

Substitute Environmental Documents  
for the  
Harbor Beaches of Ventura County (Kiddie  
Beach, Hobie Beach, and Harbor Cove Beach)  
Bacteria Total Maximum Daily Load

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



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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 bacteria at Kiddie and Hobie Beaches, and Harbor Cove Beach located at Channel Islands Harbor and Ventura Harbor, respectively. Kiddie, Hobie, and Harbor Cove Beaches will be collectively known as the Harbor Beaches of Ventura County (HBVC) in this document. This Substitute Environmental Document (SED) analyzes environmental impacts that may occur from reasonably foreseeable methods of implementing a TMDL for bacteria at HBVC. This SED is based on a proposed bacteria TMDL that will be considered by the Regional Board, and if approved by the Regional Board will be implemented through an amendment to the California Water Quality Control Plan, Los Angeles Region (Basin Plan). The proposed bacteria TMDL is described in the Staff Report, Tentative Board Resolution, and Tentative Basin Plan Amendment available on the Regional Board website. This SED analyzes foreseeable methods of compliance with the bacteria 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 bacteria 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 CEQA Guidelines Section 10590 and 15090 (Title 14 of CCR).

Water quality at Harbor Beaches of Ventura County is impaired as indicated by exceedances of coliform and enterococcus bacteria, and as documented in the State of California 303(d) list of impaired waterbodies. Exceedances of bacterial indicator densities in water indicate significant water quality problems and the impairment of potential and existing beneficial uses of Harbor Beaches of Ventura County.

The objective of the bacteria TMDL is to restore the beneficial uses of Harbor Beaches of Ventura County that are currently impaired by bacteria, in accordance with Clean Water Act section 303(d). Beneficial uses for Ventura Harbor are not specifically listed in the Basin Plan, however, the beneficial uses for Ventura County Nearshore can be applied to Ventura Harbor. The Ventura County Nearshore area has several beneficial use designations including Industrial Service Supply (IND), Navigation (NAV), Contact (REC-1) and Non-contact Recreation (REC-2), Commercial and Sport Fishing (COMM), Marine Habitat (MAR), Migration of Aquatic Organisms (MIGR), Spawning, Reproduction, and/or Early Development (SPWN), Shellfish Harvesting (SHELL), Wildlife Habitat (WILD), Rare, Threatened or Endangered Species (RARE). The beneficial uses identified in the Basin Plan for Channel Islands Harbor includes IND, NAV, REC-1, REC-2, COMM, MAR, and WILD. REC-1 and REC-2 beneficial uses are principally compromised by coliform bacteria. Swimming in waters with elevated bacterial indicator densities has long been associated with adverse health effects. Specifically, local and national epidemiological studies compel the conclusion that there is a causal relationship between adverse health effects and recreational water quality, as measured by bacterial indicator densities.

Sources of bacterial contamination at Harbor Beaches of Ventura County (HBVC) 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 at the HBVC (see Section 6.1.2 and 6.1.3 in the Staff Report). The LAs will be implemented through regulatory mechanisms that implement the State Board's 2004 Nonpoint Source Policy such as Conditional Waiver for Dischargers from Irrigated Lands (Ag Waiver). Final WLAs and LAs are zero days of exceedance allowed for the summer dry-weather and the rolling 30-day geometric mean limits. The allowable days of exceedance for the single sample limits differ for winter dry-weather and wet-weather.

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 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 have responsibility for environmental review of the projects that they determine necessary to implement the bacteria 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 bacteria TMDL projects.

Many of the specific projects and BMPs analyzed in this SED will involve small infrastructure maintenance and construction projects. Infrastructure maintenance and 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, and additional light and glare. Additionally, maintenance of constructed BMPs such as enhancing circulation and beach sand sanitation may result in additional traffic and air emissions. These foreseeable impacts are analyzed in detail in Section 6 of this SED.

To address the environmental impacts from routine and essential activities, public works departments 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 for reducing the duration of traffic and noise impacts, developing a detailed traffic plans in coordination with police or fire protection authorities, using of less noisy equipment, using of sound barriers, and using lower emissions vehicles to reduce air pollutant emission.

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 (14CCR§15091(a)(2)).

This SED finds foreseeable methods to comply with the bacteria TMDL to include both non-structural and structural BMPs at Kiddie Beach, Hobie Beach, and Harbor Cove Beach. 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 impact. The SED can be used by implementing municipalities and agencies to expedite any additional environmental analysis of specific projects required to comply with the bacteria TMDL.

The regulatory requirements and the program objectives for the Kiddie Beach, Hobie Beach, and Harbor Cove Beach bacteria TMDL are provided in Section 2 and Section 3 respectively. Section 4 discusses the program-level alternatives for the bacteria TMDL

and presents implementation alternatives to achieve compliance with the final waste load allocation of zero days of exceedance allowed for the 30-day geometric mean limits. The allowable days of exceedance for the single sample limits differ depending on season, dry-weather or wet-weather. Section 5 provides a detailed description of implementation alternatives. Section 6 contains the CEQA Checklist and Determination with in-depth analysis of each resource area (Section 6.3). Other environmental considerations are discussed in Section 7. A list of references is included in Section 11 of the 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 bacteria contamination at the Kiddie Beach, Hobie Beach, and Harbor Cove Beach in the County of Ventura 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 documents. 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:



- (4) Environmental, economic, and technical factors,
- (5) Population and geographic areas, and
- (6) 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 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.

This SED 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 documents do 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 only be adequate, complete, and a good faith efforts at full disclosure “(Cal.Code Regs.,tit. 14, §15151) (City of Fremont v. San Francisco Bay Area Rapid Transit Dist., supra, 34 Cal.App.4th at p. 1786.). 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.

Nor does 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 bacteria TMDL.

### 3. TMDL OVERVIEW AND PROGRAM OBJECTIVES

#### 3.1 INTRODUCTION – LEGAL BACKGROUND

The Total Maximum Daily Load (TMDL) for bacteria at Harbor Cove Beach, Hobie Beach, and Kiddie Beach (referred as Harbor Beaches of Ventura County) sets forth an implementation plan to attain the water quality standards for bacteria at these beaches. The TMDL was prepared pursuant to state and federal requirements to preserve and enhance water quality at Harbor Beaches of Ventura County. The adoption of a TMDL is not discretionary and is compelled by section 303(d) of the federal Clean Water Act (33 USC 1313(d)).

*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 Harbor Beaches of Ventura County, 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 United States Environmental Protection Agency (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. The TMDL 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 2002 and 2006 303(d) list submittals, the Regional Board identified Kiddie Beach (also known as Channel Islands Harbor Beach and Channel

Islands Harbor Beach Park), Hobie Beach, and Harbor Cove Beach (also known as Peninsula Beach) located at Channel Islands Harbor (CIH) and Ventura Harbor (VH), respectively as being impaired due to elevated bacterial indicator densities. Hobie, Kiddie, and Harbor Cove Beach will be collectively known as the Harbor Beaches of Ventura County (HBVC) in this SED Report.

The HBVC bacteria TMDL is a Basin Plan Amendment and is subject to the 2001 provision of Public Resources Code Section 21083.9 that requires a CEQA Scoping meeting 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. On January 10, 2007 a CEQA Scoping meeting was held to present and discuss the potential environmental impacts associated with reasonably foreseeable methods of compliance for the HBVC bacteria TMDL. A notice of the CEQA Scoping meeting was sent to interested parties including cities and county with jurisdiction in or bordering the HBVC. Input from all stakeholders and interested parties were solicited for consideration in the development of the CEQA document. The Regional Board received one comment letter from Dr. Monique Myers (University of California Cooperative Extension/Sea Grant) after the CEQA scoping meeting.

This SED is being released for public comment 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 DESCRIPTION, TMDL GOALS, AND WATER QUALITY OBJECTIVES**

As further set forth herein, this project is to adopt a regulation that will guide Regional Board permitting, enforcement, and other actions that will require responsible parties to take appropriate measures to restore and maintain all applicable Water Quality Standards at the impaired beaches of the Ventura County, and to comply with the requirements of section 303(d) of the federal Clean Water Act.

The Water Quality Control Plan Los Angeles Region (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 bacteria at the HBVC.

The Basin Plan beneficial uses designations include the REC-1 and REC-2 designations for the HBVC. The Basin Plan also contains bacteria water quality objectives to protect the REC-1 and REC-2 beneficial uses and the Water Quality Control Plan for Ocean Waters of California (Ocean Plan) also contains bacteria water quality objectives under "Water Quality Objectives."

On October 25, 2001, the Regional Board adopted a Basin Plan amendment updating the bacteria objectives for waters designated as REC-1 (LARWQCB, 2001). The State Water Resources Control Board (State Board) approved the Regional Board's Basin Plan amendment on July 18, 2002 (State Board Resolution 2002-0142), the Office of Administrative Law approved it on September 19, 2002 (OAL File No. 02-0807-01-S), and the USEPA approved it on September 25, 2002. The revised objectives include

geometric mean limits and single sample limits for four bacterial indicators: including total coliform, fecal coliform, the fecal-to-total coliform ratio, and enterococcus. The revised objectives are also consistent with, but augment, current USEPA guidance (1986), which recommends the use of enterococcus in marine water based on national epidemiological studies (LARWQCB, 2001; Cabelli, 1983).

The Ocean Plan, Water Quality Objectives, Bacterial Characteristics, Standards for "Water-Contact" are: "within a zone bounded by the shoreline and a distance 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline and in areas outside this zone used for water contact sports, as determined by the Regional Board (i.e., waters designated as REC-1) but including all kelp\* beds, the following bacterial objects shall be maintained throughout the water column..."

The 2005 Ocean Plan (SWRCB, 2005) mirrors the revised Basin Plan water quality objectives (LARWQCB, 2001).

These objectives are the same as those contained in state law (17 CCR §7958) which implements AB411. AB411 resulted in changes to Department of Health Service's (DHS) regulations for public beaches and public water contact sports areas. These changes included (1) setting minimum protective bacteriological standards for waters adjacent to public beaches and public water contact sports areas based on four indicators (total coliform, fecal coliform, enterococcus, and the fecal-to-total coliform ratio) and (2) altering the requirements for monitoring, posting, and closing certain coastal beaches based on these four bacterial indicators.

These objectives are, in general, based on an acceptable health risk in marine recreational waters of 19 illnesses per 1,000 exposed individuals (USEPA, 1986). Based on the findings of the Santa Monica Bay epidemiological study described above, the health risk associated with these objectives ranges from 7 illnesses per 1,000 (fecal coliform objective) to 28 illnesses per 1,000 (fecal-to-total coliform ratio objective).

The Basin Plan objectives for marine waters designated for Water Contact Recreation (REC-1) are as follows:

1. Rolling 30-day Geometric Mean Limits

- a. Total coliform density shall not exceed 1,000/100 mL.
- b. Fecal coliform density shall not exceed 200/100 mL.
- c. Enterococcus density shall not exceed 35/100 mL.

2. Single Sample Limits

- a. Total coliform density shall not exceed 10,000/100 mL.
- b. Fecal coliform density shall not exceed 400/100 mL.
- c. Enterococcus density shall not exceed 104/100 mL.
- d. Total coliform density shall not exceed 1,000/100 mL, if the ratio of fecal-to-total coliform exceeds 0.1.

The updated REC-1 bacterial objective also states that "[t]he geometric mean values should be calculated based on a statistically sufficient number of samples (generally not less than 5 samples equally spaced over a 30-day period)" (LARWQCB, 2001).

Protecting REC-1 beneficial uses will result in the protection of REC-2 beneficial uses because REC-1 bacterial objectives are more stringent than REC-2 bacterial objectives.

The reference system/antidegradation approach is the approach proposed in this TMDL. This approach allows for days where single sample standards are exceed bacterial water quality objectives, however the number of days that exceed bacterial water quality objectives must not be in excess of the observed exceedance days at the reference beach.

TMDLs and associated waste load allocations for point sources and load allocations for nonpoint sources are vehicles for implementation of standards. As proposed in this TMDL, waste load allocations will be incorporated into National Pollution Discharge Elimination System (NPDES) permits for Municipal Separate Storm Sewer System (MS4), non-stormwater general NPDES permits, general industrial stormwater permits, and general and individual permits. Load allocations for nonpoint sources will be implemented according to the "Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program" (SWRCB, 2004), Conditional Waiver for Dischargers from Irrigated Lands (Ag Waiver) and within the context of the TMDL.

