and would have no impact resulting in the introduction of new species of plants, or in a barrier to the normal replenishment of existing species.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

4. Plant life. d. Will the proposal result in reduction in acreage of any agricultural crop?

Answer: No impact

No impact is foreseeable. The project site is not used for agricultural production and is not designated Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. The surrounding area is fully developed and generally characterized by park, commercial, industrial, and residential uses. Therefore, the structural and non-structural BMPs will not result in reduction in acreage of any agricultural crop in the Marina del Rey Watershed.

5. Animal Life. a. Will the proposal result in change in the diversity of species, or numbers of any species of animals (birds, land animals including reptiles, fish and shellfish, benthic organisms, insects or microfauna)?

Answer: Potentially Significant Impact

Depending on the implementation method chosen, it is possible that direct or indirect impact to animal life may occur. Responsible parties should consult with the CDFW and the USFWS prior to implementing compliance strategies that pose a potentially significant impact to animal life for both protected and non-protected species. Responsible parties may also choose to implement compliance strategies that incur less impact on animal life.

Infiltration Systems and Vegetated Swales

The installation of vegetated swales and infiltration systems with vegetated biofiltration systems could increase the diversity or number of animal species, which is beneficial by creating habitat for those species. However, these types of structural BMPs could also increase the likelihood of vectors and pests. For example, vegetated swales may develop locations of pooled standing water that would increase the likelihood of mosquito breeding. Mitigation includes the prevention of standing water through the construction and maintenance of appropriate drainage slopes and through the use of aeration pumps. The introduction of mosquito larvae eating fish can help mitigate and reduce mosquito breeding in surface flow wetlands. Mitigation for vectors and pests should involve the use of appropriate vector and pest control strategies, maintenance, and frequent inspections.

Installation of non-vector producing structural BMPs can help mitigate vector production from standing water. Netting can be installed over vegetated swales to further mitigate vector

production. Structural BMPs can be designed and sites can be properly protected to prevent accidental vector production. Vector control agencies should be involved for other types of mitigation. Proper project siting and planning can help mitigate impacts to the animal life.

Also see "Plant." 2 a.

Stormwater Capture Systems

Stormwater capture systems are designed to capture rainwater using structural BMPs such as rain barrels and cisterns. However, these types of local capture systems could also increase the likelihood of vectors and pests. For example, rain barrels and cisterns may develop locations of pooled standing water that would increase the likelihood of mosquito breeding. Mitigation for vectors and pests should involve the use of appropriate vector and pest control strategies, maintenance, and frequent inspections.

Media Filters and Oil/Water Separators

In general, the activities that will take place with the implementation of media filters or oil/water separators will be similar in nature to current urban activities that are already occurring in the watershed. Their implementation will not foreseeably:

- Cause a substantial reduction of the overall habitat of a wildlife species
- Produce a drop in a wildlife population below self-sustaining levels
- Eliminate a plant or animal community

It is not reasonably foreseeable that either the construction/implementation or maintenance phase of potential projects will result in a significant long term impact to general wildlife species adapted to developed environments.

Sediment Capping

Sediment capping represents a significant project and, in general, impacts are expected; however; with proper planning and care, some impacts can be short lived and mitigated. The goal of a capping project is normally to change the nature of the harbor substrate. As a result, after the capping is complete, the new substrate can be inhospitable to the previous benthic community and a reestablishment of the organisms is typically gradual.
Moreover, other species (fish or birds) often rely upon the benthic community for food. A considerable reduction in the food source for this species may cause an adverse impact. Bird species may be required to travel to other areas in search of food; this may reduce the diversity of bird observed at the harbor. Fish populations would be subject to in harbor waters conditions, however their food source may temporarily supplemented in order to mitigate this impact.
Sediment capping would be a large project taking place at the harbor and will create noise and may require the removal of some shallow water vegetation that is often used as bird habitat. It is expected that this would impact bird species at the harbor. Mitigation measures will be required to ensure the least disturbance possible. These measures could include a bird and habitat survey to identify sensitive species and suitable habitat areas. Nesting surveys could also be conducted to ensure that disturbing activities do not take place during the nesting season. Due to the potential impacts, a sediment capping operation should be fully analyzed at the project level. The long term benefits to animal life by implementation of the TMDL outweighs short term negative impacts.

Replacement of copper-based antifouling paints

Increased growth of fouling organisms could occur as a result of boat owners switching from copper-based antifouling paints to alternative coatings, which may prove to be less effective. An increase in abundance and species diversity of fouling organisms on a boat previously moored in a different location could lead to the transport of invasive species into the Marina del Rey Harbor Waters. Certain invasive species have been known to cause disruptions in ecosystems by a variety of mechanisms, such as through competition with native biota for food and resources. The natural community, if one exists in the Marina del Rey Harbor, could be negatively affected by the introduction and establishment of invasive species.

To avoid this potentially significant impact, effective alternatives to copper-based antifouling paints should be considered. At present, there are a number of available alternatives that have been demonstrated to be both nontoxic in nature and effective at reducing fouling growth. Examples include silicone hull coatings and hard smooth epoxy hull coatings, combined with more frequent underwater hull cleaning. Furthermore, underwater hull cleaning should be performed particularly on vessels prior to leaving an area known or suspected to support species that could become invasive if brought into the Marina del Rey Harbor Waters. Additionally, the formal mandate for copper load reduction in this TMDL Basin Plan amendment will in and of itself increase the market demand for innovative solutions including nontoxic, effective hull coatings. This in turn will create greater market demand for the development of new products.

Remove Contaminated Sediments - Dredging

Dredging processes would disrupt activities of wildlife, such as birds, fish and shellfish, benthic organisms, insects or microfauna in the harbor. The presence of the pipeline and barge, as well as tugboat and barge movements, could affect animal species in the harbor for the duration of the dredging. Noise, human disturbance, and mechanical barriers from equipment and boats, all would affect wildlife, fish, and birds in the harbor. Some sediment in the harbor may contain toxic compounds that, when suspended, could affect water quality, which in turn could affect animal species.

The goal of a dredging or capping project is normally to change the nature of the harbor substrate. As a result, even after the dredging is complete the new substrate can be inhospitable to the previous benthic community and a reestablishment of the organisms is typically gradual. Moreover, other species (fish or birds) often rely upon the benthic community for food. A considerable reduction in the food source for this species may cause an adverse impact. Bird species may be required to travel to other areas in search of food; this may reduce the diversity of birds observed at the harbor. Fish populations would be subject to in harbor conditions, however their food source may temporarily supplemented in order to mitigate this impact. Proper project modeling, siting, and planning, such as limiting extent and duration of the dredging, can help mitigate impacts to the animal life.

Low Flow Diversion

Flow diversions in dry weather could eliminate some animal habitats dependant on those flows. These changes may result in a change in the diversity of species, or numbers of any species of animals (birds, land animals including reptiles, fish and shellfish, benthic organisms, insects or microfauna) discussed above. Proper project modeling, siting, and planning can help mitigate impacts to the animal life.

Catch Basin Inserts

Catch basin inserts fit directly into curbside catch basins in urbanized areas. As such, impacts that result in change in the diversity of species, or numbers of any species of animals would be avoided. Furthermore, installation of catch basin inserts requires no construction or ground disturbance which could impact biological resources.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not expected to result in change in diversity of species, or numbers of any species of animals from the current condition. However, it would allow sediments to remain contaminated for longer periods of time.

Non-Structural BMPs

Non-structural BMPs would involve no change to the physical environment either directly or indirectly and would have no impact that results in a change in the diversity of species, or numbers of any species of animals.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

5. Animal Life. b. Will the proposal result in reduction of the numbers of any unique, rare or endangered species of animals?

Answer: Potentially Significant Impact

Depending on the structural BMPs selected, direct or indirect impacts to special-status animal species may possibly occur during and after construction. If special-status species are present during activities such as ground disturbance, construction, operation and maintenance activities associated with the potential projects, direct impacts to special-status species could result, including the following:

- Direct loss of a special-status species
- Increased human disturbance in previously undisturbed habitats
- Mortality by construction or other human-related activity
- Impairing essential behavioral activities, such as breeding, feeding or shelter/refugia
- Destruction or abandonment of active nest(s)/den sites
- Direct loss of occupied habitat

In addition, potential indirect impacts may include but are not limited to, the following:

- Displacement of wildlife by construction activities
- Disturbance in essential behavioral activities due to an increase in ambient noise levels and/or artificial light from outdoor lighting around facilities

Mitigation measures, however, could be implemented to ensure that special-status animals are not negatively impacted, nor their habitats diminished. For example, when the specific projects are developed and sites identified, a focus protocol animal survey and/or a search of the California Natural Diversity Database should be performed to confirm that any potentially special-status animal species in the site area are properly identified and protected as necessary.

If special-status animal species are potentially near the project site area, as required by the Endangered Species Act (ESA), two weeks prior to grading or the construction of facilities and per USFWS and/or CDFW protocols, pre-construction surveys to determine the presence or absence of special-status species would be conducted. The surveys should extend an appropriate distance (buffer area) off site to determine the presence or absence of any special-status species adjacent to the project site. If special-status species are present on the project site or within the buffer area, mitigation would be required under the ESA. To this extent, mitigation measures shall be developed with the USFWS and CDFW to reduce potential impacts.

Infiltration Systems and Vegetated Swales

Vegetated swales and infiltration systems such as vegetated biofiltration systems could increase the diversity or number of animal species, by creating habitat for those species. The installation of vegetated treatment and infiltration systems may result in a temporary impact on the numbers of any unique, rare or endangered species of animals if they are found at the site of the installation. Proper project siting, and planning, discussed, above, can help mitigate impacts to the animal life. Vegetated swales and infiltration systems could eliminate in-stream habitats dependant on flows associated with stormwater runoff. These changes may result in reduction of the numbers of any unique, rare or endangered species of animals. Proper project modeling, siting, and planning as discussed above can help mitigate impacts to the animal life. However reduction of nuisance flows may help return the flow to a more natural state.

Stormwater Capture Systems

Stormwater capture systems could eliminate in-stream habitats dependant on flows associated with stormwater runoff. These changes may result in reduction of the numbers of any unique, rare or endangered species of animals. Proper project modeling, siting, and planning as discussed above can help mitigate impacts to the animal life. However reduction of nuisance flows may help return the flow to a more natural state.

Media Filters and Oil/Water Separators

Even though it is expected that potential projects would occur in previously developed areas it is possible for special-status species to occur in urban areas. The installation of media filters and oil/water separators may result in a temporary impact on the numbers of any unique, rare or endangered species of animals if they are found at the site of the installation. Proper project siting, and planning, discussed, above, can help mitigate impacts to the animal life.

Sediment Capping

The installation of a sediment cap is not expected to cause a reduction in unique, rare or endangered animal species. The installation process may cause temporary and short term disturbance to bird species at the harbor. However, these can be mitigated by conducting appropriate bird surveys and selecting appropriate times for the work to be conducted. However, sediment capping should not be conducted during nesting season as even minor disturbance can cause a nest to be abandoned.

Replacement of copper-based antifouling paints

Increased growth of fouling organisms could occur as a result of boat owners switching from copper-based antifouling paints to alternative coatings, which may prove to be less effective. An

increase in abundance and species diversity of fouling organisms on a boat previously moored in a different location could lead to the transport of invasive species into the Marina del Rey Harbor Waters. Certain invasive species have been known to cause disruptions in ecosystems by a variety of mechanisms, such as through competition with native biota for food and resources. The natural community, if one exists in the Marina del Rey Harbor, could be negatively affected by the introduction and establishment of invasive species. To avoid this potentially significant impact, effective alternatives to copper-based antifouling paints should be considered. At present, there are a number of available alternatives that have been demonstrated to be both nontoxic in nature and effective at reducing fouling growth. Examples include silicone hull coatings and hard smooth epoxy hull coatings, combined with more frequent underwater hull cleaning. Furthermore, underwater hull cleaning should be performed particularly on vessels prior to leaving an area known or suspected to support species that could become invasive if brought into the Marina del Rey Harbor Waters. Additionally, the formal mandate for copper load reduction in this TMDL Basin Plan amendment will in and of itself increase the market demand for innovative solutions including nontoxic, effective hull coatings. This in turn will create greater market demand for the development of new products.

If sensitive plant and animal species occur on the project site mitigation shall be required in accordance with the Endangered Species Act. Mitigation measures shall be developed in consultation with the CDFG and the USFWS. Responsible agencies should endeavor to avoid compliance measures that could result in reduction of the numbers of any unique, rare or endangered species of plants and instead opt for such measures as enforcing litter ordinances in sensitive habitat areas.

Remove Contaminated Sediments - Dredging

Dredging activities could temporarily disturb sensitive bird species using the Harbor. For example, depending on the extent of the disturbance, temporary loss of resting and foraging habitat by the state and federal endangered California least tern could be a significant impact. California least terns use quiet areas in the Harbor such as Terminal Island to nest. Therefore, mitigation measures, such as performing activities such as dredging outside the nesting season of the least tern, may be necessary to protect this species. The responsible agencies should consult with the USFWS and CDFW regarding potential impacts to California least tern.

Also see "Plant." 2 b.

Low Flow Diversions

Flow diversions in dry weather could eliminate some animal habitats dependant on those flows. These changes may result in reduction of the numbers of any unique, rare or endangered species of animals. Proper project modeling, siting, and planning as discussed above can help mitigate impacts to the animal life.

Catch Basin Inserts

Catch basin inserts fit directly into curbside catch basins in urbanized areas where native habitat or special-status species usually are absent. As such, impacts that result in reduction of the numbers of any unique, rare or endangered species of animals would be avoided. Furthermore, installation of catch basin inserts requires no construction or ground disturbance which could impact biological resources.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not expected to result in a reduction of the numbers of any unique, rare, or endangered species of animals.

Non-Structural BMPs

Non-structural BMPs would involve no change to the physical environment either directly or indirectly, and would have no impact that results in the reduction of the numbers of any unique, rare or endangered species of animals.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

5. Animal Life. c. Will the proposal result in introduction of new species of animals into an area, or in a barrier to the migration or movement of animals?

Answer: Potentially Significant Impact

It is not reasonably foreseeable that implementation of structural BMPs will result in the introduction of a new animal species. In addition, because potential projects would be established in previously heavily developed areas it is not expected that potential project sites would act as a travel route or regional wildlife corridor.

A travel route is generally described as a landscape feature (such as a ridgeline, canyon, or riparian strip) within a larger natural habitat area that is used frequently by animals to facilitate movement and provide access to necessary resources (e.g. water, food, den sites). Wildlife corridors are generally an area of habitat, usually linear in nature, which connect two or more habitat patches that would otherwise be fragmented or isolated from one another. It is unlikely that structural BMPs would be constructed in areas such as these. Structural BMPs would be sited in urbanized areas.

However, structural BMPs may potentially impact wildlife crossings. A wildlife crossing is a small narrow area relatively short and constricted, which allows wildlife to pass under or through obstacles that would otherwise hinder movement. Crossings are typically manmade and include culverts, underpasses, and drainage pipes to provide access across or under roads, highways, or other physical obstacles.

Construction activities are associated with the implementation of structural BMPs and may impact migratory avian species. These avian species may use portions of potential project sites, including ornamental vegetation, during breeding season and may be protected under the Migratory Bird Treaty Act (MBTA) while nesting. The MBTA includes provisions for protection of migratory birds under the authority of the CDFW and USFWS. The MBTA protects over 800 species including, geese, ducks, shorebirds, raptors, songbirds, and many other relatively common species.

If structural BMPs are implemented at locations where they would cause foreseeable adverse impacts on species migration or movement patterns, mitigation measures could be implemented to ensure that impacts which may result in a barrier to the migration or movement of animals is less than significant. Any site-specific wildlife crossings should be evaluated in consultation with CDFW. If a wildlife crossing would be significantly impacted in an adverse manner, then the design of the project should include a new wildlife crossing in the same general location. If construction occurs during the avian breeding season for special status species and/or MBTA-

covered species, generally February through August, then prior (within 2 weeks) to the onset of construction activities, surveys for nesting migratory avian species would be conducted on the project site following CDFW and/or USFWS guidelines. If no active avian nests are identified on or within 200 feet of construction areas, no further mitigation would be necessary.

Alternatively, to avoid impacts, the agencies implementing the TMDL may begin construction after the previous breeding season for covered avian species and before the next breeding season begins. If a protected avian species was to establish an active nest after construction was initiated and outside of the typical breeding season (February – August), the project sponsor, would be required to establish a buffer of 200 feet or as required by USFWS between the construction activities and the nest site.

If active nests for protected avian species are found within the construction footprint or within the 200-foot buffer zone, construction would be required to be delayed within the construction footprint and buffer zone until the young have fledged or appropriate mitigation measures responding to the specific situation are developed in consultation with CDFW or USFWS. These impacts are highly site specific, and assuming they are foreseeable, they would require a project-level analysis and mitigation plan.

Finally, to the extent feasible, responsible agencies should endeavor to avoid compliance measures that could result in significant barriers to the beneficial migration or movement of animals, and instead opt for such measures as non-structural BMPs in sensitive areas.

Infiltration Systems and Vegetated Swales

Construction of reasonably foreseeable infiltration systems and vegetated swales likely would not restrict wildlife movement because the sizes of infiltration systems and vegetated swales are generally too small to obstruct a corridor. In some cases, detention/retention ponds, vegetated swales, and surface flow wetlands may actually provide important habitat. Proper project siting and planning, discussed above, mitigate impacts to the animal life.

Stormwater Capture Systems

Stormwater capture systems would not result in introduction of new species of animals into an area, or in a barrier to the migration or movement of animals.

Sediment Capping

Sediment capping is not expected to result in the introduction of new animal species to the harbor. Sediment capping, however, may potentially impact the movement and/or migration of animals. If capping activities take place during migration, the noise and associated activities may adversely impact the migration patterns of some birds. It is anticipated that this could be mitigated by conducting capping activities outside of the migration season.

Replacement of copper-based antifouling paints

Increased growth of fouling organisms could occur as a result of boat owners switching from copper-based antifouling paints to alternative coatings, which may prove to be less effective. An increase in abundance and species diversity of fouling organisms on a boat previously moored in a different location could lead to the transport of invasive species into the Marina del Rey Harbor Waters. Certain invasive species have been known to cause disruptions in ecosystems by a variety of mechanisms, such as through competition with native biota for food and resources. The natural community, if one exists in the Marina del Rey Harbor, could be negatively affected by the introduction and establishment of invasive species.

To avoid this potentially significant impact, effective alternatives to copper-based antifouling paints should be considered. At present, there are a number of available alternatives that have been demonstrated to be both nontoxic in nature and effective at reducing fouling growth.

Examples include silicone hull coatings and hard smooth epoxy hull coatings, combined with more frequent underwater hull cleaning. Furthermore, underwater hull cleaning should be performed particularly on vessels prior to leaving an area known or suspected to support species that could become invasive if brought into the Marina del Rey Harbor Waters. Additionally, the formal mandate for copper load reduction in this TMDL Basin Plan amendment will in and of itself increase the market demand for innovative solutions including nontoxic, effective hull coatings. This in turn will create greater market demand for the development of new products.

Media Filters and Oil/Water Separators

Media filters and oil/water separators would be located in urbanized areas and would not be of the size to result in introduction of new species of animals into an area, or in a barrier to the migration or movement of animals.

Remove Contaminated Sediments - Dredging

Dredging or capping in the Harbor would not result in introduction of new species of animals into an area. However, dredging could potentially cause a minor barrier to the migration or movement of animals. The presence of the pipeline and barge, as well as tugboat and barge movements, could affect the migration or movement of animals in the Harbor during the dredging. Noise, human disturbance, and mechanical barriers from equipment and boats may adversely impact the migration or movement of animals in the Harbor. Proper project modeling, siting, and planning, such as limiting extent and duration of the dredging, can help mitigate impacts to the migration or movement of animals.

Also see "Plant." 2 c.

Low Flow Diversions

Flow diversions would not result in the introduction of new species of animals into an area. However, construction activities could potentially cause a minor barrier to the movement of animals. No impact is anticipated.

Catch Basin Inserts

Catch basin inserts fit directly into curbside catch basins in urbanized areas where native habitat or special-status species usually are absent. As such, impacts that result in introduction of new species of animals into an area, or in a barrier to the migration or movement of animals would be avoided. Furthermore, installation of catch basin inserts requires no construction or ground disturbance which could impact biological resources.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not expected to result in an introduction of a new species of animals into an area, or result in a barrier to migration or movement of animals.

Non-Structural BMPs

Non-structural BMPs would involve no change to the physical environment either directly or indirectly and would have no impacts that result in introduction of new species of animals into an area, or in a barrier to the migration or movement of animals.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should

implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

5. Animal Life. d. Will the proposal result in deterioration to existing fish or wildlife habitat?

Answer: Potentially Significant Impact

Infiltration Systems and Vegetated Swales

Infiltration systems and vegetated swales increase infiltration rates of stormwater runoff which may potentially change the fish and wildlife habitat within the stream channels by changing the flow regime of the channels. Infiltration systems and vegetated swales could impact in-stream species dependant on those flows. Animal species that thrived in the water channels in the absence of nuisance flows should not be adversely impacted by habitat changes if the flows are eliminated. No adverse impacts are expected because the elimination of nuisance flows would return the stream bed's wet weather flows to a more natural, pre-development condition. This in turn would facilitate the return of the stream's animal community to a more natural, pre-development condition and could impede the propagation of water-loving non-native and invasive animal species. Impeding the propagation of invasive species is not a negative impact.

Stormwater Capture Systems

Stormwater capture systems collect stormwater runoff which may potentially change the fish and wildlife habitat within the stream channels by changing the flow regime of the creeks. Local capture systems could impact in-stream species dependant on those flows. Animal species that thrived in the creeks in the absence of nuisance flows should not be adversely impacted by habitat changes if the flows are eliminated. No adverse impacts are expected because the elimination of nuisance flows would return the stream bed's wet-weather flows to a more natural, pre-development condition. This in turn would facilitate the return of the stream's animal community to a more natural, pre-development condition and could impede the propagation of water-loving non-native and invasive animal species. Impeding the propagation of invasive species is not a negative impact.