## **4. DESCRIPTION OF ALTERNATIVES**

These substitute environmental documents analyze three Program Alternatives that encompass actions within the jurisdiction of the Regional Board and implementing municipalities and agencies. The program alternatives include 1) the bacteria TMDL as it is proposed for Regional Board adoption; 2) a bacteria TMDL established by the USEPA, and 3) a No Program Alternative in which a bacteria TMDL is not implemented. Because a TMDL is required by Section 303(d) of the Clean Water Act, the no Program Alternative is only analyzed to allow decision makers to compare the impacts of approving a proposed alternative and its components compared with the impacts of not approving a proposed alternative. 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 bacteria TMDL program alternatives.

This document does not analyze a “partial” TMDL; for example, a TMDL which would achieve only a 70% or only an 80% reduction for bacterial indicator densities based on geometric mean limits and single sample limits. This sort of alternative was considered and rejected. To the extent that significant adverse environmental impacts would be created by compliance with the proposed TMDL, a “partial” TMDL would have fewer environmental impacts associated with compliance (although, also, less environmental benefits of the TMDL), the specific legal requirements of section 303(d) of the Clean Water Act require a level necessary to achieve water quality standards. Thus a “partial” TMDL is unlawful because a partial reduction in bacteria would not meet water quality standards.

The components assessed at a program-level generally are program elements that would be implemented as part of the bacteria 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 bacteria TMDL projects.

### **4.1 PROGRAM ALTERNATIVES**

#### **4.1.1 ALTERNATIVE1 - REGIONAL BOARD TMDL**

This program alternative is based on the TMDL that is presently proposed for Regional Board consideration. The TMDL assigns both waste load allocations (WLAs) and load allocations (LAs). The TMDL WLAs will be implemented through National Pollutant Discharge Elimination System (NPDES) and Waste Discharge Requirement (WDR) permits. The WLAs focus on reductions in sources of bacteria from municipal storm drains and discharges associated with regional, state, and federal discharge permittees. The TMDL LAs focus on reductions of local sources and agricultural sources associated with runoff and drainage. The TMDL will be implemented primarily through regulatory mechanisms that implement the State Board’s 2004 Nonpoint Source Policy, including permits and waivers.

The Regional Board TMDL provides a plan for addressing the adverse impacts of bacteria through a progressive reduction in bacteria contamination at the Harbor Beaches of Ventura County (HBVC). The plan distinguishes between dry- and wet-weather bacterial exceedances. The TMDL proposes a five-year schedule for the HBVC

for dry weather, which is reasonable and as short as practicable. The proposed implementation schedule for wet weather is ten years for Kiddie Beach, Hobie Beach, and Harbor Cove Beach. Once adopted into the Basin Plan, WLAs and LAs specified in the Basin Plan Amendment (BPA) considered by the NPDES permit writers when developing permit limits that are adopted in separate 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. During the development of the TMDL, a CEQA scoping meeting was held during which the manner of compliance was discussed. At this meeting, reasonably foreseeable means of compliance were examined. Non-structural alternatives include improved trash management at the beaches, control of feral cat population, dock sanitation practices, control of illicit septic discharges into harbor waters, and public education and outreach. Structural methods include bird excluders, squawkers, enhanced circulation devices, low-flow diversions, beach sand replacement, beach sand sanitation, and wet-weather structural BMPs.

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 bacteria TMDL area. It also concludes that significant impacts can be mitigated or there are alternative means of compliance available.

#### **4.1.2 ALTERNATIVE 2 – USEPA TMDL**

This program alternative is based on a TMDL to be established by the United States Environmental Protection Agency (USEPA), if the Regional Board fails to adopt a bacteria TMDL. The technical analysis will be similar to the Regional Board analysis and the same laws and regulations will be applied. It is assumed the technical portions and WLAs and LAs of this TMDL Program Alternative will be essentially the same as Program Alternative 1. However, such a TMDL is not implemented through a Basin Plan amendment. Therefore, the WLAs will be implemented through NPDES permit limits as the permits are renewed without consideration of a compliance schedule. Because NPDES permits are renewed every five years, all responsible parties and municipalities will be required to be in full compliance immediately following the TMDL adoption by USEPA, or within five years.

This TMDL program alternative also anticipates compliance through installation of structural BMPs, and non-structural BMPs as discussed in Section 5. Potential adverse impacts to the environment principally from the construction and operation 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 bacteria TMDL area. It also concludes that significant impacts can be mitigated or there are alternative means of compliance available, and that the benefits of the program outweigh any significant adverse environmental effects.

#### **4.1.3 ALTERNATIVE 3 – NO PROGRAM ALTERNATIVE**



This program alternative assumes that neither the USEPA nor the Regional Board implements a bacteria TMDL. While cities and municipalities could implement BMPs on a discretionary basis, this CEQA analysis is based on the assumption that no additional bacterial reduction BMPs would be implemented in addition to those that are presently in place. However, the No Project TMDL is contrary to state and federal law. Therefore, the failure to implement a bacteria TMDL is unlawful.

In addition, while impact to the environment from construction or maintenance of structural BMPs would be avoided in this No Program alternative, No Program would not restore beneficial uses to Harbor Beaches of Ventura County (HBVC). Either TMDL Program Alternative will restore beneficial uses at HBVC and attain water quality standards by removing bacteria from these beaches. As such, either bacteria TMDL program alternative 1 or 2 represents a benefit to the environment and the No TMDL Program Alternative represents a continued bacteria impairment of the environment.

#### **4.1.4 RECOMMENDED PROGRAM ALTERNATIVE**

This environmental analysis finds that Program Alternative 1 is the most environmentally advantageous alternative.

Alternative 3 is not a feasible alternative. While it avoids potential impacts due to discrete installation projects, bacterial impairment of the beaches will continue. Both program alternatives 1 and 2 will comply with the law and remove the bacterial impairment from Harbor Beaches of Ventura County at the comparatively small environmental cost of small installation projects throughout the watershed.

The key difference between program alternatives 1 and 2 is the establishment of an implementation schedule. While the same WLAs and LAs will need to be met and the same technological choices will be available by both alternatives, alternative 1 will allow a measured implementation plan, resulting in full compliance of dry-weather bacterial objectives in five years, and wet-weather in ten years for the HBVC. Alternative 2, in contrast, will require compliance at the time of permit renewal, in all permit cases, in less than five years. The environmental impacts due to alternative 2 may be of greater severity as the intensity of implementation actions will be greater to comply with the shorter time frame. The longer schedule of alternative 1 allows for prioritization and planning, more thoroughly mitigated impacts, more appropriately designed, sited and sized structural devices and, therefore, less environmental impact, in general. In addition, prioritization and planning will likely result in more efficient use of funds and lower overall costs.

#### **4.2 PROJECT-LEVEL ALTERNATIVES**

The program alternatives above present many alternatives and options, and 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. During the development of the TMDL, a CEQA scoping meeting

was held during which the manner of compliance was discussed. At this meeting, the most reasonable means of compliance were discussed and included non-structural alternatives such as improved trash management at the beaches, control of feral cat population, dock sanitation practices, control illicit septic discharges into harbor waters, and public education as well as structural methods such as bird excluders, squawkers, enhanced circulation, low-flow diversions, and beach sand replacement, beach sand sanitation, and wet-weather structural BMPs.

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 bacteria TMDL projects. Section 5 of this SED includes an extensive discussion of the project alternatives.

## **5. DESCRIPTION OF IMPLEMENTATION ALTERNATIVES AND SITE SPECIFIC ANALYSES**

This Section of the SED gives a description of the structural devices or non-structural best management practices (BMPs) and the type of sites where they might be placed in compliance with the bacteria TMDL.

The Regional Board is prohibited from specifying the manner of compliance with its regulations (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, but not limited to, include structural methods such as low-flow diversions, beach sand replacement, resurfacing beach, beach sand sanitation, bird excluders, squawkers, enhanced circulation devices, and wet-weather structural BMPs as well as non-structural alternatives such as outreach and education, and administrative actions.

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 BMPS**

Structural BMPs involve the use of structural 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 LOW-FLOW DIVERSIONS**

A Low Flow Diversion is a structural device that routes urban runoff from canyons, streets and small watersheds away from the storm drain system or waterway, and redirects it into the sanitary sewer system, where the contaminated runoff then receives treatment and filtration before being re-used or discharged. As the name suggests, the unit collects street runoff and, through a series of tanks and pumps, diverts the liquid flow into the sanitary sewer system (City of Los Angeles Stormwater Program Website, 2007). The diversion device may stop the flow of polluted urban runoff from a storm drain from reaching the ocean during dry-weather. This device would reduce bacterial source loading associated with dry-weather flow.

Low flow diversions could be placed at

1. Storm drains adjacent to the beaches
  - a. There is a storm drain adjacent to the sheetpile groin along the southern boundary of the US Coast Guard Station, at the northern end of Hobie Beach.
  - b. There do not appear to be any storm drain discharges directly in adjacent to Harbor Cove Beach.
- 2) Storm drains in the Channel Islands Harbor or Ventura Harbor

3) Storm drains in the watersheds draining to the harbors. The Channel Islands Harbor watershed, which includes the Oxnard West Drain, is approximately 11.38 square miles. The Ventura Harbor watershed, which includes the Arundell Barranca drainage area, is approximately 13.93 square miles.

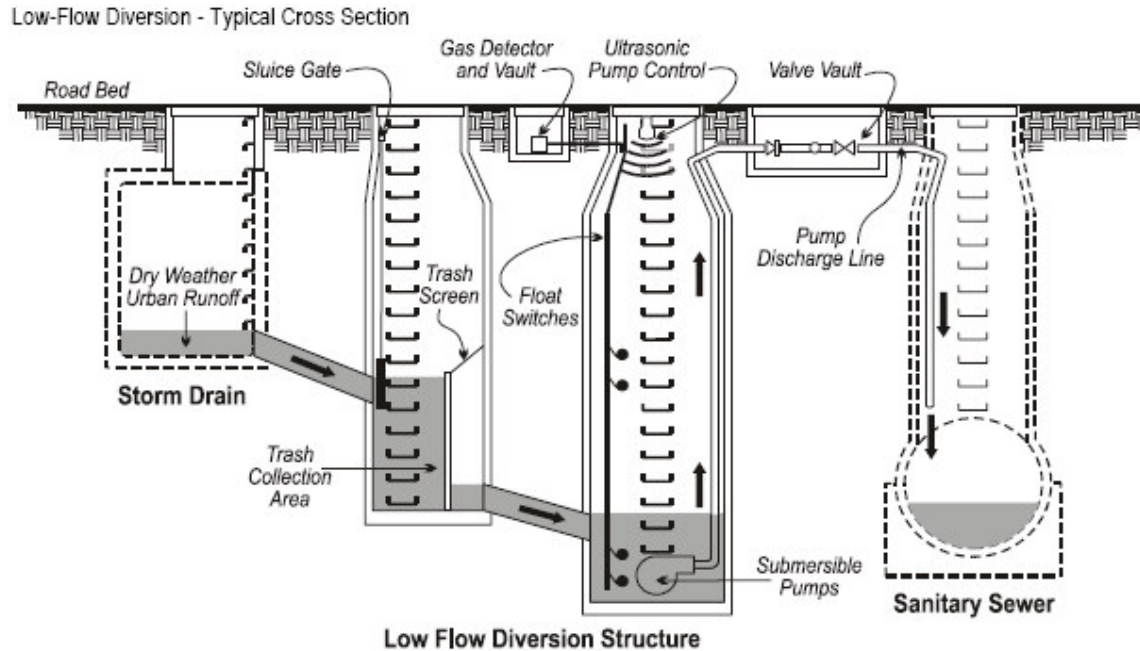


Figure 5.1. Schematic of Low Flow Diversion Structure (CDM, 2005)

### 5.1.2 BEACH SAND REPLACEMENT

When a beach is composed of fine sand and clays with low permeability, the beach may be more prone to flooding or ponding at higher tides, though elevation and contouring of the beach is also a contributing factor. The proposed measure is to replace existing beach sand with new clean coarse sand to improve the permeability and drainage capability of sand. Beach sand replacement has been recommended as a corrective measure at Inner Cabrillo Beach at the Port of Los Angeles to "increase permeability and flushing" (City of Los Angeles, 2006a; 2006b). Beach sand replacement consist of replacing existing finer sand types with coarser types of sand (Langier and Taggart, 2006). Beach sand replacement would take place directly at the Harbor Beaches.

### 5.1.3 RESURFACING (PEBBLING) BEACH

To further increase permeability and infiltration of beach sand, another method which can be considered is resurfacing of the Harbor Beaches of Ventura County with gravel or other larger particle-sized rock aggregates. Resurfacing would take place directly at the Harbor Beaches.

#### **5.1.4 BEACH SAND SANITATION**

Beach sand sanitation is a direct means of reducing and eliminating bacterial growth in beach sand. Thermal sanitation is a physical method of directly reducing bacterial concentrations in beach sand. A steam generator can be applied directly to beach to increase the temperature of the sand, thus reducing bacterial concentrations.

#### **5.1.5 BIRD EXCLUDERS**

Birds are one of the primary local sources of bacterial contamination at Harbor Beaches of Ventura County. This problem may be reduced with the construction of a bird exclusion structure covering the beach to discourage birds, such as sea gulls from use of the tidal zone of beach. A successful design may use a number of poles that would allow effective coverage of the beach with fine, high tensioned cables that span between poles in a grid-like fashion. These poles would be installed across the entire length of the tidal zone to disrupt the bird's normal landing or roosting habits. A conceptual design is shown in Figure 5.2. Bird excluders were installed on Inner Cabrillo beach in the Port of Los Angeles to reduce the bird fecal loading in the swim zone. A bird excluder effectiveness study, conducted by City of Los Angeles, concluded a 65% reduction in bacterial exceedances (Dalkey and Baharance, 2003). A subsequent study conducted in 2006 by the City of Los Angeles concluded that the devices had a significant impact in the reduction of violations of bacteria water quality standards (City of Los Angeles, 2006a). Bird excluder devices would be used directly on the Harbor Beaches.



Figure 5.2. Bird excluder  
(Source: Bell Bird Control, 2007)

#### **5.1.6 SQUAWKERS**

The bird exclusion system may be further enhanced by the installation of a noise device that would emit sounds creating a scare zone where it is uncomfortable for many species of birds to remain. The sound emitted by these devices is faintly similar to the “squawking” noise produced by distressed birds, hence the name Squawker. Squawkers are advanced electronic bird deterrents with several speakers as shown in Figure 5.3. These sounds may be programmed to discourage birds that frequently land on the beach area. Birds will become used to noise that frequently occur at regular

intervals, and are broadcasted in one direction for long periods of time. Therefore, different combinations of electronic and/or natural sounds move randomly from speaker to speaker for varying durations, at variable intervals will decrease the bird's familiarity with a pattern. As with other techniques, noise-making devices generally are more effective when used in combination with other conventional scare devices. These devices have been piloted by the Ventura County Harbor Department (VCHD) at the Channel Island Harbor Beaches (VCHD Personal Communications, 11 December 2006).



Figure 5.3 Squawker with four speakers  
(Source: Bird-X, Inc., 2007)

#### 5.1.7 ENHANCED CIRCULATION DEVICES

The Harbor Beaches of Ventura County (HBVC) are enclosed beaches located at the entrance of a Harbor. Enclosed beaches are usually characterized by weak circulation and the slow flushing of waters off the beach, specifically of ankle-deep, nearshore waters. Increasing circulation in these shallow nearshore waters would more rapidly mix and dilute fecal indicator bacteria, resulting in lower bacterial densities at the beach. There are a number of devices available for increasing circulation, as well as options to increase circulation through modifying channels and increasing tidal or wind driven flows. Enhanced circulation devices would be used directly at the Harbor Beaches.

Several mechanical flow enhancement devices could be used to enhance the circulation, including Oloid™, InStream™ Unit, and a submerged infusion pump (Largier and Taggart, 2006).

##### **Oloid™**

Oloid™ as shown in Figure 5.4, named for the geometrical shaped paddle or blade, uses a motor to rotate the blade, which is available in the original oval design or a new flat blade design. The Oloid™ gently agitates, circulates and aerates the water through rotating a specially shaped blade with a movement likened to that of a fish tail. This is a low-powered, quiet option, but (as with most options) involves visible surface units. Oloid™ have been tested at Baby Beach in the City Dana Point (Everest International Consultants, Inc., 2006) and in the City Newport Beach (Everest International Consultants, Inc., 2002).

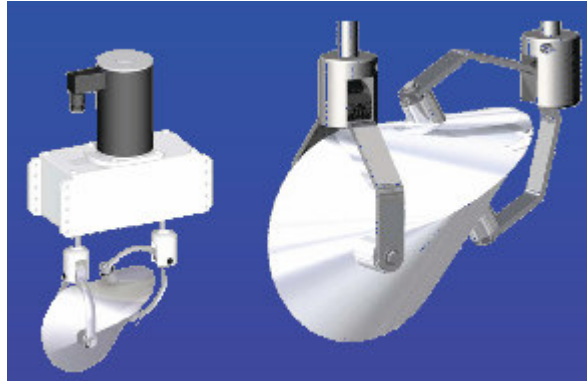


Figure 5.4 Schematic of Oloids™  
(Source: Everest, Inc., 2006)

### **InStroom™**

InStroom™ circulation units, shown in Figure 5.5 and patented by Battelle Memorial Institute, have a flow rate of 3 to 6 million gallons per day (MGD). The InStroom™ circulation unit pulls water from the surface as well as the water column and spins it through large rotating plastic disks at 200 gallons per second. The InStroom™ units have been tested in City of Newport Beach at the Newport Bay (Everest International Consultants, Inc., 2002). While most of these mechanical devices are very effective at moving water, they all require ongoing operation and maintenance.



Figure 5.5 InStroom™ units  
(Source: Everest Inc., 2002)

## **Circulation Pump**

Circulation pumps are another structural BMP that can significantly enhance circulation in the swim zone, when optimally located. Circulation studies conducted at Inner Cabrillo correlated a significant improvement in water quality through enhanced circulation with manual pumps (City of Los Angeles, 2006a; LARWQCB, 2004).

### **5.1.8 WET-WEATHER STRUCTURAL BMPs**

Stormwater washes pollutants off roof-tops, pavement, streets, and lawns. Wet-weather flow is a much more difficult problem to control than dry-weather flow. Sources are diffuse and often require sub-regional and regional coordination and cooperation to control.

#### **Sub-Regional Structural BMPs**

Sub-regional structural BMPs consist of a single or a series of BMPs designed to treat wet-weather flows for limited sub-regions within the watershed. Sub-regions can vary in size from small parking lots to several city blocks. These sub-regional implementation strategies typically have multiple pollutant treatment potential (Marina del Rey, 2007). Listed below are a few sub-regional structural BMPs and brief description of each:

- Vegetated biofiltration systems include swales, filter strips, bioretention areas, and storm water planters (McCoy et al., 2006). Vegetated systems involve the use of soils and vegetation to filter and treat stormwater prior to discharge into surface or sub-surface water. Additional bioslopes, infiltration trenches, soil grading alterations, bioretention ponds, and the use of selective vegetation can further increase the efficiency of vegetative biofiltration systems.
- Local infiltration improvements, like porous paving, retention ponds, and infiltration pits, can promote added infiltration of stormwater rather than runoff over impervious surfaces (McCoy et al., 2006).

#### **Regional Structural BMPs**

Regional structural BMPs contain many similarities to sub-regional structural BMPs but differ in both the scope and scale of implementation strategies. Treatment areas can range from several sub-regions to the entire watershed. Regional structural BMPs retain the multiple treatment potential of sub-regional BMPs. Listed below are a few regional structural BMPs and a brief description of each:

- Regional biofiltration systems, including sub-surface flow wetlands, promote hydrolysis, oxidation, and rhizodegradation from soil filtration through the aerobic and anaerobic zones of the soil matrix (Halverson, 2004). These systems can treat a variety of different pollutants and can be utilized for flood mitigation.
- Region infiltration and detention systems, including detention and infiltration basin, help reduce flow volume lower stream areas and promote sedimentation (McCoy et al., 2006).

### **5.2 NON-STRUCTURAL BMPs**

Non-structural BMPs include prevention practices designed to improve water quality by reducing bacterial source. Non-structural BMPs may require minimum construction. In addition, non-structural BMPs provide for the development of bacterial control programs that include, but are not limited to prevention, education, and regulation. Less significant



adverse impacts on the environment were anticipated for these controls. These programs are described below:

### **5.2.1 ADMINISTRATIVE CONTROLS**

For dry-weather implementation, administrative controls require less initial investment of time, compared to structural BMPs, due to less need for planning for capital required for structural BMPs. However, for continuous implementation, administrative actions may require greater time. These actions include better enforcement of harbor ordinances, existing pet disposal ordinances, better enforcement of existing litter ordinances, posting additional signage, continuing feral cat population control, proposing stricter penalties, and other actions of an administrative nature.

For wet-weather implementation, administrative controls tend to be more costly and have a far greater scope. New developments and redevelopments in the Ventura County have to comply with the terms of the MS4 permit. This includes meeting the current Ventura County Storm Water Quality Urban Impact Mitigation Plan (SQUIMP) standards for appropriate post-construction stormwater BMPs and the use of Low Impact Development (LID). Sub-regional and Region wide plans for sheet-flow diversion may need to be developed. A green building program similar to one developed in the City of Santa Monica can help promote sustainability (McCoy and Hartwich, 2006).

### **5.2.2 OUTREACH AND EDUCATION**

Education and outreach to residents may minimize the potential for contamination of stormwater runoff and beaches by encouraging residents to clean up after their pets, pick up litter, minimize runoff from agricultural, residential, and commercial facilities, and control excessive irrigation. The public is often unaware of the fact that excess water discharged on streets and lawns ends up in receiving waters at beaches, or the contamination caused by the polluted runoff.

Local agencies can provide educational materials to the public via television, radio, and print media, distribute brochures, flyers, and community newsletters, create information hotlines to outreach to educators and schools, develop community events, and support of volunteer monitoring and cleanup programs. Storm drain inlet and beach stenciling are another means of educating the public about the direct discharge of stormwater to receiving waters and the effects of littering and dumping on receiving water quality. Stenciling can be conducted in partnership with other agencies and organizations to garner greater support for educational programs (USEPA, 2005).

## **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 Substitute Environmental Document (SED). The implementation alternatives for achieving compliance with the Harbor Beaches of Ventura County (HBVC) bacteria TMDL are described in detail in Section 5 of this document and again in the TMDL Staff Report. Each of these implementation alternatives have been independently evaluated in this draft SED. The environmental setting for the HBVC bacteria TMDL is discussed in Section 6.1.3. The installation, operation and maintenance activities associated with the bacteria TMDL implementation alternatives are discussed in Section 6.2. Section 6.3 is 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).

#### **6.1.1 APPROACH TO ENVIRONMENTAL SETTING AND IMPACT ANALYSIS**

Any potential environmental impacts associated with the HBVC bacteria TMDL depend upon the specific compliance projects selected by the responsible parties, most of whom are public agencies subject to their own CEQA obligations. (See Pub. Res. Code § 21159.2.) This CEQA substitute document identifies broad mitigation approaches that could be considered at the program level. Consistent with PRC§21159, the substitute document does not engage in speculation or conjecture, but rather considers the reasonably foreseeable environmental impacts of 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.

Within each of the sections listed above, 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 HBVC and surrounding watershed area, totaling an estimated 11 square miles for Channel Islands Harbor and 14 square miles for Ventura Harbor. This is the geographic area for assessing impacts of the different implementation alternatives, because the high level of fecal indicator bacteria at HBVC 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 evaluated 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 bacteria 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 Best Management Practices (BMPs) (Caltrans, 2002, CASQA, 2003a, CASQA, 2003b, WERF, 2005).

### **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 TMDL compliance, PRC §21159 places the responsibility of project-level analysis on the agencies that will implement the water board's TMDL.

### **6.1.3 ENVIRONMENTAL SETTING**

#### **Channel Islands Harbor (CIH)**

CIH is located on the Pacific Coast in Ventura County as shown in Figure 6-1. The Harbor lies on the Oxnard Alluvial Plain about halfway between the Santa Clara River and Calleguas Creek. The Oxnard Alluvial Plain was created by deposits from the Santa Clara and Calleguas over thousands of years.

The channel to the Ocean is in the southern part of CIH; towards the north, the harbor splits into the West Channel and the East Channel. The west channel travels north under Channel Islands Boulevard into Mandalay Bay. The east channel travels north under Channel Island Harbor into Mandalay Bay also but does not allow the passage of boats. Mandalay Bay travels north through the Edison Canal to Mandalay Generating Station two miles to the north.

The harbor is protected by one main breakwater in front of main entrance. In addition, there are two small jetties located on north and south side of the main entrance. The United States Army Corps of Engineers (USACE) created Hobie and Kiddie along with CIH. The beaches were originally “designed to absorb the impact of tidal surges, which would otherwise damage infrastructure within the harbor” (Larry Walker, 2001). Due to their original design, Hobie and Kiddie can be classified as surge beaches (VCHD Personal Communications, 11 December 2006).