Sediment Capping

Sediment capping may require the removal and covering of some aquatic vegetation. The removal and covering of aquatic vegetation would reduce wildlife habitat primarily for birds; however, it is expected that enough vegetation would remain in place to prevent a significant impact. Moreover, the habitat areas reduced by capping operations would gradually re-colonize.

Sediment capping will cover the sediments where benthic aquatic invertebrates reside with clay sediment, clay, gravel, or other material. This impact would be unavoidable and the cover of contaminated sediment material is the goal of a capping operation. It is expected that the benthic community will gradually re-colonize as well.

Replacement of copper-based antifouling paints

Increased growth of fouling organisms could occur as a result of boat owners switching from copper-based antifouling paints to alternative coatings, which may prove to be less effective. An increase in abundance and species diversity of fouling organisms on a boat previously moored in a different location could lead to the transport of invasive species into the Marina del Rey Harbor Waters. Certain invasive species have been known to cause disruptions in ecosystems by a variety of mechanisms, such as through competition with native biota for food and resources. The natural community, if one exists in the Marina del Rey Harbor, could be negatively affected by the introduction and establishment of invasive species.

To avoid this potentially significant impact, effective alternatives to copper-based antifouling paints should be considered. At present, there are a number of available alternatives that have been demonstrated to be both nontoxic in nature and effective at reducing fouling growth. Examples include silicone hull coatings and hard smooth epoxy hull coatings, combined with more frequent underwater hull cleaning. Furthermore, underwater hull cleaning should be performed particularly on vessels prior to leaving an area known or suspected to support species that could become invasive if brought into the Marina del Rey Harbor Waters. Additionally, the formal mandate for copper load reduction in this TMDL Basin Plan amendment will in and of itself increase the market demand for innovative solutions including nontoxic, effective hull coatings. This in turn will create greater market demand for the development of new products.

Remove Contaminated Sediments - Dredging

Dredging or capping would increase suspended sediment in the vicinity of dredging activity, increasing turbidity of the water. This would reduce water clarity in the Harbor, which would result in the deterioration of existing fish or wildlife habitat. The increased turbidity would affect survival of phytoplankton and zooplankton, which form the prey basis for many of the wildlife, fish, and bird species in the Harbor. Dredging processes would disrupt activities of wildlife in the Harbor, and the presence of the pipeline and barge, as well as tugboat and barge movements, would affect biological resources in the Harbor for the duration of the dredging. Noise, human disturbance, and mechanical barriers from equipment and boats, all would affect wildlife, fish, and birds in the harbors. Some sediment in the Harbor contains toxic compounds that, when suspended, could affect water quality, which in turn could affect existing fish or wildlife habitat.

Also see "Plant." 2 a, b, and c.

Low Flow Diversions

Flow diversions divert dry-weather runoff and first flush storm runoff which may potentially change the fish and wildlife habitat in the Harbor. Existing fish and wildlife that thrived in the Harbor in the absence of nuisance flows should not be adversely impacted by habitat changes if the flows are eliminated. No adverse impacts are expected because the elimination of nuisance flows would return the harbors bed to its more natural, pre-development condition.

Catch Basin Inserts

Catch basin inserts fit directly into curbside catch basins in urbanized areas. As such, impacts that result in deterioration to existing fish or wildlife habitat would be avoided.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not expected to result in deterioration to existing fish or wildlife habitat from the current condition. However, it would allow sediments to remain contaminated for longer periods of time, impacting habitat.

Non-Structural BMPs

Non-structural BMPs would involve no change to the physical environment either directly or indirectly, and would have no impacts that result in deterioration to existing fish or wildlife habitat.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should

implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

6. Noise. a. Will the proposal result in increases in existing noise levels?

Answer: Potentially Significant Impact

Installation of structural BMPs would potentially involve removal of asphalt and concrete from streets and sidewalks, excavation and shoring, installation of reinforced concrete pipe, installation of the unit, and repaving of the streets and sidewalks. It is anticipated that installation activities would occur in limited, discrete, and discontinuous areas over a short duration. No major construction activities are anticipated. It is anticipated that excavation, for the purpose of installation, and repaving would result in the greatest increase in noise levels during the period of installation. Table 6-2 provides noise levels generated by different machinery that may be used in installing the structural BMPs units.

Table 6- 2 Typical Installation Equipment Noise Emission Levels

Equipment	Maximum Noise Level, (dBA) 50 feet from source	Equipment Usage Factor	Total 8-hr Leq exposure (dBA) at various distances	
			50ft	100ft
Foundation Installation			83	77
Concrete Truck	*82*	*0.25*	76	70
Front Loader	*80*	*0.3*	75	69
Dump Truck	*71*	*0.25*	65	59
Generator to vibrate concrete	*82*	*0.15*	74	68
Vibratory Hammer	*86*	*0.25*	80	74
Equipment Installation			83	77
Flatbed truck	*78*	*0.15*	70	64
Forklift	*80*	*0.27*	74	69
Large Crane	*85*	*0.5*	82	76

Source; Caltrain, 2004

Contractors and equipment manufacturers have been addressing noise problems for many years, and through design improvements, technological advances, and a better understanding of how to minimize exposures to noise, noise effects can be minimized. An operations plan for the specific construction and/or maintenance activities could be developed to address the variety of available measures to limit the impacts from noise to adjacent homes and businesses. To minimize noise and vibration impacts at nearby sensitive sites, installation activities should be conducted during daytime hours to the extent feasible. There are a number of measures that can be taken to reduce intrusion without placing unreasonable constraints on the installation process or substantially increasing costs. These include noise and vibration monitoring to ensure that contractors take all reasonable steps to minimize impacts when near sensitive areas; noise testing and inspections of equipment to ensure that all equipment on the site is in good condition and effectively muffled; and an active community liaison program. A community liaison program should keep residents informed about installation plans so they can plan around noise or vibration impacts; it should also provide a conduit for residents to express any concerns or complaints.

The following measures would minimize noise and vibration disturbances at sensitive areas during installation:

- Use newer equipment with improved noise muffling and ensure that all equipment items have the manufacturers' recommended noise abatement measures, such as mufflers, engine covers, and engine vibration isolators intact and operational. Newer equipment will generally be quieter in operation than older equipment. All installation equipment should be inspected at periodic intervals to ensure proper maintenance and presence of noise control devices (e.g., mufflers and shrouding).
- Perform all installation in a manner to minimize noise and vibration. Use installation methods or equipment that will provide the lowest level of noise and ground vibration impact near residences and consider alternative methods that are also suitable for the soil condition. The contractor should select installation processes and techniques that create the lowest noise levels.
- Perform noise and vibration monitoring to demonstrate compliance with the noise limits. Independent monitoring should be performed to check compliance in particularly sensitive areas. Require contractors to modify and/or reschedule their installation activities if monitoring determines that maximum limits are exceeded at residential land uses.
- Conduct truck loading, unloading and hauling operations so that noise and vibration are kept to a minimum by carefully selecting routes to avoid going through residential neighborhoods to the greatest possible extent. Ingress and egress to and from the staging area should be on collector streets or higher street designations (preferred).
- Turn off idling equipment.
- Temporary noise barriers shall be used and relocated, as practicable, to protect sensitive receptors against excessive noise from installation activities. Consider mitigation measures such as partial enclosures around continuously operating equipment or temporary barriers along installation boundaries.
- The installation contractor should be required by contract specification to comply with all local noise and vibration ordinances and obtain all necessary permits and variances.

These and other measures can be classified into three distinct approaches as outlined in Table 6-3.

Table 6- 3 Noise Abatement Measures

Type of Control	Description
Source Control	*Time Constraints* – Prohibiting work during sensitive nighttime hours *Scheduling* – performing noisy work during less sensitive time periods *Equipment Restrictions* – restricting the type of equipment used *Substitute Methods* –using quieter equipment when possible *Exhaust Mufflers* – ensuring equipment have quality mufflers installed *Lubrication and Maintenance* – well maintained equipment is quieter *Reduced Power Operation* – use only necessary power and size Limit equipment on-site – only have necessary equipment on-site *Noise Compliance Monitoring* – technician on-site to ensure compliance
Path Control	*Noise barriers* – semi-portable or portable concrete or wooden barriers *Noise curtains* – flexible intervening curtain systems hung from supports *Increased distance* – perform noisy activities further away from receptors
Receptor Control	*Community participation* –open dialog to involve affected parties *Noise complaint process* – ability to log and respond to noise complaints

Adapted from Thalheimer, 2000

Increases in ambient noise levels are expected to be less than significant once mitigation measures have been properly applied.

Infiltration Systems and Vegetated Swales

Implementation of these BMPs would result in temporary increases in existing noise levels, but this would be short term and only exist until maintenance or construction is completed. Therefore, this noise impact is less than significant.

Stormwater Capture Systems

The construction and installation of stormwater capture systems would result in temporary increases in existing noise levels, but this would be short term and only exist until construction is completed.

Media Filters and Oil/Water Separators

The construction and installation of media filters and oil/water separators would result in temporary increases in existing noise levels, but this would be short term and only exist until construction is completed.

Replacement of copper-based antifouling paint

Replacement of copper-based antifouling paints is not expected to result in increases in existing noise levels.

Remove Contaminated Sediments – Dredging and Sediment Capping

Dredging and excavation or sediment capping activities would result in increases in existing noise levels. Noise levels from the hydraulic or clamshell dredge equipment exceeding a CNEL level of 60 dBA or more would indicate a significant noise impact. Noise mitigation measure for dredging are similar to those listed for installation of structural BMPs. Implementing measures such as these may reduce dredging noise impacts. Table 6-4 provides noise levels generated by different machinery that may be used in dredging.

Table 6- 4 Typical Dredge Equipment Noise Emission Levels

Equipment	Noise Level at 50 Feet From Source
Diesel-Powered Clamshell Dredge	*85*
Tugboat	*87*
Support Boat	*87*
Barge	*87*
Crane (Barge-Mounted)	*87*
Backhoe	*84*
Bulldozer	*88*

Adopted from USACE and LAHD 2009b.

Low Flow Diversions

The construction and installation of flow diversions would result in temporary increases in existing noise levels, but this would be short term and only exist until construction is completed. Therefore, this noise impact would reduce to less than significant level.

Catch Basin Inserts

Installation of catch basin inserts would not involve any construction activity or the use of major equipment therefore no significant increase in ambient noise levels is anticipated. Catch Basin Inserts need to be cleaned regularly. Frequency of cleaning depends on the amount of trash flowing into the insert. Increased street sweeping can decrease the amount of trash, caught by catch basin inserts. Catch basins are cleaned out on varying schedules at a minimum frequency as a requirement of the MS4 permit. This implementation measure does not require an increase in cleaning frequency above what is already required for existing permits, therefore no significant increase in noise levels are anticipated.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not expected to result in increases in existing noise levels.

Non-Structural BMPs

Non-structural BMPs could result in increases in existing noise levels due to increased traffic from maintenance vehicles which may increase the noise level temporarily as the vehicles pass through an area. However, the increase in noise levels would be no greater than typical infrastructure maintenance activities currently performed by municipalities.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However,

implementation of these mitigation measures are within the responsible and jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

6. Noise. b. Will the proposal result in exposure of people to severe noise levels?

Answer: Potentially Significant Impact

There will be noise associated with structural and non-structural BMPs (see 6 Noise a). Personnel conducting the operation and/or working in the general area may be exposed to severe noise levels. This would require that all personnel be required to wear ear protection in order to mitigate this exposure. The noise mitigation measures have been previously described in response to 6. Noise. a.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the responsible and jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

7. Light and Glare. Will the proposal produce new light or glare?

Answer: Potentially Significant Impact

Structural BMPs

The construction and installation of structural BMPs could potentially be performed during evening or night time hours. If this scenario were to occur, night time lighting would temporarily be required to perform the work. Also, lighting could possibly be used to increase safety around structural BMPs. A lighting plan should be prepared to include mitigation measures. Mitigation measures can include shielding on all light fixtures and limiting light trespass and glare through the use of directional lighting methods. Other potential mitigation measures may include the use of screening and low-impact lighting, performing construction during daylight hours, or designing security measures for installed structural BMPs that do not require night lighting. Certain BMPs may employ solar panels for electricity to operate. The potential glare from these solar panels can be mitigated by siting them away from receptors, using shielding, or using alternative photovoltaic panels, which absorb light and do not produce glare.

Non-Structural BMPs

Non-structural BMPs will not produce new light or glare because none of the BMPs would introduce any physical effects that could impact light and glare.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the responsible and jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section

15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

8. Land Use. a. Will the proposal result in substantial alteration of the present or planned land use of an area?

Answer: Potentially Significant Impact

Structural BMPs

The installation of infiltration systems, vegetated swales, stormwater capture systems, media filters, oil/water separators, diversion and/or treatment BMPs, and catch basin inserts are not expected to result in substantial alterations or adverse impacts to present or planned land use. To the extent that there could be land use impacts at a specific location, these potential land use conflicts are best addressed at the project level. Since the Regional Board cannot specify the manner of compliance with the TMDL, the Regional Board can not specify the exact location of structural treatment devices. The various agencies that might install such structural BMPs such as vegetated swales and detention basins will need to identify local land use plans as part of a project-level analysis to ensure that projects comply with permitted use regulations and are consistent with land use plans, general plans, specific plans, conditional uses, or subdivisions.

Notably, structural BMPs can be suitable for an ultra-urban setting and can be specifically designed to accommodate limited land area.

Construction of structural treatment devices will not result in permanent features such as above-ground infrastructure that would disrupt, divide, or isolate existing communities or land uses. Projects can incorporate public education and aesthetically pleasing design with functional water quality treatment. Projects may be designed to increase parks and wildlife habitat areas and to improve water quality. Construction activities could follow standard mitigation methods and BMPs to reduce any potential impact on surrounding land uses and access to all adjacent land uses could be provided during the construction period.

Non-Structural BMPs

Non-structural BMPs and source reduction efforts would involve no change to the physical environment either directly or indirectly and would have no impact on land use.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the responsible and jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

9. Natural Resources. a. Will the proposal result in increase in the rate of use of any natural resources?

Answer: No Impact

Structural and/or non-structural BMPs will not increase the rate of use of any natural resources. Implementation of structural and/or non-structural BMPs should not require quarrying, mining,

dredging, or extraction of locally important mineral resources. Operation of construction and maintenance vehicles could increase the use of fossil fuels, and some types of structural BMPs may consume electricity to operate pumps. Fuel and energy consumption are discussed in greater detail in item 15 Energy, listed below.

9. Natural Resources. B. Will the proposal result in substantial depletion of any non-renewable natural resource?

Answer: No Impact

See 9. Natural Resources. a.

10. Risk of Upset. Will the proposal involve a risk of an explosion or the release of hazardous substances (including, but not limited to: oil, pesticides, chemicals or radiation) in the event of an accident or upset conditions?

Answer: Potentially Significant Impact

There is the possibility that hazardous materials (e.g. oil and gasoline) may be present during implementation and/or operation of the structural and non-structural BMPs. Potential risk of exposure and explosion can be mitigated with proper handling and storage procedures. Compliance with the requirement of California Occupational Health and Safety Administration (Cal OSHA) and local safety regulations during installation, operations, and maintenance of these alternatives would help to prevent any worksite accidents or accidents involving the release of hazardous materials into the environment. Mitigation may include properly storing hazardous materials in protected areas with fencing and signs to prevent health hazards.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

11. Population. Will the proposal alter the location, distribution, density, or growth rate of the human population of an area?

Answer: No Impact

It is not anticipated that reasonably foreseeable methods of compliance will result in an impact to population in the altering the location, distribution, density, or growth rate of human population of an area.

12. Housing. Will the proposal affect existing housing, or create a demand for additional housing?

Answer: No Impact

Structural BMPs

It is not anticipated that reasonably foreseeable methods of compliance will result in an impact to existing housing, or create a demand for additional housing. Small infrastructure projects like low flow diversions, vegetated swales, and the use of porous pavement, would be placed in urbanized areas, so no additional space would be necessary. Some BMPs such as additional

detention and infiltration basins could require space, but such BMPs are small, and responsible agencies would not need to impact existing housing in any way to site them.

Non-Structural BMPs

It is not reasonably foreseeable that non-structural BMPs would affect existing housing, or create a demand for additional housing.

13. Transportation/Circulation. a. Will the proposal result in generation of substantial additional vehicular movement?

Answer: Potentially Significant Impact

Structural BMPs

Structural BMPs will not result in generation of substantial additional long-term vehicular movement. There may be additional vehicular movement during construction of structural BMPs and during maintenance activities. However, vehicular movement during construction, and excavation and disposal of dredge materials would be temporary during the duration of those activities, and vehicular movement during maintenance activities would be periodic and only as the vehicle passes through the area. This may generate minor additional vehicular movement.

In order to reduce the impact of traffic related to construction and disposal of dredge material, a construction traffic management plan could be prepared for traffic control during any street closure, detour, or other disruption to traffic circulation. The plan could identify the routes that construction vehicles would use to access the site, hours of construction traffic, and traffic controls and detours. The plan could also include plans for temporary traffic control, temporary signage and stripping, location points for ingress and egress of construction vehicles, staging areas, and timing of construction activity which appropriately limits hours during which large construction equipment may be brought on or off site.

Non-Structural BMPs

Non-structural BMPs could result in increases in vehicular movement due to increased traffic from maintenance vehicles. However, the increase in vehicular movement would be no greater than typical infrastructure maintenance activities currently performed by municipalities.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible parties listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These parties have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

13. Transportation/Circulation. b. Effects on existing parking facilities, or demand for new parking?

Answer: Potentially Significant Impact

Infiltration Systems, Vegetated Swales, Stormwater Capture Systems, Media Filters, and Oil/Water Separators

Compliance with the TMDL may result in alterations to existing parking facilities to incorporate infiltration stormwater BMPs or other structural BMPs to treat stormwater. Structural BMPs can be designed to accommodate space constraints or be placed under parking spaces and would not

significantly decrease the amount of parking available in existing parking facilities. If structural BMPs did create an impact on parking, available parking spaces can be reconfigured to provide equivalent number of spaces or a functionally similar parcel can be provided to mitigate potential adverse parking impacts.

Maintenance of structural BMPs could reduce available parking in an area during certain times of the day, week, and/or month, depending on frequency of operation and/or maintenance events. Maintenance events should be scheduled to be performed at the same time as other maintenance activities performed by the municipalities, and/or at times when these activities have lower impact, such as periods of low traffic activity and parking demand.

Sediment Capping

The installation of a sediment cap may result in temporary impacts to parking facilities. Parking areas may temporarily be required for the staging of the installation of the sediment cap. All parking effects from this activity should be limited and temporary only.

The TMDL will improve sediment and surface water quality with respect to toxic pesticides and PCBs. This may result in increased patron visitation of the park which could lead to an increased demand for parking. Available parking spaces can be reconfigured to provide equivalent number of spaces or a functionally similar parcel can be provided for use as offsite parking to mitigate potential adverse parking impacts.

Replacement of copper-based antifouling paints

Replacement of copper-based antifouling paints is not expected to result in effects on existing parking facilities, or demand for new parking.

Remove Contaminated Sediments - Dredging

Dredging and excavation or sediment capping activities would result in short-term impacts to existing parking facilities. Open space may be required for the staging of dredging activities and for the temporary stockpiling of material removed from the Harbor bottom. All parking effects from the dredging itself should be limited and temporary only, and equipment and materials are to be removed at the completion of dredging operations.

Low Flow Diversions

The installation of the flow diversions may result in temporary impacts to parking facilities. Parking areas may temporarily be required for the staging of the installation of the flow diversions. All parking effects from the installation of the flow diversions should be limited and temporary only, and equipment and materials are to be removed at the completion of construction operations.

Catch Basin Inserts

The installation of the catch basin inserts may result in temporary impacts to parking facilities. Parking areas may temporarily be required for the staging of the installation of the catch basin inserts. All parking effects from the installation of the catch basin inserts should be limited and temporary only, and equipment and materials are to be removed at the completion of construction operations.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not expected to result in effects on existing parking facilities, or demand for new parking.

Non-Structural BMPs

Non-structural BMPs may result in short-term impacts to existing parking facilities, if construction operations require use of existing parking. Non-structural BMPs should be scheduled at times when these activities have lower impact, such as periods of low traffic activity and parking demand. For example, Street sweeping could reduce available parking in an area during certain times of the day, week, and/or month, depending on frequency of events. Street sweeping should be scheduled during times of low parking demand to mitigate this impact.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

13. Transportation/Circulation. c. Will the proposal result in substantial impacts upon existing transportation systems?

Answer: Potentially Significant Impact

Structural BMPs

Depending on the structural BMPs selected and transportation method chosen for dredging material disposal, temporary alterations to existing transportation systems may be required during construction and installation activities. The potential impacts would be limited and short-term.

Potential impacts could be reduced by limiting or restricting hours of construction so as to avoid peak traffic times, and by providing temporary traffic signals and flagging to facilitate traffic movement. Activities could be synced with existing port operations to further mitigate impacts to existing systems.

Non-Structural BMPs

It is not reasonably foreseeable that non-structural BMPs would result in substantial impacts upon existing transportation systems.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

13. Transportation/Circulation. d. Will the proposal result in alterations to present patterns of circulation or movement of people and/or goods?

Answer: Potentially Significant Impact

See response to "Transportation/Circulation." 13. c.

13. Transportation/Circulation. e. Will the proposal result in alterations to waterborne, rail or air traffic?

Answer: Potentially Significant Impact

Infiltration Systems, Vegetated Swales, Stormwater Capture Systems, Media Filters, Replacement of copper-based antifouling paints, Oil/Water Separators, Low Flow Diversion, Catch Basin Inserts, and Monitored Natural Attenuation of Contaminants.