Kiddie Beach and Hobie Beach are located at the eastern end of the main entrance to the harbor. Kiddie Beach is at the end of the southern entrance jetty and Hobie beach is immediately adjacent and just north. Behind Kiddie Beach is a restroom and parking lot directly on Victoria Avenue.

Kiddie Beach is approximately 430 ft long and about 120 ft wide at Mean Lower Low Water (MLLW) and 70 ft at Mean Higher High Water (MHHW). Kiddie Beach is a sandy beach. Hobie Beach is approximately 400 ft long and variable in depth from 75 to 250 ft wide at MLLW. At MHHW the beach is almost entirely inundated. Hobie Beach is a rocky beach.

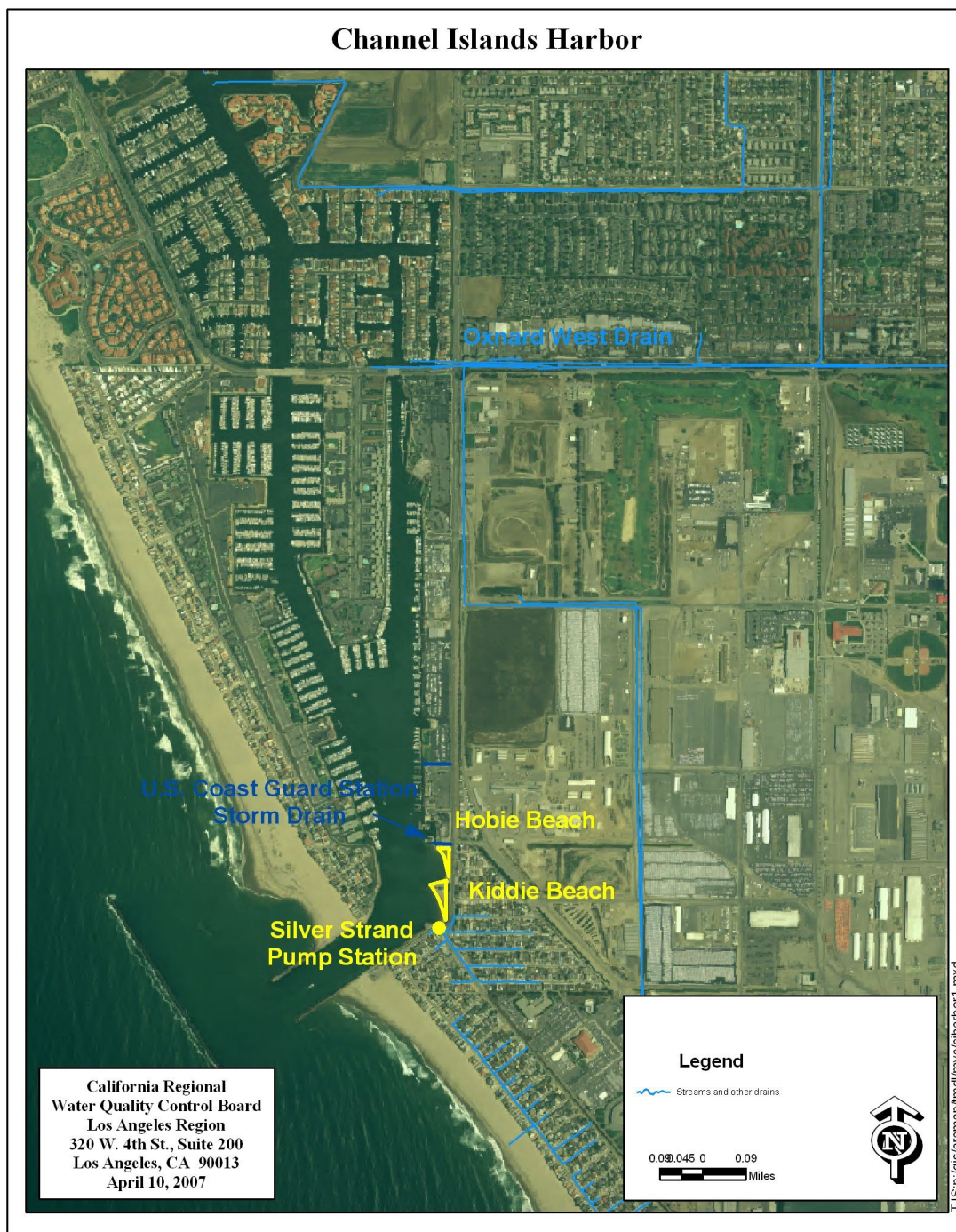


Figure 6-1 Channel Islands Harbor Geographical Map

### **Ventura Harbor (VH)**

VH is located in the northwest portion of Ventura County (see Figure 6-2). The harbor is located approximately ½-mile north of the Santa Clara River Estuary which drains into the Pacific Ocean. VH also lies on the Oxnard Alluvial Plain.

The harbor opening is located on mid-western portion of the harbor. The channel leading in from the mouth separates into the northern and southern half of the harbor. The southern channel travels to the Ventura marinas. The northern channel travels to the Ventura Harbor Keys. Located at northwest portion of harbor, at the entrance to the Ventura Harbor Keys, is the Arundell Barranca. The Arundell Barranca drainage channel consists of agricultural, municipal, urban drainage. The channel travels further northeast and run through to the mountains.

The harbor is protected by one main breakwater, which runs perpendicular to the main entrance, and three jetties (USACE, 2004). The larger, north jetty is located on northern end of the main entrance. The smaller, middle jetty is located on the southern end of the main entrance which is the northern tip of HCB. Lastly, south jetty is located on the southern end of HCB. The lifeguard tower is located at the southern end of the beach. The public restrooms lies just east of the lifeguard tower in the parking lot on Spinnaker drive.

HCB is approximately 1,000 feet long. The south jetty, located at the southern end of the beach, separates HCB from South Jetty Beach and Surfer's Knoll Beach. Similar to the CIHB, HCB was also originally designed as a surge beach (VPD, Personal Communications, 19 January 2007).



## Ventura Harbor

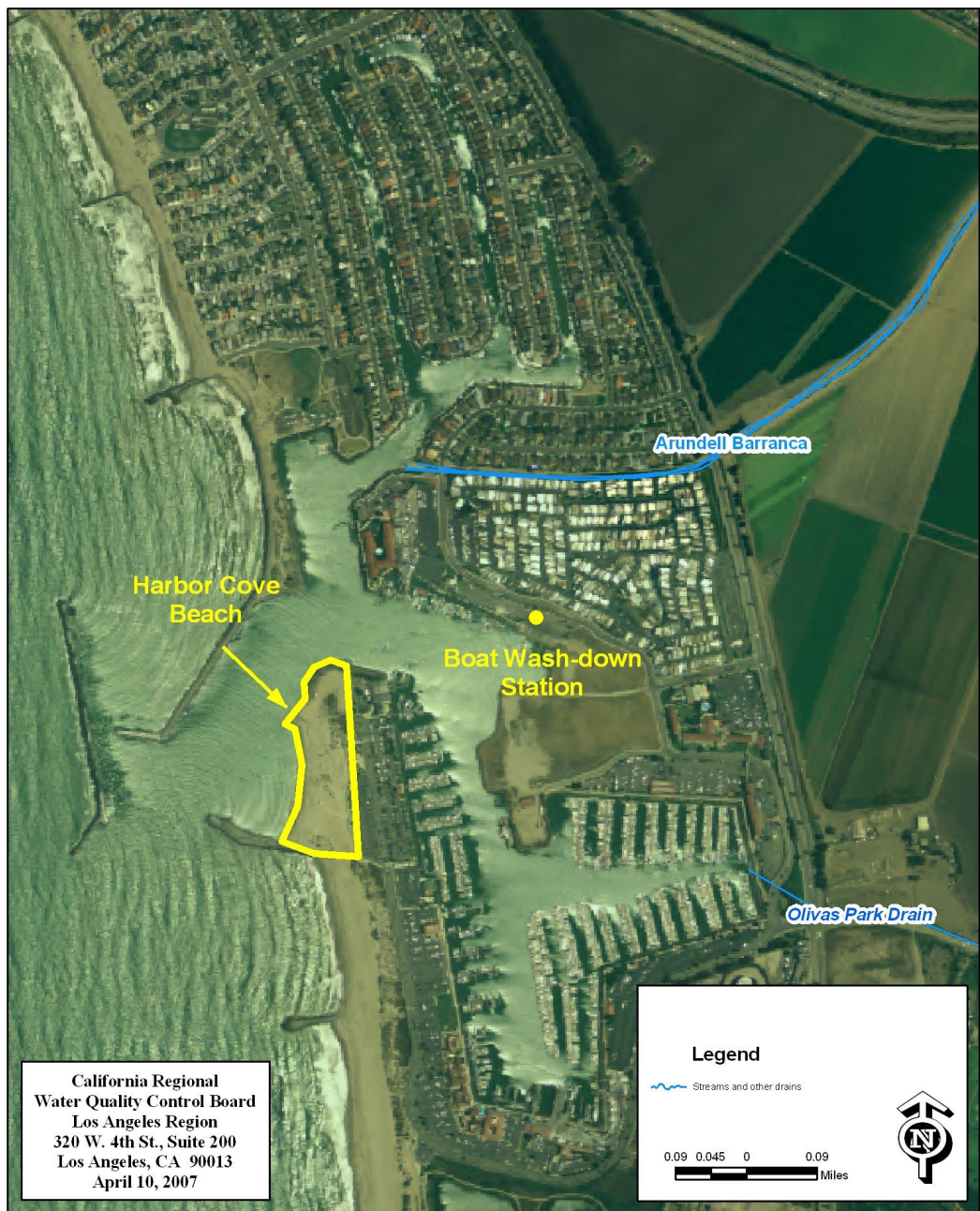


Figure 6-2. Ventura Harbor Geographical Map

#### **6.1.4 BENEFICIAL USES OF HARBOR COVE, HOBIE, AND KIDDIE BEACHES**

The Basin Plan designates beneficial uses for water bodies in the Los Angeles Region. These uses are recognized as existing (E), potential (P), or intermittent (I) uses. All beneficial uses, whether E, P or I, must be protected.

The Basin Plan lists beneficial uses for the Channel Islands Harbor, which includes Kiddie and Hobie Beaches (see Table 6.1-1). Beneficial uses for VH and Harbor Cove Beach are not specifically listed in the Basin Plan. However, the beneficial uses for Ventura County Nearshore can be applied to VH (see Table 6.1-1). In addition, Ventura Keys (Marina) and the Ventura Marina are part of VH and their beneficial uses are included in Table 6.1-1 along with CIH.

REC-1 and REC-2 beneficial uses are the focus of this TMDL as each use requires numeric bacterial objectives. The REC-1 beneficial use is defined in the Basin Plan as “Uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, white water activities, fishing, or use of natural hot springs”.

The REC-2 beneficial use is defined in the Basin Plan as: “Uses of water for recreational activities involving proximity to water, but not normally involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tidepool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.”

<b>Watershed</b>	Hydro Unit No.	I N D	N A V	R E C 1	R E C 2	C O M M	M A R	W I L D	R A R E	M I G R	S P W N	S H E L L
Ventura County Coastal Nearshore+		E	E	E	E	E	E	E	E	E	E	E
Channel Islands Harbor	403.11	E	E	E	E	E	E	E				
Ventura Keys (Marina)	403.11		E	E	E	E	E	E				
Ventura Marina	403.11	E	E	E	E	E	E	E				E

IND Industrial Service Supply  
 NAV Navigation  
 REC-1 Water contact recreation  
 REC-2 Non-contact Recreation  
 COMM Commercial and Sport Fishing  
 MAR Marine Habitat  
 MIGR Migration of Aquatic Organisms  
 SPWN Spawning, Reproduction, and/or Early Development  
 SHELL Shellfish Harvesting  
 WILD Wildlife Habitat  
 RARE Rare, Threatened or Endangered Species

Table 6.1-1. Beneficial Uses for Channel Islands Harbor and Ventura County Coastal Nearshore Area



### 6.3. CEQA CHECKLIST AND DETERMINATION

#### 6.3.1 ENVIRONMENTAL CHECKLIST

	ENVIRONMENTAL CHECKLIST	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant	No Impact
<b>1.</b>	<b>Earth. Will the proposal result in:</b>				
	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
<b>2.</b>	<b>Air. Will the proposal result in:</b>				
	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

	<b>ENVIRONMENTAL CHECKLIST</b>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant	No Impact
<b>3.</b>	<b>Water. Will the proposal result in:</b>				
	a. Changes in currents, or the course of direction or water movements, in either marine or fresh waters?		X		
	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		
<b>4.</b>	<b>Plant Life. Will the proposal result in:</b>				
	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		

	<b>ENVIRONMENTAL CHECKLIST</b>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant	No Impact
	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		
<b>5.</b>	<b>Animal Life. Will the proposal result in:</b>				
	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		
<b>6.</b>	<b>Noise. Will the proposal result in:</b>				
	a. Increases in existing noise levels?		X		
	b. Exposure of people to severe noise levels?		X		
<b>7.</b>	<b>Light and Glare. Will the proposal:</b>				
	a. Produce new light or glare?		X		
<b>8.</b>	<b>Land Use. Will the proposal result in:</b>				
	a. Substantial alteration of the present or planned land use of an area?				X
<b>9.</b>	<b>Natural Resources. Will the proposal result in:</b>				
	a. Increase in the rate of use of any natural resources?				X

	<b>ENVIRONMENTAL CHECKLIST</b>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant	No Impact
	b. Substantial depletion of any nonrenewable natural resource?				X
<b>10.</b>	<b>Risk of Upset. Will the proposal involve:</b>				
	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		
<b>11.</b>	<b>Population. Will the proposal:</b>				
	a. Alter the location, distribution, density, or growth rate of the human population of an area?				X
<b>12.</b>	<b>Housing. Will the proposal:</b>				
	a. Affect existing housing, or create a demand for additional housing?				X
<b>13.</b>	<b>Transportation/Circulation. Will the proposal result in:</b>				
	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		

	<b>ENVIRONMENTAL CHECKLIST</b>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant	No Impact
<b>14.</b>	<b>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:</b>				
	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		
<b>15.</b>	<b>Energy. Will the proposal result in:</b>				
	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		
<b>16.</b>	<b>Utilities and Service Systems. Will the proposal result in a need for new systems, or substantial alterations to the following utilities:</b>				
	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		

	<b>ENVIRONMENTAL CHECKLIST</b>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant	No Impact
<b>17.</b>	<b>Human Health. Will the proposal result in:</b>				
	a. Creation of any health hazard or potential health hazard (excluding mental health)?		X		
	b. Exposure of people to potential health hazards?		X		
<b>18.</b>	<b>Aesthetics. Will the proposal result in:</b>				
	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		
<b>19.</b>	<b>Recreation. Will the proposal result in:</b>				
	a. Impact upon the quality or quantity of existing recreational opportunities?		X		
<b>20.</b>	<b>Archeological/Historical. Will the proposal:</b>				
	a. Result in the alteration of a significant archeological or historical site structure, object or building?				X
<b>21.</b>	<b>Mandatory Findings of Significance</b>				
	<b>Potential to degrade:</b> 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		

	<b>ENVIRONMENTAL CHECKLIST</b>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant	No Impact
	<b>Short-term:</b> 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
	<b>Cumulative:</b> 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		
	<b>Substantial adverse:</b> Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		X		

#### **6.4.2 DISCUSSION OF ENVIRONMENTAL EVALUATION**

The analysis of potential environmental impacts is based on the numerous alternative means of compliance available for controlling bacteria at Kiddie Beach, Hobie Beach, and Harbor Cove Beach in response to the proposed Basin Plan amendment. These include structural BMPs such as dry-weather structural BMPs (i.e. low-flow diversions, beach sand replacement, resurfacing beach sand, beach sand sanitation, bird excluders, squawkers, and enhanced circulation), and wet-weather structural BMPs (i.e. vegetated biofiltration, infiltration improvements), as well as non-structural BMPs such as outreach and education, and administrative actions. Potential impacts are discussed below and it is found that any significant impacts can be mitigated at a project level or there are alternative means of compliance available. Many of the mitigation measures identified are common practices currently employed by agencies when planning and implementing stormwater BMPs. Agencies such as California Stormwater Quality Association (CASQA) and 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). The evaluation considers whether the environmental impact indicated will have a substantial, adverse change in any of the physical conditions within the area affected by the activity. In addition, the evaluation discusses environmental effects in proportion to their severity and probability of occurrence.

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 bacteria 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. Based on this review, we concluded that the potentially significant impacts can be mitigated to less than significant levels in almost all circumstances. 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 non-structural and 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 agency.



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

Answer: Less than significant with mitigation incorporated

Low-flow Diversions

Installation of low-flow diversion devices may potentially result in unstable earth conditions, if loose or compressible soils are present. These impacts can be avoided by proper siting, studying, and monitoring measures of compliance away from areas with loose or compressible sands.

Beach Sand Replacement

Beach sand replacement may potentially result in unstable earth conditions, if loose or compressible sands are present. These impacts can be avoided by proper siting, studying, and monitoring measures of compliance to ensure stable conditions.

Resurfacing (Pebbling) Beaches

Resurfacing beaches may potentially result in unstable earth conditions, if loose or compressible sands are present. These impacts can be avoided by proper siting, studying, and monitoring measures of compliance to ensure stable conditions.

Beach Sand Sanitation

Impacts associated with disturbance and sanitation of beach sands are temporary. This alternative means of compliance would not require excavation or disturbance of earth that would result in significant environmental impacts.

Bird Excluders

Bird excluders are not anticipated to have an impact on earth, resulting in unstable earth conditions or change geologic substructures. Impacts associated with construction and installation of compliance measures are temporary and would not require excavation or disturbance of earth that would result in environmental impacts.

Squawkers

Squawkers are not anticipated to have an impact on earth, resulting in unstable earth conditions or change geologic substructures. Impacts associated with construction and installation of compliance measures are temporary and would not require excavation or disturbance of earth that would result in environmental impacts.

Enhanced Circulation Devices

Enhanced circulation devices are floating mechanical devices that require no construction or ground disturbance. There is therefore no potential impact to earth conditions or geologic substructures from this alternative means of compliance.

### Wet-Weather Structural BMPs

For wet-weather structural BMPs, infiltration of collected stormwater 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. These impacts can be avoided by siting infiltration type BMP away from areas with loose or compressible soils, and away from slopes that could become destabilized by an increase in groundwater flow. Infiltration type BMP can also be built on a small enough scale to avoid these types of impacts. If responsible parties install facilities such as detention basins or waste treatment lagoons on a scale that could result in unstable earth conditions or in changes in geologic substructures, potential impacts could be avoided through proper geotechnical investigations, siting, design, and ground and groundwater level monitoring to ensure that structural BMP are not employed in areas subject to unstable soil 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.

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

Answer: Less than significant with mitigation incorporated

Depending on the structural BMPs selected in urbanized areas, the proposal may result in minor surface soil excavation or grading during construction of structural BMPs resulting in increased disturbance of the soil. However, much of the urbanized areas have already undergone soil compaction and hardscaping. Standard construction techniques, including but not limited to, shoring, piling and soil stabilization can mitigate any potential short-term impacts. In addition, structural BMPs can be designed and sited in areas where the risk of new soil disruption is minimal. Soil disruptions, displacements, compaction, or overcoming during construction activities would be similar to typical temporary capital improvement construction and maintenance activities currently performed by municipalities, and no long-term impacts to the soil are expected.

### Low-flow Diversions

The impacts on soil disruptions, displacements, compaction, or overcoming during construction activities can be avoided or minimized by proper siting and designing low-flow diversion devices.

### Beach Sand Replacement

Replacing existing fine sand with coarser types of sand may result in minor surface soil excavation or grading during the replacement activity, which result in increased disturbance of the soil. The impacts on soil disruptions, displacements, compaction, or overcoming can be avoided or minimized through selective replacement. Only the top layer of contaminated sand may require replacement. Controlling the amount sand

replaced and the use of construction mitigation measures for minimizing compact and disruption can also be employed. Minimal use of heavy equipment can further reduce the risk of compaction.

#### Resurfacing (Pebbling) Beaches

Resurfacing beaches may result in surface soil excavation or grading during the replacement of contaminated sand with gravel or other larger particle-sized rock, which result in increased disturbance of the soil. Soil disruptions, displacements, compaction, or overcoming during replacement activities can be avoided or minimized. Only the top layer of sand may require resurfacing rather than replacing all the sand with large particle size aggregate. Use of construction mitigation measures for minimizing compact and disruption can also be employed. Minimal use of heavy equipment can further reduce the risk of compaction.

#### Beach Sand Sanitation

Beach sand sanitation may result in surface soil excavation or grading during the disinfection of contaminated sand through thermal means, which may result in disturbance of the sand. The top layer of sand possesses the highest leaching potential in the beach sand. Applying thermal sanitation to the surface layer only, would yield the effective results whilst minimizing impacts resulting in soil disruptions, displacements, compaction.

#### Bird Excluders

Bird excluders may result in minor surface soil excavation or grading during construction of this structural BMP resulting in minor disturbance of the soil. Soil disruptions, displacements, compaction, or overcoming during construction activities can be minimized by conducting no grading, avoiding the use of heavy equipment on the beach and designing bird excluders with fewer poles.

#### Squawkers

Installation of squawkers would not result in disruptions, displacements, compaction or overcoming of the soil because none of these BMPs include earth moving activities.

#### Enhanced Circulation Devices

Enhanced circulation devices would not result in disruptions, displacements, compaction or overcoming of the soil because none of these BMPs include earth moving activities.

#### Wet-Weather Structural BMPs

Installation of wet-weather structural BMPs may result in surface soil excavation or grading during construction of structural BMPs resulting in increased disturbance of the soil. The impacts on soil disruptions, displacements, compaction, or overcoming during construction activities can be minimized by proper siting and designs. Sub-regional wet-weather BMPs can be situated in highly developed and compacted areas to avoid areas with more susceptible soil. Regional Structural BMPs can also be located in highly developed and compacted areas or optimally sited and designed such that adjacent and

underlying soil would not be adversely affected with the construction of detention basins or wet-lands. Sub-surface flow wetlands have been successfully installed in parks and designed for minimal impact to surround soils.

#### 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.

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

Answer: No impact

#### Low-flow Diversions

Low-flow Diversions would not be of the size or scale to result in unstable earth conditions, changes in geologic substructures, topography or ground surface relief features, or destruction or modification of any unique geologic or physical features.

#### Beach Sand Replacement

Sand replacement requires no ground disturbance which might result in change in topography or ground surface relief features.

#### Resurfacing (Pebbling) Beaches

Implementation of this structural BMP could result in some change in topography or ground surface relief features; however, this BMP is so small that changes to topography would not be noticeable.

#### Beach Sand Sanitation

There is no potential to impact earth conditions or geologic substructures from this alternative means of compliance.

#### Bird Excluders

Bird excluders would not be of the size or scale to result in unstable earth conditions, changes in geologic substructures, topography or ground surface relief features, or destruction, covering or modification of any unique geologic or physical features.

#### Squawkers

Installation of squawkers would not affect topography or ground relief features because this BMP would not result in earth moving activities.

### Enhanced Circulation Devices

The BMP for enhance circulation would not affect topography or ground relief features because this BMP would not result in earth moving activities.

### Wet-Weather Structural BMPs

Wet-weather structural BMPs would not be of the size or scale to result in unstable earth conditions, changes in geologic substructures, topography or ground surface relief features, or destruction or modification of any unique geologic or physical 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: Less than significant with mitigation incorporated

### Low-flow Diversions

Low-flow diversions would not be of the size or scale to result in destruction, covering or modification of any unique geologic or physical features.

### Beach Sand Replacement

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.

### Resurfacing (Pebbling) Beaches

While resurfacing beaches with gravel or other larger particle-sized rock would result in a modification of the physical features of the beach, the designed surge beaches are not a "unique geologic or physical feature".

### Beach Sand Sanitation

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.

### Bird Excluders

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

### Squawkers

Installation of squawkers would not cause the destruction, covering or modification of any unique geologic or physical features.

### Enhanced Circulation Devices

Enhanced circulation could potentially increase the movement and/or deposition of sediment by increasing hydrological mixing. The selection of low energy enhanced circulation devices would reduce additional flow increases and less likely disturb sand. Optimal siting may also mitigate potential impacts to geological structures. Enhanced circulation devices have been successfully deployed at other small beaches without excessive deposition or eroding of the beaches. In addition, the designed surge beaches are not a “unique geologic or physical feature”.

### Wet-Weather Structural BMPs

Wet-weather structural BMPs would not be of the size or scale to result in destruction, covering or modification of any unique geologic or physical features. In the unlikely event that responsible parties discover any unique geologic or physical features which require protection, potential impacts could be mitigated by avoiding siting facilities in these areas.

### 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: Less than significant with mitigation incorporated

### Low-flow Diversions

Low-flow diversions may result in minor soil excavation during construction which could introduce the potential for that soil to be eroded. However, construction related erosion impacts will cease with the cessation of construction. 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 BMPs should be used during implementation to minimize offsite sediment runoff or deposition. Construction sites are required to retain sediment on site, both under general construction stormwater WDRs and through the construction program of the applicable MS4 WDRs; both of which are already 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 stormwater from

entering the canyons and channels, or reduce the runoff flow velocity, which may be considered a beneficial impact.