It is not reasonably foreseeable that these implementation BMPs would result in alterations to waterborne, rail or air traffic.

Remove Contaminated Sediments – Dredging and Sediment Capping

Dredging and disposal or sediment capping activities would result in short-term impacts to waterborne traffic. Dredge and disposal would be carried out using waterborne construction equipment such as clamshell dredges, barges, and tugboats, which would result in short-term impacts the waterborne traffic in the Harbors. Dredge material may also be transported via barge or rail. However, all impacts from the dredging itself should be limited and temporary only, and equipment and materials are to be removed at the completion of dredging operations. Locating barge away from more highly used port transportation lanes may help to mitigate aquatic traffic. If using rails for dredger material disposal, activities can also be timed for non-peak hours.

Non-Structural BMPs

It is not reasonably foreseeable that non-structural BMPs would result in alterations to waterborne, rail or air traffic.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

13. Transportation/Circulation. f. Will the proposal result in increase in traffic hazards to motor vehicles, bicyclists or pedestrians?

Answer: Potentially Significant Impact

Structural BMPs

A temporary increase in traffic hazards may occur during construction and installation activities. The specific project impacts can be mitigated by appropriate mitigation methods during construction. To the extent that site-specific projects entail excavation in roadways, such excavations should be marked, barricaded, and traffic flow controlled with signals or traffic control personnel in compliance with authorized local police or California Highway Patrol requirements. These methods would be selected and implemented by responsible local agencies considering project level concerns. Standard safety measures should be employed including fencing, other physical safety structures, signage, and other physical impediments designed to promote safety and minimize pedestrian/bicyclists accidents.

Non-Structural BMPs

Street Sweeping BMPs

A temporary increase in traffic hazards may occur during street sweeping activities. The specific project impacts can be mitigated by appropriate mitigation methods during operation. These methods would be selected and implemented by responsible local agencies considering project level concerns. Standard safety measures should be employed including physical safety structures, signage, and other physical impediments designed to promote safety and minimize motor vehicles, pedestrian/bicyclists accidents.

Other Non-Structural BMPs

It is not reasonably foreseeable that other non-structural BMPs would result in increases in traffic hazards to motor vehicles, bicyclists or pedestrians.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

14. Public Service. a. Will the proposal have an effect upon, or result in a need for new or altered governmental services in any of the following areas: Fire protection?

Answer: Potentially Significant Impact

Structural BMPs

During construction and installation of structural BMPs, temporary delays in response time of fire vehicles due to road closure/traffic congestion during construction activities may occur. However, any construction activities would be subject to applicable building and safety and fire prevention regulations and codes. The responsible agencies could notify local emergency service providers of construction activities and road closures and could coordinate with local providers to establish alternative routes and appropriate signage. In addition, an Emergency Preparedness Plan could be developed for the construction of proposed new facilities in consultation with local emergency providers to ensure that the proposed project's contribution to cumulative demand on emergency response services would not result in a need for new or altered fire protection services. Most jurisdictions have in place established procedures to ensure safe passage of emergency vehicles during periods of road maintenance, construction, or other attention to physical infrastructure. The installation of structural devices would not create any more significant impediments than such other ordinary activities.

Non-structural BMPs

It is not reasonably foreseeable that non-structural BMPs would result in a need for new or altered governmental services in fire protection.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)).

These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

14. Public Service. b. Will the proposal have an effect upon, or result in a need for new or altered governmental services in any of the following areas: Police protection?

Answer: Potentially Significant Impact

Structural BMPs

There is potential for temporary delays in response times of police vehicles due to road closure/traffic congestion during installation of structural BMPs. To mitigate potential delays the responsible agencies could notify local emergency and police service providers of construction activities and road closures, if any, and coordinate with the local police protection to establish alternative routes and traffic control during the installation activities. Most jurisdictions have in place established procedures to ensure safe passage of emergency vehicles during periods of road maintenance, construction, or other attention to physical infrastructure, and there is no evidence to suggest that installation of these structural devices would create any more significant impediments than other such typical activities. Any construction activity would be subject to applicable building and safety codes and permits. Therefore, the potential delays in response times for police vehicles after mitigation are less than significant.

Non-Structural BMPs

It is not reasonably foreseeable that non-structural BMPs would result in a need for new or altered governmental services in police protection.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

14. Public Service. c. Will the proposal have an effect upon, or result in a need for new or altered governmental services in any of the following areas: Schools?

Answer: No Impact

Non-structural and structural BMPs will not have an effect upon, or result in a need for new or altered schools or school services because none of the BMPs would introduce any physical effects that could impact this public service category.

14. Public Service. d. Will the proposal have an effect upon, or result in a need for new or altered governmental services in any of the following areas: Parks or other recreational facilities?

Answer: Potentially Significant Impact

Structural BMPs

During construction and installation of infiltration systems, stormwater capture systems or vegetated treatment systems, parks or other recreational facilities could be temporarily affected. Construction activities could potentially be performed near or within a park or recreational

facilities. Potential impacts would be limited and short-term and could be avoided through siting, designing, and scheduling of construction activities. Parks can also be used to treat stormwater runoff by designing playing fields to serve as infiltration basins, which could impact the recreational use of the fields after a storm. This impact could be mitigated by designing infiltration facilities that drain quickly.

Remove Contaminated Sediments – Dredging and Sediment Capping

Dredging or sediment capping activities would result in short-term impacts to recreational use of the Harbor. Open space may be required for the staging of dredging activities and for the temporary stockpiling of sediment removed from the Harbor bottom. All impacts from the dredging itself should be limited and temporary only, and equipment and materials are to be removed at the completion of dredging operations. Proper project siting and planning can help mitigate adverse impacts to parks or other recreational facilities.

Non-Structural BMPs

It is not foreseeable that non-structural BMPs will have a negative impact upon, or result in a need for new or altered governmental services to parks or other recreational facilities.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

14. Public Service. e. Will the proposal have an effect upon, or result in a need for new or altered governmental services in any of the following areas: maintenance of public facilities, including roads?

Answer: Potentially Significant Impact

Structural BMPs

Structural BMPs and infrastructure improvements could potentially impact public service requiring additional maintenance to ensure proper operation. Culvert cleaning, flow diversion devices, vegetated swales, oil/water separators, and catch basin inserts require some degree of maintenance, though the frequency and intensity of maintenance vary per BMPs. Other structural BMPs and infrastructure improvements do not require frequent maintenance. These devices can be further designed and engineered to lessen the amount of maintenance and servicing required. While these requirements may result in increases in maintenance costs, any increase will be outweighed by the resulting overall improvement in water quality and protection of aquatic life and water supply beneficial uses.

Non-Structural BMPs

It is not foreseeable that non-structural BMPs will have a negative impact upon, or result in a need for new or altered governmental services in any of the following areas: maintenance of public facilities including roads.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce

potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

14. Public Service. f. Will the proposal have an effect upon, or result in a need for new or altered governmental services in any of the following areas: other government services?

Answer: Potentially Significant Impact

Structural BMPs

As discussed above, structural BMPs may include additional maintenance to ensure proper operation of newly installed structural BMPs. Maintenance events could be scheduled to be performed at the same time as other maintenance activities performed by the municipalities, or at times when these activities have lower impact, such as periods of low traffic activity and parking demand.

Non-Structural BMPs

Implementation of the TMDL will result in the need for some increased monitoring on the storm drains and Marina del Rey Harbor to track compliance with the TMDL. However, no impact on the environment would be expected from these monitoring activities. Increased public outreach and education, street cleaning, and storm drain cleaning may potentially impact government services. Nevertheless, these types of alterations to governmental services are not "environmental" impacts that involve a change in the physical environment. Enlisting enforcement and clean-up volunteers may help mitigate adverse impacts associated with non-structural BMPs.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

15. Energy. a. Will the proposal result in use of substantial amounts of fuel or energy?

Answer: Potentially Significant Impact

Structural BMPs

Compliance should not result in the use of substantial additional amounts of fuel or energy, or a substantial increase in demand upon existing sources of energy, or require the development of new sources of energy.

Construction of infrastructure improvements and structural BMPs require energy and fuel for heavy equipment, machinery, and vehicles. Energy demands during construction are temporary.

Responsible parties can further mitigate fuel and energy consumption during construction through the use of more energy efficient vehicles and equipment.

Reasonably foreseeable infrastructural improvements and structural BMPs require infrequent maintenance and are unlikely to use substantial amount of fuel or energy, substantially increase demand upon existing sources of energy, or require the development of new sources of energy.

Replacement of copper-based antifouling paints

Increased growth of fouling organisms could occur as a result of boat owners converting from copper-based antifouling paints to alternative coatings and strategies which may prove to be less effective. Less effective antifoulant coatings may result in increased fouling community growth on boat hulls. Increased fouling community growth will resulted in increased hull bottom drag and corrosion, and a subsequent decrease in safety, maneuverability, and fuel efficiency. A decrease in fuel efficiency would lead to an increase in gasoline consumption for motorized boats, which in turn could have adverse effects on air quality because of increased gasoline combustion. To avoid this potentially significant impact, effective alternatives to copper-based antifouling paints should be considered. At present, there are a number of available alternatives that have been demonstrated to be both nontoxic in nature and effective at reducing fouling growth. Examples include silicone hull coatings and hard smooth epoxy hull coatings, combined with more frequent underwater hull cleaning. In general, less toxic and non-toxic alternative coatings require more frequent cleaning in order to remove the buildup of fouling growth and prevent increased fuel consumption. If increased frequency of hull cleaning isn't adequate to prevent significant air pollution, additional measures such as putting pollution control devices on engines may be necessary.

Non-Structural BMPs

Increases in administrative action, and outreach and education may also increase consumption and demand for fuel and energy. Responsible parties may also employ volunteers and choose to employ outreach activities and use of more energy efficient vehicles.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

15. Energy. b. Will the proposal result in a substantial increase in demand upon existing sources of energy, or require the development of new sources of energy.

Answer: Potentially Significant Impact

See response to "15. Energy. a." Compliance with the TMDL will not require the development of new sources of energy.

16. Utilities and Service Systems. a. Will the proposal result in a need for new systems, or substantial alterations to the following utilities: power or natural gas?

Answer: Potentially Significant Impact

Structural BMPs

Installation of structural BMPs may require alterations or installation of new power or natural gas lines. Power and natural gas lines might need to be rerouted to accommodate the addition of structural BMPs. The degree of alteration depends upon local system layouts which careful placement and design can minimize. However, that the installation of structural BMPs will result in a substantial increased need for new systems, or substantial alterations to power or natural gas utilities, is not reasonably foreseeable, because none of these BMPs are large enough to substantially tax current power or natural gas sources. No long-term effects on the environment are expected if alterations to power or natural gas utilities are required.

Non-Structural BMPs

Non-structural BMPs will not result in a need for new systems or alterations to power or natural gas utilities because none of the BMPs would introduce any physical effects that could impact this characteristic.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

16. Utilities and Service Systems. b. Will the proposal result in a need for new systems, or substantial alterations to the following utilities: communications systems?