#### Beach Sand Replacement

Beach sand replacement would include soil excavation during removal of sand, which could introduce the potential for that sand to be eroded. However, construction related erosion impacts will cease with the cessation of construction. Wind or water erosion of soils may occur as a potential short-term impact. By implementing existing measures and proper siting and timing, impacts associated with erosion can be mitigated.

#### Resurfacing (Pebbling) Beaches

Resurfacing beaches with gravel or other larger particle-sized rock may result in sand excavation during construction, which could introduce the potential for that sand to be eroded. However, construction related erosion impacts will cease with the cessation of construction. Wind or water erosion of soils may occur as a potential short-term impact. By implementing existing measures and proper siting and timing, impacts associated with erosion can be mitigated.

#### Beach Sand Sanitation

The sanitation process at beaches may result in some disturbance of sand during sanitation, which could introduce the potential for that soil to be eroded. However, erosion potential will cease with the cessation of sanitation. Wind or water erosion of soils may occur as a potential short-term impact. By implementing existing measures and proper siting and timing, impacts associated with erosion can be mitigated.

#### Bird Excluders

There is 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.

#### Squawkers

There is 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.

#### Enhanced Circulation Devices

Enhanced circulation could potentially increase the movement and/or deposition of, or erosion of, sediment by increasing hydrological mixing. Appropriate enhanced circulation devices would be low energy and less likely to disturb sand. These potential effects can be adequately studied, and modeled to mitigate potential impacts to the sediment by appropriate design and placement of the enhanced circulation device. Enhanced circulation devices have been successfully deployed at other small beaches without excessive deposition or eroding of the beaches

### Wet-Weather Structural BMPs

Wet-weather structural BMPs may result in minor soil excavation during construction which could introduce the potential for that soil to be eroded. Erosion of soils may occur as a short-term impact during construction. Construction BMPs should be used during implementation to minimize offsite sediment runoff or deposition. Greater utilization of low impact development (LID) can further mitigate the potential for erosion. Construction sites are required to retain sediment on site, both under general construction stormwater WDRs and through the construction program of the applicable MS4 WDRs; both of which are already designed to minimize or eliminate erosion impacts on receiving water.

### 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.

**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: Less than significant with mitigation incorporated

### Low-flow Diversions

Low-flow diversions are designed to divert low-flows to the local Publicly Owned Treatment Works (POTW) for treatment 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 which may modify the channel of a river or stream or the bed of the ocean or any bay, inlet or lake.

### Beach Sand Replacement

Beach sand replacement may temporarily disturb sands and result in some erosion of sands. The duration of the disturbance should be minimized to minimize potential for erosion. New beach sands may have a greater or lesser potential for erosion; such a change can be modeled so that the coarseness of sand, compaction of sand can be optimized to mitigate potential negative impacts to beach sands and changes to the bed of the ocean.

### Resurfacing (Pebbling) Beaches

Resurfacing beaches with gravel or other larger particle-sized rock may temporarily disturb sand and result in some erosion. The duration of the disturbance should be minimized to minimize potential for erosion. The new beach surface may have a greater or lesser potential for erosion; such a change can be modeled so that the coarseness of



sand, compaction of sand can be optimized to mitigate potential negative impacts to the beach surface and changes to the bed of the ocean.

#### Beach Sand Sanitation

There is no potential to result in changes in siltation, deposition or erosion which may modify the bed of the beach.

#### Bird Excluders

There is no potential to result in changes in deposition or erosion of beach sands, or changes in siltation, deposition or erosion, which would modify the bed of the ocean either on or off the site from this alternative means of compliance.

#### Squawkers

There is no potential to result in changes in deposition or erosion of beach sands, or changes in siltation, deposition or erosion, which would modify the bed of the ocean either on or off the site from this alternative means of compliance.

#### Enhanced Circulation Devices

Operation of enhanced circulation devices could potentially increase the movement and/or deposition of, or erosion of, sediment by increasing hydrological mixing and, therefore, may result in changes in deposition or erosion of beach sands or changes in siltation, deposition or erosion and modify the bed of the ocean. Appropriate enhanced circulation devices would be low energy and less likely to disturb sand. These potential effects can be adequately studied, and modeled to mitigate potential impacts to the sediment by appropriate design and placement of the enhanced circulation device. Enhanced circulation devices have been successfully deployed at other small beaches without excessive deposition or eroding of the beaches or modifying the bed of the ocean.

#### Wet-Weather Structural BMPs

Deposition of significant volumes of sediment to beaches occurs mostly during wet-weather flows. Therefore, wet-weather diversion and treatment BMPs that remove the stream's sediment load could impact deposition of sand on beaches. End of stream detention basins that capture sediment, resulting in possible changes in deposition or erosion, can be mitigated if it becomes necessary through sand replacement and importation. Both CIH and the VH are periodically dredged to maintain depth; a decrease in the amount of sediment reaching the Harbors may make extent or frequency of such dredging less necessary.

#### 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 beach.

**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

It is not anticipated that reasonably foreseeable methods of structural and non-structural BMPs will result in an exposure of people or property to geological hazards such as 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: Less than significant with mitigation incorporated

#### Low-flow Diversions

Short term increases in traffic during the construction and installation of low-flow diversion 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. Mitigation measures for increased air emissions due to increased vehicle trips or for construction equipment due to the installation of low-flow diversion 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.

#### Beach Sand Replacement

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 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.

#### Resurfacing (Pebbling) Beaches

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 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.

### Beach Sand Sanitation

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 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 of low emission vehicles as well as other SCAQMD recommended mitigation measures.

### Bird Excluders

The adverse impacts to ambient air quality may result from short term increases in traffic during the construction and installation of bird excluders. These impacts are temporary and localized to construction activities alone. Construction BMPs can be implemented to mitigate air impacts along with the use of low emission vehicles as well as other SCAQMD recommended mitigation measures.

### Squawkers

The adverse impacts to ambient air quality may result from short term increases in traffic during the construction and installation of squawkers. These impacts are temporary and localized to construction activities alone. Construction BMPs can be implemented to mitigate air impacts along with the use of low emission vehicles as well as other SCAQMD recommended mitigation measures.

### Enhanced Circulation Devices

The emission of air pollutants may impact ambient air quality during short-term construction and long-term operation activities. Mitigation measures for increased air emissions due to increased vehicle trips or for construction equipment due to the installation of low-flow diversion 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.

### Wet-Weather Structural BMPs

The adverse impacts to ambient air quality may result from short term increases in traffic during the construction and installation of wet-weather structural BMPs. These impacts are temporary and localized to construction activities alone. Construction BMPs can be implemented to mitigate air impacts along with the use of 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, non-structural BMPs are not expected to have noticeable impact on

ambient air quality for the level of effort that would be required for these relatively small beach areas.

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

Answer: Less than significant with mitigation incorporated

Low-flow Diversions

Construction and installation of low-flow diversions may result in objectionable odors in the short-term due to exhaust from operation equipment and vehicles, but 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.

Beach Sand Replacement

Beach sand replacement may result in objectionable odors in the short-term due to exhaust from operation equipment and vehicles, but 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.

Resurfacing (Pebbling) Beaches

Resurfacing beaches with gravel or other larger particle-sized rock may result in objectionable odors in the short-term due to exhaust from construction equipment and vehicles, but 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.

Beach Sand Sanitation

Beach sand sanitation may result in objectionable odors in the short-term due to exhaust from disinfection chemicals, operation equipment and vehicles, but 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.

Bird Excluders

Construction and installation of bird excluders may result in objectionable odors in the short-term due to exhaust from construction equipment and vehicles, but 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.

Squawkers

Construction and installation of squawkers may result in objectionable odors in the short-term due to exhaust from construction equipment and vehicles, but 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.

#### Enhanced Circulation Devices

Installation and operation of circulation devices may result in objectionable odors in the short-term due to exhaust from operation equipment and vehicles, but these impacts are temporary and localized to construction activities alone. Construction BMP can be implemented to mitigate air quality impacts along with the use low emission vehicles as well as other SCAQMD recommended mitigation measures.

#### Wet-Weather Structural BMPs

Construction and installation of wet-weather structural BMPs may result in objectionable odors in the short-term due to exhaust from construction equipment and vehicles. However, BMPs may be a source of objectionable odors if BMPs allow for water stagnation or collection of water with sulfur-containing compounds. Stormwater runoff is not likely to contain sulfur containing compounds, but stagnant water could create objectionable odors.

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. Structural BMPs should be inspected regularly to ensure that treatment devices are not clogged, pooling water, or odorous. During maintenance, odorous sources should be uncovered for as short of a time period as possible. Wet-weather structural BMPs 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.

#### Non-Structural BMPs

Non-structural BMPs could result in the creation of objectionable odors in urbanized areas caused by exhaust from maintenance vehicles. Objectionable odors due to engine exhaust would be temporary and dissipate once the vehicle has passed through the area. Objectionable odors from exhaust could be reduced if gasoline or propane engines were used instead of diesel engines.

**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: No impact

It is not anticipated that reasonably foreseeable methods of 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.

**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: Less than significant with mitigation incorporated

#### Low-flow Diversions

Low-flow diversions may impact water movement. The diversions are used to reduce dry-weather flows in storm drains and, ultimately, to the Harbors. Southern California streams naturally have little or no flow during periods without rain, so loss of this flow will not negatively affect the downstream Harbors.

#### Beach Sand Replacement

Replacing existing fine beach sand with coarser types of sand is used to improve the permeability and drainage capability of beach sand. Additional permeability on these small beaches will not affect enough water to result in changes in currents, or the course of direction or water movements

#### Resurfacing (Pebbling) Beaches

Resurfacing beaches with gravel or other larger particle-sized rock is used to improve the permeability and drainage capability of beach. Additional permeability on these small beaches will not affect enough water to result in changes in currents, or the course of direction or water movements.

#### Beach Sand Sanitation

Disinfection of sand will not cause changes in currents, or the course of direction or water movements, in either marine or fresh waters because most of the BMPs would not introduce any physical effects that could impact these characteristics.

#### Bird Excluders

Installation of bird excluders 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.

#### Squawkers

Installation of squawkers 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.

#### Enhanced Circulation Devices

Enhance circulation devices could potentially alter the direction of water movement. These devices are designed to increase the circulation at the beach face and promote

additional mixing in the surf zones. Adequately modeling, siting, and planning can help mitigate any possible negative impacts caused by water movement, such as those discussed above in sections 1 a, b and d-f.

#### Wet-Weather Structural BMPs

Wet-weather structural BMPs may change the currents in the watersheds by diverting flow away from the channels. However, stream flow in the urbanized lower watersheds are highly channelized, therefore none of the reasonably foreseeable structural BMPs would alter the direction or slope of the stream channels in the lower watersheds. The roughness coefficient may be reduced as sediment is kept out of the channels, which could increase the flow rate in the channels but would not change the direction of flow. The increase in flow rate in the channels could be offset by the reduction of peak flow, as a result of the installation of structural BMPs such as detention basins, sand filters or infiltration basins. Overland flow in the urbanized portion of the watershed is directed primarily to storm drains. This overland flow may change depending on the structural BMPs installed such as infiltration basins. If stormwater runoff flow is reduced, or is diverted to detention basins and not returned to the creeks, these changes would reduce the potential for erosion, which is beneficial to the environment.

#### 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.

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

Answer: Less than significant

#### Low-flow Diversions

Low-flow diversions have the potential to impact the amount of surface water runoff. These diversions are designed for dry-weather flows only. The numbers of low-flow diversions that can be installed are small and the flow rate during this period is minor. Southern California streams naturally have little or no flow during periods without rain, so loss of this flow will not negatively affect the downstream Harbors.

#### Beach Sand Replacement

Replacing existing fine beach sand with coarser types of sand is used to improve the permeability and drainage capability of beach sand. However, additional permeability on these small beaches will not alter drainage patterns, and the rate and amount of surface water runoff to the beaches.

### Resurfacing (Pebbling) Beaches

Resurfacing beaches with gravel or other larger particle-sized rock is used to improve the permeability and drainage capability of beach. However, additional permeability on these small beaches will not alter drainage patterns, and the rate and amount of surface water runoff to the beaches.

### Beach Sand Sanitation

Beach sand sanitation would not result in changes in absorption rates, drainage patterns, or the rate and amount of surface water runoff. No impact is anticipated. No mitigation measures are required.

### Bird Excluders

Bird excluders would not result in changes in absorption rates, drainage patterns, or the rate and amount of surface water runoff. No impact is anticipated. No mitigation measures are required.

### Squawkers

Squawkers would not result in changes in absorption rates, drainage patterns, or the rate and amount of surface water runoff. No impact is anticipated. No mitigation measures are required.

### Enhanced Circulation Devices

Enhanced circulation devices would not result in changes in absorption rates, drainage patterns, or the rate and amount of surface water runoff. No impact is anticipated. No mitigation measures are required.

### Wet-Weather Structural BMPs

Wet-weather structural BMPs 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, structural BMPs such as vegetated biofiltration would change drainage patterns by increasing absorption rates, which would reduce the amount of surface runoff to creeks. However, increased imperviousness in the watersheds has increased stormwater flows, so a partial reduction in stormwater flow would not be a negative environmental effect.

### 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 drainage patterns, rate and amount of surface water runoff. No impact is anticipated. No mitigation measures are required.

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

Answer: Less than significant with mitigation incorporated



### Low-flow Diversions

Low-flow diversions have the potential to impact the course of flow of flood waters. Low-flow diversions are designed to divert low-flow water in storm drains to local Publicly Owned Treatment Works (POTWs). Impacts to the flow of flood waters can be mitigated with proper design and siting. Low-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 over taxing POTWs treatment capacity.

### Beach Sand Replacement

Replacing existing fine beach sand with coarser types of sand is used to improve the permeability and drainage capability of beach sand. However, additional permeability on these small beaches will not alter the course of flow of flood waters. No mitigation measures are required.

### Resurfacing (Pebbling) Beaches

Resurfacing beaches with gravel or other larger particle-sized rock is used to improve the permeability and drainage capability of beach. However, additional permeability on these small beaches will not alter the course of flow of flood waters. No mitigation measures are required.

### Beach Sand Sanitation

Sanitation of beach sands would not result in altering the course of flow of flood waters because sanitation would not introduce any physical change to the beach that could impact the flow of flood waters. No mitigation measures are required.

### Bird Excluders

Bird excluders would not result in altering the course of flow of flood waters because installation of bird excluders would not introduce any physical change to the beach that could impact the flow of flood waters. No mitigation measures are required.

### Squawkers

Squawkers would not result in altering the course of flow of flood waters because squawkers would not introduce any physical change to the beach that could impact the flow of flood waters. No mitigation measures are required.

### Enhanced Circulation Devices

Enhanced circulation devices affect circulation and waters in the harbors and do not affect flood waters and would not result in altering the course of flow of flood waters. No mitigation measures are required.

### Wet-Weather Structural BMPs

Wet-weather structural BMPs, such as swales, detention systems or infiltration basins, could alter the volume of flood waters by diverting a portion of the flood waters, but a reduction in flood waters 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 structural BMPs. Installation of wet-weather structural BMPs like wetlands could result in positive environmental benefits like flood mitigation and upstream flow volume reduction. Detention and infiltration basins also reduce upstream flow volume.

### 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.

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

Answer: Less than significant with mitigation incorporated

### Low-flow Diversions

Low-flow diversions are designed to divert low-flow water in storm drains to local POTWs during dry-weather. Because the reduction of nuisance flows would return the watersheds to a more natural, predevelopment condition, this impact is not significant.

### Beach Sand Replacement

Beach sand replacement does not change the amount of surface water in waterbody. No mitigation measures are required.

### Resurfacing (Pebbling) Beaches

Resurfacing beaches do not change the amount of surface water in waterbody. No mitigation measures are required.

### Beach Sand Sanitation

Sanitation of sands does not change the amount of surface water in waterbody. No mitigation measures are required.

### Bird Excluders

Bird excluders do not divert water for other uses, and the amount of surface water in the waterbody is not changed. No mitigation measures are required.

### Squawkers

Squawkers do not divert water for other uses, and the amount of surface water in the waterbody is not changed. No mitigation measures are required.

### Enhanced Circulation Devices

Enhanced circulation devices do not change the amount of surface water in the waterbody. No mitigation measures are required.

### Wet-weather Structural BMPs

Stormwater runoff may be retained and/or diverted for groundwater infiltration and/or to detention basins. Water that is retained or diverted would not flow into the canyons and stream channels. Because the surface water runoff to the creeks would be reduced, the adverse effects of channel erosion of the creeks would also be reduced.

Reduction in the amount of water in the stream channels may affect the ecology of the streams; however, all of these affects can be mitigated to less than significant levels as discussed below in the answers to questions 4 and 5 on Plant Life and Animal Life.

### 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.

**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: Less than significant

The TMDL will improve surface water quality in terms of indicator bacteria. In addition, the BMPs which reduce stormwater runoff may contribute to reductions in other types of pollutants which are also carried by stormwater.

### Low-flow Diversions

Low-flow diversions would not result in discharge to surface waters, or in any negative change to surface water quality. No mitigation measures are required.

### Beach Sand Replacement

Beach sand replacement would not result in discharge to surface waters, or in any negative change to surface water quality. No mitigation measures are required.

### Resurfacing (Pebbling) Beaches

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

### Beach Sand Sanitation

Sanitation of beach sands would not result in discharge to surface waters, or in any negative change to surface water quality. No mitigation measures are required.

### Bird Excluders

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

### Squawkers

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

### Enhanced Circulation Devices

Enhanced circulation devices would not result in discharge to surface waters, or in any negative change to surface water quality. No mitigation measures are required.

### Wet-weather Structural BMPs

During wet-weather discharges, certain structural BMPs (including detention basins, infiltration basins, and filter strips) 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.

### Non-Structural BMPs

Non-structural BMPs would not result in discharge to surface waters, or in any negative change to surface water quality. No mitigation measures are required.

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

Answer: Less than significant with mitigation incorporated

### Low-flow Diversions

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

### Beach Sand Replacement

Beach sand replacement would not result in alteration of the direction or rate of flow of ground waters. No mitigation measures are required.

### Resurfacing (Pebbling) Beaches

Resurfacing beaches would not result in alteration of the direction or rate of flow of ground waters. No mitigation measures are required.

### Beach Sand Sanitation

Sanitation of beach sands would not result in alteration of the direction or rate of flow of ground waters. No mitigation measures are required.

### Bird Excluders

Bird excluders would not result in alteration of the direction or rate of flow of ground waters. No mitigation measures are required.

### Squawkers

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

### Enhanced Circulation Devices

Enhanced circulation would not result in alteration of the direction or rate of flow of ground waters. No mitigation measures are required.

### Wet-Weather Structural BMPs

Over the long term, infiltration of stormwater runoff via infiltration type BMPs such as vegetative strips 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. These impacts can be avoided by siting infiltration type BMPs away from areas with loose or compressible soils, and away from slopes that could become destabilized by an increase in groundwater flow. Infiltration type BMPs can also be built on a small enough scale to avoid these types of impacts. In the unlikely event that dischargers might install facilities on a scale that could result in unstable earth conditions, potential impacts could be avoided through proper groundwater investigations, siting, design, and groundwater level monitoring to ensure that structural BMPs are not employed in areas where slopes could become destabilized.

### 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.

**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: No impact

The reasonably foreseeable methods of compliance act entirely on surface waters and would not add or withdraw groundwater.

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

Answer: No impact

No impact is foreseeable. The structural and non-structural BMPs will not reduce public water supplies because the public water supplies are not drawn from stormwater or marine waters in the harbors.

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

Answer: Less than significant with mitigation incorporated

#### Low-flow Diversions

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.

#### Beach Sand Replacement

Beach sand replacement 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.

#### Resurfacing (Pebbling) Beaches

Resurfacing beaches 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.

#### Beach Sand Sanitation

Sanitation of beach sands 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.

#### Bird Excluders

Bird excluders 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.

### Squawkers

Squawkers 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.

### Enhanced Circulation Devices

Enhanced circulation 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.

### Wet-Weather Structural BMPs

Installation of wet-weather structural BMPs that are not properly designed and constructed to allow for bypass of excess stormwater during storms that exceed design capacity can cause flooding. However, this potential impact can be mitigated through proper design and maintenance of structural BMPs. Any modifications to the watershed hydrology should be modeled and accounted for in the design of BMP.

### Non-Structural BMPs

Non-structural BMPs 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.

**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: Less than significant with mitigation incorporated

### Low-flow Diversions

Low-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.

### Beach Sand Replacement

Replacement activities of beach sand could result in temporary impact to plants in the construction zone. The number or diversity of plant species could be maintained by

preserving them prior, during, and after the replacement of beach sand, or by reestablishing and maintaining the plant communities post construction. Proper project modeling, siting, and planning can help mitigate impacts to the plant life.

#### Resurfacing (Pebbling) Beaches

Pebbled beaches could result in temporary impact to plant cover in the construction zone. The number or diversity of plant species could be maintained by preserving them prior, during, and after the replacement of existing sands, or by reestablishing and maintaining the plant communities post construction. Proper project modeling, siting, and planning can help mitigate impacts to the plant life.

#### Beach Sand Sanitation

Sanitation of beach sands by thermal means would not result in impacts to species diversity and number of species of plants. Any plant life near the sanitation area would be avoided.

#### Bird Excluders

Bird excluders would not result in change in the diversity of species, or number of any species of plants (including trees, shrubs, grass, crops, microflora and aquatic plants). No mitigation measures are required.

#### Squawkers

Squawkers would not result in change in the diversity of species, or number of any species of plants (including trees, shrubs, grass, crops, microflora and aquatic plants). No mitigation measures are required.

#### Enhanced Circulation Devices

Enhanced circulation may result in change in the diversity of species, or number of any species of plants. Increased circulation could possibly temporarily increase turbidity and suspended solids at the circulation site. This would decrease light penetration, possibly causing a decline in photosynthesis by nearby aquatic plants and phytoplankton. However, the increased circulation, in addition to the wave action, allows phytoplankton to mix from less light-limited areas also, limiting the impact of the device. Proper project modeling, siting, and planning, such as limiting extent and duration of increased circulation, can help mitigate impacts to the plant life.

#### Wet-Weather Structural BMPs

During the wet-weather season, the installation of structural BMPs such as vegetated swales, filter strips, 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, structural BMPs 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 creeks, which could be adverse. This can be mitigated through proper project modeling, siting, and planning so that the resulting creek hydrology mimics natural conditions.



### Non-Structural BMPs

Non-structural BMPs would not result in 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.

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

Answer: Less than significant with mitigation incorporated

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 Game (CDFG) 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.

### Low-flow Diversions

It is unlikely that during and after construction of low-flow diversion devices in recreational and urbanized areas would result in a reduction of the numbers of any unique, rare or endangered species of plants. Mitigation measures could be implemented such as discussed above, to ensure that potential impacts on unique, rare or endangered plant species are less than significant.

### Beach Sand Replacement

It is unlikely that sand replacement at Harbor Beaches of Ventura County would result in a reduction of the numbers of any unique, rare or endangered species of plants. Mitigation measures, discussed above, could be implemented to ensure that potential impacts on unique, rare or endangered plant species are less than significant.

### Resurfacing (Pebbling) Beaches

It is unlikely that resurfacing beaches with gravel or other larger particle-sized rock at Harbor Beaches of Ventura County would result in a reduction of the numbers of any unique, rare or endangered species of plants. Mitigation measures, discussed above, could be implemented to ensure that potential impacts on unique, rare or endangered plant species are less than significant.

### Beach Sand Sanitation

It is unlikely that sanitation of sands at Harbor Beaches of Ventura County would result in a reduction of the numbers of any unique, rare or endangered species of plants. Mitigation measures, discussed above, could be implemented to ensure that potential impacts on unique, rare or endangered plant species are less than significant.

### Bird Excluders

It is anticipated that bird excluders would be installed on the beach or highly urbanized areas. Bird excluders are poles and wires and would not cause significant shading. It is unlikely that this compliance strategy would result in a reduction of the numbers of any unique, rare or endangered species of plants. Mitigation measures, discussed above, could be implemented to ensure that potential impacts on unique, rare or endangered plant species are less than significant.

### Squawkers

Squawkers will not result in a reduction of the numbers of any unique, rare, or endangered species of plants because these BMPs will not affect the habitat of any unique, rare, or endangered species of plants. No mitigation measures are required.

### Enhanced Circulation Devices

It is unlikely that enhanced circulation in harbors would reduce the numbers of any unique, rare or endangered species of plants due to a minor increase in flow in an area, which already experiences wave action, and would not change the characteristics of water (temperature, dissolved oxygen etc) which affect plant species. Mitigation measures, discussed above, could be implemented to ensure that potential impacts on unique, rare or endangered plant species are less than significant.