Answer: No Impact

Structural BMPs

New systems or alterations to communications systems are not necessarily required for structural BMPs. It is anticipated that construction and maintenance crews will use various communication systems such as, telephones, cell phones, and radios. These types of communication devices and systems are used daily by the construction and maintenance personnel as part of regular business activities. It is not expected that the implementation of this TMDL would create undue stress on the established communication systems and will not require substantial alterations to the current communication system or a new communication system. However, that municipalities could install a remote monitoring system, which could include a new communications system, is possible. A telephone line or wireless communications system could be installed, which would not be a substantial alteration.

Non-Structural BMPs

Non-structural BMPs will not result in a need for new systems or alterations to communications systems because none of the BMPs would introduce any physical effects that could impact this characteristic. Current forms of communications used in maintenance vehicles could still be used.

16. Utilities and Service Systems. c. Will the proposal result in a need for new systems, or substantial alterations to the following utilities: water?

Answer: No Impact

Non-structural and/or structural BMPs will not result in a need for new systems or alterations to water supply. The need for new municipal or recycled water to implement this TMDL is not foreseeable.

16. Utilities and Service Systems. d. Will the proposal result in a need for new systems, or substantial alterations to the following utilities: Sewer or septic tanks?

Answer: Potentially Significant Impact

Structural BMPs

It is not reasonably foreseeable that structural BMPs except the flow diversions described below would result in a need for new systems, or substantial alterations to the following utilities: Sewer or septic tanks

Low Flow Diversions

Diverting the low-flow and storm first flush flows to the City's and/or County's sanitary sewer lines would increase the wastewater treatment demand and decrease the available capacity of the existing treatment facilities. This implementation measure will result in a need for new systems, or substantial alterations to sewer or septic tanks. This impact may be mitigated by installing high-flow bypasses along with the diversions. High-flow bypasses are designed to bypass the diversion in the event high-flow events, like storm events, to prevent overflow, flooding, and exhaustion of wastewater treatment plant's capacity.

Depending on the number of diversions installed and flow potential, low-flow and first flush storm diversion may significantly impact the treatable capacity of local Publicly Owned Treatment Works (POTWs). Responsible parties should study the layout of each diversion to determine the optimal amount of diversions necessary and the flow potential associated with those diversions. Responsible parties should also consult with local POTW to determine the average flow rate and treatable capacity of each POTW.

Non-Structural BMPs

It is not reasonably foreseeable that non-structural BMPs would result in a need for new systems, or substantial alterations to the following utilities: sewer or septic tanks.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

16. Utilities and Service Systems. e. Will the proposal result in a need for new systems, or substantial alterations to the following utilities: storm water drainage?

Answer: Potentially Significant Impact

Structural BMPs

In order to achieve compliance with the TMDL, the stormwater drainage systems may need to be reconfigured and/or retrofitted with structural BMPs to capture and/or treat a portion or all of the storm water runoff. The alterations and/or additions to storm water drainage systems will depend on the compliance strategy selected by each responsible party at each location where structural BMPs might be installed. Impacts from construction activities to retrofit or reconfigure the storm drain system as part of BMP installation, and mitigation measures have been considered and discussed in the previous sections of the checklist discussion.

Infiltration Systems and Vegetated Swales

The installation of infiltration systems and vegetated swales may result in substantial alterations to stormwater drainage. This impact may be mitigated by installing high-flow bypasses along with the infiltration systems and vegetated swales. Proper project modeling, siting, and planning can help mitigate adverse impacts to substantial alterations to storm water drainage.

Remove Contaminated Sediments – Dredging and Sediment Capping

Dredging or capping activities would not result in a need for new systems, or substantial alterations to storm water drainage. No impact is expected.

Low Flow Diversions

The development of flow diversion systems has the potential to result in a need for new systems, or substantial alterations to storm water drainage. The systems involve construction of diversion structures, drain lines, and wet well. These types of devices may result in a potentially significant impact due to changes in drainage patterns or flooding hazards if devices become blocked by trash and debris. Any device installed in a storm drain, especially an older, under-capacity drain could have a negative effect on the drain's ability to convey runoff. These negative impacts can be mitigated through design of devices with overflow/bypass structures and by performing regular maintenance of these structures. Proper project modeling, siting, and planning can help mitigate adverse impacts and substantial alterations to storm water drainage.

Catch Basin Inserts

Catch basin inserts are manufactured frames that typically incorporate filters or fabric and placed in a curb opening or drop inlet to remove trash, sediment, or debris. They can also be perforated metal screens placed horizontally or vertically within a catch basin. Flooding is a potential hazard if the filters or screens became blocked by trash and debris and prevent the discharge of stormwater. This would be of particular concern in areas susceptible to high leaf-litter rates. This potential impact can be mitigated through the use of inserts that are designed with automatic release mechanisms or retractable screens that allow flow-through during wet-weather and by performing regular maintenance to prevent the build up of trash and debris. Therefore, the exposure of people and property to flooding hazards after mitigation should be less then significant.

Non-structural BMPs

Non-structural BMPs will not result in a need for new systems, or substantial alterations to stormwater drainage systems because none of the BMPs would introduce any physical effects that could impact this characteristic.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

16. Utilities and Service Systems. f. Will the proposal result in a need for new systems, or substantial alterations to the following utilities: solid waste and disposal?

Answer: Potentially Significant Impact

Infiltration Systems and Vegetated Bioswales

The installation of infiltration systems and vegetated swales may generate construction debris. Additionally, installed infiltration systems and vegetated swales may collect sediment and solid wastes that will require disposal. Construction debris can be recycled at aggregate recycling centers or disposed of at landfills. Improved sorting and recycling methods can reduce the total amount of disposable wastes. Sediment and solid wastes that may be collected can be disposed of at appropriate landfill and/or disposal facilities.

Stormwater Capture Systems

Installed stormwater capture systems may collect sediment and solid wastes that will require disposal. However, no new solid waste or disposal systems would be needed to handle the relatively small volume generated by these projects. Sediment and solid wastes that may be collected can be disposed of at appropriate landfill and/or disposal facilities.

Media Filters and Oil/Water Separators

The installation of media filters and oil/water separators may generate construction debris. Additionally, installed, these BMPs may collect sediment and solid wastes that will require disposal. Construction debris may be recycled at aggregate recycling centers or disposed of at landfills. Sediment and solid wastes that may be collected can be disposed of at appropriate landfill and/or disposal facilities.

Sediment Capping

Sediment capping is to cover contaminated sediments in situ by a layer of clean sediment, clay, gravel, or other material. Sediment capping is not anticipated to result in a need for new systems or substantial alterations to the utilities of solid waste disposal.

Remove Contaminated Sediments - Dredging

The purpose of dredging is to remove sediments from the Harbor bottoms. This dredged material requires disposal. One option for disposal of dredged materials is a landfill site; this could potentially impact solid waste utilities. Another option is to re-use the material in nearby slip fill projects with proper containment.

Low Flow Diversions

The installation of flow diversion systems may generate construction debris. Additionally, installed flow diversion systems may collect sediment and solid wastes that will require disposal. Construction debris can be recycled at aggregate recycling centers or disposed of at landfills. Improved sorting and recycling methods can reduce the total amount of disposable stormwater

wastes. Sediment and solid wastes that may be collected can be disposed of at appropriate landfill and/or disposal facilities.

Install Vegetated Bioswales

The installation of the vegetated bioswales may generate construction debris. Additionally, installed vegetated bioswales may collect sediment and solid wastes that will require disposal. Construction debris can be recycled at aggregate recycling centers or disposed of at landfills. Improved sorting and recycling methods can reduce the total amount of disposable wastes. Existing landfills in the area have adequate capacity to accommodate this limited amount of construction debris. Impacts on the disposal of solid waste would be less than significant. It is not foreseeable that this proposal will result in a need for new systems, or substantial alterations to solid waste and disposal utilities.

Catch Basin Inserts

The installed catch basin inserts may collect sediment and solid wastes that will require disposal. Construction debris can be recycled at aggregate recycling centers or disposed of at landfills. Improved sorting and recycling methods can reduce the total amount of disposable stormwater wastes. Sediment and solid wastes that may be collected can be disposed of at appropriate landfill and/or disposal facilities.

Non-structural BMPs

Non-structural BMPs will not result in a need for new systems, or substantial alterations to solid waste and disposal utilities because none of the BMPs would introduce significant amounts of waste that could impact this characteristic.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

17. Human Health. a. Will the proposal result in creation of any health hazard or potential health hazard (excluding mental health)?

Answer: Potentially Significant Impact

Structural BMPs

It is reasonably foreseeable that hazards or hazardous materials could be encountered during the installation of structural BMPs. Contamination could exist depending on the current and historical land uses of the area. Depending on their location, structural BMPs could be proposed in areas of existing oil fields and/or methane zones or in areas with contaminated soils or groundwater. The use of hazardous materials (e.g., paint, oil, gasoline) and potential for accidents is also likely during installation.

Debris and sediment that are removed during construction of structural BMPs could become hazardous to the public or to maintenance workers who collect and transport the debris and sediment if they are not handled in a timely manner and disposed of appropriately.

Installation of structural BMPs could result in the temporary interference of emergency response or evacuation plans if construction equipment, road closures, or traffic interfered with emergency vehicles traveling through the installation area.

To the extent that installation of structural BMPs could involve work with or near hazards or hazardous materials, potential risks of exposure can be mitigated with proper handling and storage procedures. The health and safety plan prepared for any project should address potential effects from cross contamination and worker exposure to contaminated soils and water and should include a plan for temporary storage, transportation, and disposal of contaminated soils and water. Compliance with the requirements of California Occupational Health and Safety Administration (CalOSHA) and local safety regulations during installation, operation, and maintenance of these systems would prevent any worksite accidents or accidents involving the release of hazardous materials into the environment, which could harm the public, nearby residents and sensitive receptors such as schools. Systems can be redesigned and sites can be properly protected with fencing and signs to prevent accidental health hazards.

To the extent that trash trapped by trash separation devices could become hazardous, impacts to maintenance workers and the public could be avoided or mitigated by educating the local community about the effects of improper disposal of such wastes, enforcing litter ordinances, and timely cleaning out trash separation devices.

To the extent that, infiltration systems, vegetated swales, stormwater capture systems, and flow diversion systems become a source of standing water and vector production, design at the project level can help mitigate vector production from standing water. Vector control agencies may be employed as another source of mitigation. Systems that are prone to standing water can be selectively installed away from high-density areas and away from residential housing and/or by requiring oversight and treatment of those systems by vector control agencies. Appropriate planning, design, siting, and implementation can reduce or eliminate potential health hazards due to the installation of structural BMPs.

See response to "Air." 2. a and b.

Non-Structural BMPs

Non-structural BMPs would involve no change to the physical environment either directly or indirectly and would have no impact related to hazards, hazardous materials, or human health.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

17. Human Health. b. Will the proposal result in exposure of people to potential health hazards?

Answer: Potentially Significant Impact

See response to 17 Human Health a.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce

potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the responsible and jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

18. Aesthetics. a. Will the proposal result in the obstruction of any scenic vista or view open to the public?

Answer: Potentially Significant Impact

Structural BMPs

Construction of low-flow diversions and other structural BMPs could potentially result in a temporary impairment of a scenic vista or view open to the public and create an aesthetically offensive site open to the public view. Project construction would require site grading, construction materials, stockpiling and storage, and the use of construction equipment. This construction impact would be localized and short-term, lasting during the normal working hours at specific locations. Construction BMPs like screening and landscaping can help mitigate aesthetic impacts. Construction materials and equipment shall be removed from the site as soon as they are no longer necessary. After construction, the scenic vista or view would return to the condition it was prior to the construction.

Remove Contaminated Sediments – Dredging and Sediment Capping

Dredging or capping may require that a dredge be floating in the harbors in order to remove sediment materials. In addition, there may be visual impacts associated with open space areas that are used for the staging of dredging activities and for the temporary stockpiling of material removed from the harbors bottom. These temporary changes would not significantly result in the obstruction of any scenic vista or view open to the public.

Non-structural BMPs

Non-structural BMPs will not result in the obstruction of any scenic vista or view open to the public because none of the BMPs would introduce any physical effects that could impact this characteristic.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the responsible and jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

18. Aesthetics. b. Will the proposal result in the creation of an aesthetically offensive site open to public view?

Answer: Potentially Significant Impact

See response to 18. Aesthetics. a.

19. Recreation. a. Will the proposal result in impacts on the quality or quantity of existing recreational opportunities?

Answer: Potentially Significant Impact

Structural BMPs

During construction and installation of structural BMPs, beaches, harbors or other recreational areas could be temporarily affected. Construction activities could potentially be performed near or within a harbor or recreational area. Potential impacts would be limited and short-term, and could be avoided through proper planning, and scheduling of construction activities.

In the event that the municipalities might install facilities on a scale that could alter a beach, harbor or recreational area, the structural BMPs could be designed in such a way as to be incorporated into the beach, harbor or recreational area. Additionally, many structural BMPs, if necessary, may be constructed underground to minimize impacts on the quality or quantity of existing recreational opportunities. Mitigation to replace lost areas may include the creation of new open space recreation areas and/or improved access to existing open space recreation areas.

Additionally, improvement of water quality could create new recreation opportunities in urbanized areas of the watersheds by providing the opportunity to recreate in and near a clean water body with a robust and diverse population of plants and animals.

Non-Structural BMPs

It is not reasonably foreseeable that non-structural BMPs would impact the quality or quantity of existing recreational opportunities.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the responsible and jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

20. Archeological/Historical. Will the proposal result in the alteration of a significant archeological or historical site structure, object or building?

Answer: Potentially Significant Impact

Structural BMPs

Structural BMPs would be installed in currently urbanized areas where ground disturbance has previously occurred. Because these areas are already fully urbanized it is unlikely that implementation of structural treatment devices would cause a substantial adverse change to historical or archeological resources, destroy paleontological resources, or disturb human remains. However, depending on the final location of facilities, potential impacts to cultural resources could occur. The site-specific presence or absence of these resources is unknown because the specific locations for facilities will be determined by responsible agencies at the

project level. Installation of these systems could result in minor ground disturbances, which could impact cultural resources if they are sited in locations containing these resources and where disturbances have not previously occurred.

Upon determination of specific locations for structural treatment devices, responsible agencies should complete an archaeological survey including consultation with the Native American Heritage Commission, to make an accurate assessment of potential to affect historic, archaeological, or architectural resources or to impact any human remains. If potential impacts are identified, mitigation measures could include project redesign, such as the relocation of facilities outside the boundaries of archeological or historical sites. In the event that prehistoric or historic cultural resources are discovered in project area during construction, all work shall be halted in the vicinity of the archaeological discovery until a qualified archaeologist can visit the site of discovery and assess the significance of the archaeological discovery.

Non-structural BMPs

Non-structural BMPs would involve no change to the physical environment either directly or indirectly and would not result in the alteration of a significant archeological or historical site structure, object or building.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the responsible and jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

21. Mandatory Findings of Significance.

21. a Potential to degrade. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Answer: Potentially Significant Impact

Taken all together, the potential impacts of the project will not cause a significant degradation to the environment with appropriate implementation of available mitigation measures. The implementation of this TMDL will result in improved water quality in the waters of the Region and will have significant beneficial impacts to the environment over the long term.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

21. b Short-term. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals?

Answer: No Impact

This TMDL is directed to long-term environmental goals, and does not sacrifice long-term for short-term benefit. There are no short-term beneficial effects on the environment from the implementation of non-structural and/or structural BMPs that would be at the expense of long-term beneficial effects on the environment. The implementation and compliance with this TMDL will result in improved water quality in the waters of the Region and will have significant beneficial impacts to the environment over the long term.

21. c. Cumulative. Does the project have impacts which are individually limited, but cumulatively considerable?

Answer: Potentially Significant Impact

Each compliance measure is expected to have nominal environmental impacts if performed properly. Mitigation measures are available for most of these impacts. It is not expected that implementation of the TMDL will cause cumulatively considerable impacts if available mitigation measures are properly implemented.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

21. d. Substantial adverse. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Answer: Potentially Significant Impact

Without implementation of recommended mitigation measures, potentially significant environmental impacts, such as impacts to air, noise, and transportation, can result from implementation projects. In some cases, mitigation measures even if performed may not reduce the impacts to less than significant levels. The significance of these impacts is discussed in detail above, as well as elsewhere in this document. The project will not cause substantial adverse effects on human beings.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

7. OTHER ENVIRONMENTAL CONSIDERATIONS

This section evaluates several other environmental considerations of reasonably foreseeable methods of complying with the OC Pesticides, PCBs, PAHs, Sediment Toxicity, and Metals TMDL, specifically:

7.1. Cumulative Impacts of the Program Alternatives (as required by CEQA Guidelines Section 15130);

7.2. Potential Growth-Inducing Effects of the Program Alternatives (as required by CEQA Guidelines Section 15126); and

7.3. Unavoidable Significant Impacts (as required by CEQA Guidelines Section 15126.2).

7.1 CUMULATIVE IMPACTS

Cumulative impacts, defined in Section 15355 of the CEQA Guidelines, refer to two or more individual effects, that when considered together, are considerable or that increase other environmental impacts. Cumulative impact assessment must consider not only the impacts of the proposed TMDL, but also the impacts from other municipal and private projects, which would occur in the watershed during the period of implementation.

The areas of cumulative impacts analyzed in this section include: 1) the program level cumulative impacts and 2) the project level cumulative impacts. On the program level, the impacts from multiple TMDLs, if they exist, are analyzed. On the project level, while the full environmental analysis of individual projects are the purview of the implementing municipalities and agencies, the cumulative impact analysis included here entails consideration of construction activities occurring in the vicinity of one another as a result of other projects being built in the same general time frame and location. The Toxic Pollutants TMDL projects, if occurring with other construction projects, could contribute to temporary cumulative noise and vibration effects that would not occur with only one project.

7.1.1 PROGRAM CUMULATIVE IMPACTS

Currently there is another one TMDL effective in the Marina del Rey watershed – the Marina del Rey Bacteria TMDL. None of the implementation approaches for other TMDLs should disrupt any structural BMPs as applied for toxic pollutants. In fact, potential implementation strategies discussed in this SED for the Toxic Pollutants TMDL may contribute to the implementation of other TMDLs.

7.1.2 PROJECT CUMULATIVE IMPACTS

Specific TMDL projects must be environmentally evaluated and cumulative impacts considered as the implementing municipality or agency designs and sites the project. However, as examples, TMDL projects and other construction activities may result in cumulative effects of the following nature:

Noise and Vibration - Local residents in the near vicinity of installation and maintenance activities may be exposed to noise and possible vibration. The cumulative effects, both in terms of added noise and vibration at multiple Toxic Pollutants TMDL installation sites, and in the context of other related projects, are not considered cumulatively significant due to the temporary nature of noise increases. Noise mitigation methods including scheduling of construction or implementation device installation are available as discussed in the checklist. In addition, the fact that implementation BMP installation activities are being conducted in the same vicinity as other projects will not make mitigation methods less implementable.

Air Quality - Implementation of the Toxic Pollutants TMDL Program may cause additional

emissions of criteria pollutants and slightly elevated levels of carbon monoxide during construction or BMP device installation activities. The TMDL, in conjunction with all other construction activity, may contribute to the region's non-attainment status during the installation period. SCAQMD prepared the Air Quality Management Plan (AQMP) (2003) to bring the region into compliance with the National Ambient Air Quality Standards as set by the EPA under the Clean Air Act Amendments (1990). The AQMP is essentially designed to address the cumulative air pollutants released into the South Coast Air Basin (SCAB). Because these installations -related emissions are temporary, and because the AQMP addresses cumulative air pollution in the SCAB, compliance with the TMDL would not result in long-term significant cumulative air quality impacts. In the short term, cumulative impacts could be significant if the combined emissions from the individual TMDL projects exceed the threshold criteria for the individual pollutants.

Transportation and Circulation - Compliance with the Toxic Pollutants TMDL involves installation activities occurring simultaneously at a number of surface sites in this TMDL area. Installation of BMP devices may be occurring in the same general time and space as other related or unrelated projects. In these instances, surface construction activities from all projects could produce cumulative traffic effects which may be significant, depending upon a range of factors including the specific location involved and the precise nature of the conditions created by the dual construction activity. Special coordination efforts may be necessary to reduce the combined effects to an acceptable level. Overall, significant cumulative impacts are not anticipated because coordination can occur and because transportation mitigation methods are available as discussed in the checklist. In addition, the fact that BMP device installation activities are being conducted in the same vicinity as other projects will not make mitigation methods less implementable.

Public Services - The cumulative effects on public services in the Toxic Pollutants TMDL study area would be limited to traffic inconveniences discussed above. These effects are not considered cumulatively significant as discussed above.

Aesthetics - Construction activities associated with other related projects may be ongoing in the vicinity of one or more Toxic Pollutants TMDL construction sites. To the extent that combined construction activities do occur, there would be temporary adverse visual effects of less than cumulatively significant proportions as discussed in the checklist.

7.2 GROWTH-INDUCING IMPACTS

This section presents the following:

7.2.1) an overview of the CEQA Guidelines relevant to evaluating growth inducement,

7.2.2) a discussion of the types of growth that can occur in the Marina del Rey Harbors,

7.2.3) a discussion of obstacles to growth in the watershed, and

7.2.4) an evaluation of the potential for the TMDL Program Alternatives to induce growth.

7.2.1 CEQA GROWTH-INDUCING GUIDELINES

Growth-inducing impacts are defined by the State CEQA Guidelines as (CEQA Guidelines, Section 15126.2(d)):

> The ways in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are impacts which would remove obstacles to population

> growth. Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects... [In addition,] the characteristics of some projects... may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It is not assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

Growth inducement indirectly could result in adverse environmental effects if the induced growth is not consistent with or accommodated by the land use plans and growth management plans and policies. Local land use plans provide for land use development patterns and growth policies that encourage orderly urban development supported by adequate public services, such as water supply, roadway infrastructure, sewer services, and solid waste disposal services.

Public works projects that are developed to address future unplanned needs (i.e., that would not accommodate planned growth) could result in removing obstacles to population growth. Direct growth inducement would result if, for example, a project involved the construction of new wastewater treatment facilities to accommodate populations in excess of those projected by local or regional planning agencies. Indirect growth inducement would result if a project accommodated unplanned growth and indirectly established substantial new permanent employment opportunities (for example, new commercial, industrial, or governmental enterprises) or if a project involved a construction effort with substantial short-term employment opportunities that indirectly would stimulate the need for additional housing and services. Growth inducement also could occur if the project would affect the timing or location of either population or land use growth, or create a surplus in infrastructure capacity.

7.2.2 Types of Growth

The primary types of growth that occur within the Toxic Pollutants TMDL area are:

1) Development of land, and

2) Population growth (Economic growth, such as the creation of additional job opportunities, also could occur; however, such growth generally would lead to population growth and, therefore, is included indirectly in population growth.)

Growth in land development

Growth in land development is the physical development of residential, commercial, and industrial structures in the Toxic Pollutants TMDL area. Land use growth is subject to general plans, community plans, parcel zoning, and applicable entitlements and is dependent on adequate infrastructure to support development.

Population Growth

Population growth is growth in the number of persons that live and work in the Toxic Pollutants TMDL area and other jurisdictions within the boundaries of the area. Population growth occurs from natural causes (births minus deaths) and net emigration to or immigration from other geographical areas. Emigration or immigration can occur in response to economic opportunities, life style choices, or for personal reasons.

Although land use growth and population growth are interrelated, land use and population growth could occur independently from each other. This has occurred in the past where the housing growth is minimal, but population within the area continues to increase. Such a situation results in increasing population densities with a corresponding demand for services, despite minimal land use growth.

Overall development in the County of Los Angeles is governed by the County of Los Angeles General Plan, which is intended to direct land use development in an orderly manner. The General Plan is the framework under which development occurs, and, within this framework, other land use entitlements (such as variances and conditional use permits) can be obtained. Because the General Plan guides land use development and allows for entitlements, it does not represent an obstacle to land use growth. The cities within the Toxic Pollutants TMDL area also have plans which direct land use development.

7.2.3 Existing Obstacles to Growth

Obstacles to growth could include such things as inadequate infrastructure, such as an inadequate water supply that results in rationing, or inadequate wastewater treatment capacity that results in restrictions in land use development. Policies that discourage either natural population growth or immigration also are considered to be obstacles to growth.

7.2.4 Potential for Compliance with the Proposed TMDL to Induce Growth

Direct Growth Inducement

Because the reasonably foreseeable methods of compliance with the proposed Toxic Pollutants TMDL focus on structural BMPs, non-structural BMPs and improvements to the storm drain system which are located throughout the urbanized portion of this TMDL area, this TMDL would not result in the construction of new housing and, therefore, would not directly induce growth.

Indirect Growth Inducement

Two areas of potential indirect growth inducement are relevant to a discussion of the proposed TMDL: (1) the potential for compliance with the TMDL to generate economic opportunities that could lead to additional immigration, and (2) the potential for the proposed TMDL to remove an obstacle to land use or population growth.

Installation and/or construction of structural BMPs to comply with the proposed TMDL would occur over a 20-year time period. Installation and maintenance spending for compliance would generate jobs throughout the region and elsewhere where goods and services are purchased or used to install structural BMPs. Based on the above annual construction cost estimates, the alternatives would result in direct jobs and indirect jobs. The creation of jobs in the region is considered a benefit.

Although the construction activities associated with the Toxic Pollutants TMDL would increase the economic opportunities in the area and region, this construction is not expected to result in or induce substantial or significant population or land use development growth because the majority of the new jobs that would be created by this construction are expected to be filled by persons already residing in the area or region, based on the existing surplus of unemployed persons in the area and region.

The second area of potential indirect growth inducement is through the removal of obstacles to growth. As discussed above, no obstacles exist to land use or to population growth in the watershed.

7.3 UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

Section 15126.2(c) of the CEQA Guidelines requires a discussion of potential significant, irreversible environmental changes that could result from a proposed project. Examples of such changes include commitment of future generations to similar uses, irreversible damage that may result from accidents associated with a project, or irretrievable commitments of resources. Although the proposed TMDL would require resources (materials, labor, and energy) they do not represent a substantial irreversible commitment of resources.

Furthermore, implementation of the Toxic Pollutants TMDL is both necessary and beneficial. To the extent that the alternatives, mitigation measures, or both, that are examined in this SED are not deemed feasible by the municipalities and agencies complying with the TMDL, the necessity of implementing the federally required TMDL and removing the significant environmental effects from toxic pollutants impairment in the Marina del Rey Harbor Waters (an action required to achieve the express, national policy of the Clean Water Act) remains. In addition, implementation of the TMDL will have substantial benefits to water quality and will enhance beneficial uses. Enhancement of the recreational beneficial uses (both water contact recreation and non-contact water recreation) will have positive social and economic effects by decreasing potential toxic pollutants hazards in the harbor and other recreation areas.

8. STATEMENT OF OVERRIDING CONSIDERATIONS AND DETERMINATION

The Regional Board staff has balanced the economic, legal, social, technological, and other benefits of this proposed Toxic Pollutants TMDL against the unavoidable environmental risks in determining whether to recommend that the Regional Board approves this project. Upon review of the environmental information generated for this project and in view of the entire record supporting the TMDL, staff has determined that the specific economic, legal, social, technological, and other benefits of this proposed Toxic Pollutants TMDL outweigh the unavoidable adverse environmental effects, and that such adverse environmental effects are acceptable under the circumstances.

The implementation of this Basin Plan amendment will result in improved water quality in the waters of the Region and will have significant positive impacts to the environment (including restoration and enhancement of beneficial uses) and the economy over the long term. Enhancement of the recreational beneficial uses (both water contact recreation and non-contact water recreation) will have positive social and economic effects by decreasing potential hazards and increasing the aesthetic experience at the waterbodies of concern in the Marina del Rey Harbor Waters. Specific projects employed to implement the Basin Plan amendment may have adverse significant impacts to the environment, but these impacts are generally expected to be limited, short-term or may be mitigated through design and scheduling.

The Staff Report, Basin Plan amendment, and this SED provide the necessary information pursuant to Public Resources Code section 21159 to conclude that properly designed and implemented BMPs and properly executed remediation activities generally should not foreseeably have a significant adverse effect on the environment. Any potential impacts can be mitigated at the subsequent project level when specific sites and methods have been identified, and responsible agencies can and should implement the recommended mitigation measures.

For this TMDL, mitigation measures are available to reduce environmental impacts to less than significant levels and in most cases are routine measures that are typically used in construction projects and infrastructure maintenance. Routine construction and maintenance of power lines and storm sewer systems are regular and expected activities carried out by responsible parties. Sewer and power line maintenance, traffic alterations, and environmental impacts from them already occur and are expected. This project will foreseeably require these types of projects and their individual impacts are not expected to be extraordinary in the magnitude or severity of impacts.

Specific projects to comply with this TMDL that may have a significant impact will be implemented by responsible jurisdictions and would therefore be subject to a separate environmental review. The lead agency for the TMDL Implementation projects have the ability to mitigate project impacts, can and should mitigate project impacts, and are required under CEQA to mitigate any environmental impacts they identify, unless they have reason not to do so. Notably, in almost all circumstances, where unavoidable or immitigable impacts would present unacceptable hardship upon nearby receptors or venues, the local agencies have a variety of alternative implementation measures available instead. Cumulatively, the many, small individual projects may have a significant effect upon life and the environment throughout the region.

This TMDL is required by law under section 303(d) of the federal Clean Water Act (CWA), and if this Regional Board does not establish this TMDL, the USEPA will be required to develop a TMDL. The CWA requires states to establish a priority ranking for waters on the 303(d) list of

impaired waters and to develop and implement TMDLs for these waters (40 CFR §130.7). The impacts associated with USEPA's establishment of the TMDL would be significantly more severe, as discussed herein, because USEPA will not provide a compliance schedule, and the final waste load allocations, pursuant to federal regulations, would need to be complied with upon incorporation into the relevant stormwater permits. (40 CFR 122.44(d)(1)(vii)(B).) Since compliance would not be authorized over a period of years, all of the impacts associated with complying would be truncated into a short time frame, thus exacerbating the magnitude of the cumulative effect of performing all projects relatively simultaneously throughout the region.

The implementation of this TMDL will result in improved water quality in the Marina del Rey Harbor Waters, but it may result in short-term localized significant adverse impacts to the environment as a variety of small construction projects may be undertaken in the vicinity of the waterbodies of concern in the Marina del Rey Harbors. Individually, these impacts are generally expected to be limited, short-term or may be mitigated through careful design and scheduling. The Staff Report for the Marina del Rey Harbor Waters Toxic Pollutants TMDL and this checklist provide the necessary information pursuant to Public Resources Code section 21159 to conclude that properly designed and implemented structural or non-structural BMPs of compliance should mitigate and generally avoid significant adverse effects on the environment, and all agencies responsible for implementing the TMDL should ensure that their projects are properly designed and implemented.

All of the potential impacts must, however, be mitigated at the subsequent, project level because they involve specific sites and designs not specified or specifically required by the Basin Plan amendment to implement the TMDL. At this stage, any more particularized conclusions would be speculative. The Regional Board does not have legal authority to specify the manner of compliance with its orders or regulations (California Water Code section § 13360), and thus cannot dictate that an appropriate location be selected for any particular project, that it be designed consistent with standard industry practices, or that routine and ordinary mitigation measures be employed. These measures are all within the jurisdiction and authority of the agencies that will be responsible for implementing this TMDL, and those agencies can and should employ those alternatives and mitigation measures to reduce any impacts as much as feasible. (Title 14, California Code of Regulations, Section 15091(a)(2).)

Implementation of the TMDL is both necessary and beneficial. To the extent that the alternatives, mitigation measures, or both, that are examined in this analysis are not deemed feasible by responsible agencies, the necessity of implementing the federally required TMDL and removing the toxic pollutants impairment from the Marina del Rey Harbor Waters (an action required to achieve the express, national policy of the Clean Water Act) remains.

9. FINDINGS

On the basis of this initial evaluation and staff report for the TMDL, which collectively provide the required information:

☐ I find the proposed Basin Plan amendment could not have a significant effect on the environment.

☒ I find that the proposed Basin Plan amendment could have a significant adverse effect on the environment. However, there are feasible alternatives and/or feasible mitigation measures that would substantially lessen any significant adverse impact. These alternatives are discussed above and in the staff report for the TMDL.

☐ I find the proposed Basin Plan amendment may have a significant effect on the environment. There are no feasible alternatives and/or feasible mitigation measures available which would substantially lessen any significant adverse impacts. See the attached written report for a discussion of this determination.

DATE:

April 4, 2014

Samuel Unger

Sam Unger
Executive Officer

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