### Wet-Weather Structural BMPs

It is unlikely that during and after construction of wet-weather structural BMPs in recreational and urbanized areas would result in a reduction of the numbers of any unique, rare or endangered species of plants. Mitigation measures, discussed above, could be implemented to ensure that potential impacts on unique, rare or endangered plant species are less than significant.

### 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.

**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: Less than significant with mitigation incorporated

### Low-flow Diversions

Low-flow diversions divert the surface water runoff discharge. 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 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.

### Beach Sand Replacement

Sand replacement on the beach would not result in introduction of new species of plants into an area, or act as a barrier to the normal replenishment of existing species.

### Resurfacing (Pebbling) Beaches

Resurfacing beaches with gravel or other larger particle-sized rock could result in temporary impact to plant cover in the construction zone. The number or diversity of plant species could be maintained by preserving them prior, during, and after the replacement of existing sands, or by reestablishing and maintaining the plant communities post construction.

### Beach Sand Sanitation

Sanitation of sands by thermal means would not result in introduction of new species of plants into an area. However, it may be a barrier to the normal replenishment of existing sand associated microflora depending on how often it is repeated. Proper project modeling, siting, and planning, such as minimizing the area to be treated, can mitigate impacts to the plant life.

### Bird Excluders

It is not reasonably foreseeable that implementation of bird excluders would result in the introduction of exotic or invasive plant species into an area. Nor will it result in a barrier to the normal replenishment of existing species. No mitigation measures are required.

### Squawkers

Squawkers would not result in introduction of new species of plants into an area, or in a barrier to the normal replenishment of existing species. No mitigation measures are required.

### Enhanced Circulation Devices

Enhanced circulation in harbors would not result in introduction of new species of plants into an area. However, circulation could potentially be a minor barrier to the normal replenishment of existing species. Because circulation would temporarily increase in

turbidity and suspended solids, this would decrease light penetration, causing a decline in photosynthesis by aquatic plants and phytoplankton. However, the increased circulation in addition to the wave action, allow phytoplankton to mix from less light-limited areas also, limiting the impact of the device. Proper project modeling, siting, and planning, such as limiting extent and duration of increased circulation, can help mitigate impacts to the plant life.

#### Wet-Weather Structural BMPs

For wet-weather structural BMPs that may include the use of plants, such as vegetated swales or bioretention areas, 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 Exotic Pest Plant of Greatest Ecological Concern in California (1999, California Invasive Plant Council, as amended) should be prohibited.

#### Non-Structural BMPs

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

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

Answer: Less than significant with mitigation incorporated

#### Low-flow Diversions

It is not expected that low-flow diversions would be placed in any area currently engaged in crop production, but it would be implemented in existing storm drains and already urbanized areas and would have no foreseeable impact on the acreage of any agricultural crop. No mitigation measures are required.

#### Beach Sand Replacement

Beach sand would not be placed in any area currently engaged in crop production, would have no foreseeable impact on the acreage of any agricultural crop. No mitigation measures are required.

#### Resurfacing (Pebbling) Beaches

Replacement of beach sand with gravel or other larger particle-sized rock would not be placed in any area currently engaged in crop production, would have no foreseeable impact on the acreage of any agricultural crop. No mitigation measures are required.

### Beach Sand Sanitation

Beach sand would not be sanitized in any area currently engaged in crop production, would have no foreseeable impact on the acreage of any agricultural crop. No mitigation measures are required.

### Bird Excluders

It is not expected that bird excluders would be placed in any area currently engaged in crop production, but it would be implemented on the beach and in already urbanized areas and would have no foreseeable impact on the acreage of any agricultural crop. No mitigation measures are required.

### Squawkers

It is not expected that squawkers would be placed in any area currently engaged in crop production, but it would be implemented in already urbanized areas and would have no foreseeable impact on the acreage of any agricultural crop. No mitigation measures are required.

### Enhanced Circulation Devices

It is not expected that any circulation devices would be placed in any area currently engaged in crop production, and it would have no foreseeable impact on the acreage of any agricultural crop. No mitigation measures are required.

### Wet-Weather Structural BMPs

Wet-weather structural BMPs such as swales, filter strips, bioretention areas, or retention ponds could be placed in areas currently engaged in crop production. This can be mitigated through proper project siting, and planning such that the agricultural areas impacted are minimized.

### Non-Structural BMPs

Non-structural BMPs would involve no change to the physical environment either directly or indirectly and would have no impact on the acreage of any agricultural crop.

**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 California Department of Fish and Game (CDFG) and the U.S. Fish and Wildlife Service (USFWS) prior to implementing compliance strategies that pose a potentially significant impact to animal life for both protected and non-protected. Responsible parties may also choose to implement compliance strategies that incur less impact on animal life.

### Low-flow Diversions

Low-flow diversions in dry weather could eliminate in-stream habitats dependant on those flows. These changes may 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) discussed above. Proper project modeling, siting, and planning can help mitigate impacts to the animal life.

### Beach Sand Replacement

Beach sand replacement could change the habitats of some species and may result in a change to the diversity of species, or numbers of animal species such as sand microfauna or small sand crustaceans. The relatively small size of the beaches and the slight increase in sand permeability makes the impact on animal species less than significant. The Port of Los Angeles, for instance, is conducting a sand replacement project under a CEQA notice of exemption (NOE).

### Resurfacing (Pebbling) Beaches

Resurfacing beach with gravel or other large particle-sized rock could change the habitats of some species and may result in change in the diversity of species, or numbers of animals. The relatively small size of the beach and the slight increase in permeability makes the impact on animal species less than significant.

### Beach Sand Sanitation

Sanitation of sand by thermal means would result in impacts to species diversity and number of species of animals such as sand associated microfauna, depending on the frequency and duration of exposure. Proper project modeling, siting, and planning, such as minimizing the area to be treated, can mitigate impacts to the animal life.

### Bird Excluders

Bird excluders are especially designed to discourage bird habitation on the beach and may potentially reduce the overall habitat for birds at the beach. Excluders do not harm birds nor have any effect outside the installation area. The Port of Los Angeles installed a bird excluder on inner Cabrillo Beach in 2001 without discernable negative effects on birds. Responsible parties should consult with the California Department of Fish and Game (CDFG) and the U.S. Fish and Wildlife Service (USFWS) prior to implementing compliance strategies that pose a potentially significant impact to animal life for both protected and non-protected bird species so that the bird excluder can be designed the appropriate size and height to minimize unnecessary effects on birds.

### Squawkers

Squawkers are designed to discourage bird habitation on the beach and may potentially reduce the overall habitat for birds at the beach. Squawkers do not harm birds nor have any effect outside the audible area. Responsible parties should consult with the CDFG and the USFWS prior to implementing compliance strategies that pose a potentially significant impact to animal life for both protected and non-protected bird species to determine the appropriate sound levels to minimize unnecessary effects on birds.

### Enhanced Circulation Devices

Enhanced circulation in harbors may alter circulation flows in the adjacent channel and swim zones and may increase the transport of sediment relative to the existing conditions. Implementation of mechanical flow enhancement may increase sediment transport and may cause a redistribution of sand. These changes may result in change in the diversity of species, or numbers of any species of animals including sand crustaceans and microfauna. Proper project modeling, siting, and planning, such as limiting the extent and duration of increased circulation, can help mitigate impacts to the animal life.

### Wet-Weather Structural BMPs

The installation of wet-weather structural BMPs such as 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 wet-weather structural BMPs could also increase the likelihood of vectors and pests. For example, constructed basins, vegetated swales, and surface flow wetlands 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 wet-weather structural BMPs 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. Wet-weather structural BMPs 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.

### Non-Structural BMPs

Non-structural BMPs, such as actions to control the cat populations could result in change in the diversity of species, or numbers of any species of animals as predator cats are removed (or the population is stabilized) in the local area. This could have a positive effect on local bird populations or a negative effect by allowing a larger rat population. The Ventura County Harbor Department maintains a manageable feral cat population to balance the environmental advantages of local rodent population control and disadvantages of ongoing, albeit controlled and limited, feral cat source loading.

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

Answer: Less than significant with mitigation incorporated

Depending on the structural BMPs selected, direct or indirect impacts to special-status animal species may possibly occur during and after construction. Special-status species are present in many of the watersheds. 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

The following mitigation measures should be implemented to reduce or avoid potential project-level impacts to unique, rare or endangered species of animals:

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 applicable U.S. Fish and Wildlife Service (USFWS) and/or California Department of Fish and Game (CDFG) 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 in accordance with USFWS and/or CDFG protocols 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 CDFG to reduce potential impacts.



### Low-flow Diversions

Low-flow diversions in dry weather could eliminate in-stream 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.

### Beach Sand Replacement

Beach sand replacement could change the habitats of some sand species. Construction equipment during sand replacement could also temporarily affect animal species. These activities may result in reduction of the numbers of any unique, rare or endangered species of animals. Proper project planning as discussed above can help mitigate impacts to the animal life.

### Resurfacing (Pebbling) Beaches

Beach sand replacement with gravel or other large particle-sized rock could change the habitats of some sand species. The use of construction equipment during beach replacement could also temporarily affect animal species. These activities may result in reduction of the numbers of any unique, rare or endangered species of animals. Proper project planning as discussed above can help mitigate impacts to the animal life.

### Beach Sand Sanitation

Sanitation of sands by thermal means may involve ground disturbance. This could result in reduction of the numbers of any unique, rare or endangered species of animals if they are present in the sand. Proper project modeling, siting, and planning can help mitigate impacts to the animal life.

### Bird Excluders

Bird excluders are especially designed to discourage bird habitation on the beach and may potentially reduce the overall habitat for birds at the beach. Excluders do not harm birds nor have any effect outside the installation area. The Port of Los Angeles installed a bird excluder on inner Cabrillo Beach in 2001 without discernable negative effects on birds. Responsible parties should consult with the CDFG and the USFWS as discussed above prior to implementing compliance strategies that pose a potentially significant impact for both protected and non-protected bird species so that the bird excluder can be designed the appropriate size and height to minimize unnecessary effects on birds. Compliance methods involving bird excluders should avoid affecting habitat that is vital for the survival of special status bird species.

### Squawkers

Squawkers are especially designed to discourage bird habitation on the beach and may potentially reduce the overall habitat for birds at the beach. Squawkers do not harm birds nor have any effect outside the audible area. Responsible parties should consult with the CDFG and the USFWS as discussed above prior to implementing compliance strategies that pose a potentially significant impact for both protected and non-protected bird species so that the squawker can be designed with the appropriate sound level to minimize unnecessary effects on birds. Compliance methods involving bird excluders should avoid affecting habitat that is vital for the survival of special status bird species.

### Enhanced Circulation Devices

Enhanced circulation in harbors may potentially affect water current flow velocities and sediment transport relative to the existing conditions. Implementation of mechanical flow enhancement would increase sediment transport and redistribution of sand. Animal life may also be adversely affected through the interaction with the circulation pumps and propellers. These changes may result in an impact to animal life, reduction of the numbers of unique, rare or endangered species of animals if such animals are identified on the beach or in the sand. Proper project modeling, siting, and planning, such as limiting extent and duration of increased circulation, can help mitigate impacts to the special status animal species. Additional design features for enhanced circulation devices like screening and filtering may help mitigate adverse impacts to animal life.

### Wet-Weather Structural BMPs

Wet-weather structural BMPs such as vegetated biofiltration systems could increase the diversity or number of animal species, by creating habitat for those species. The installation of wet-weather structural BMPs 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.

### Non-Structural BMPs

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

**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: Less than significant with mitigation incorporated

Structural BMPs would not foreseeably introduce new species. In urbanized areas, the potential installation sites would not act as a travel route or regional wildlife corridors. However, BMPs could potentially be constructed in agricultural areas or open space where travel routes or regional wildlife corridors exist. 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 such as water, food, or 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. Construction of reasonably foreseeable structural BMPs likely would not restrict wildlife movement because the sizes of the BMPs are generally too small to obstruct a corridor. For terrestrial animals, corridors would be maintained regardless of stream flow since reduced flows would not provide physical barriers for these animals. In the event that any structural BMP built would hinder animals from moving throughout the stream corridor, a pathway around the BMP could be constructed.

Compliance measures should be avoided which result in significant barriers to the migration or movement of animals, and instead non-structural BMPs and/or structural BMPs other than fences or obstructions that would not change the migration or movement of animals should be emphasized. Potential project sites in open space areas that might be used to install structural BMPs should be evaluated in consultation with CDFG to identify potential wildlife travel routes. If a wildlife travel route is identified that could be impacted by the installation of structural BMPs, then the project should be designed to include a new wildlife travel route in the same general location.

Some migratory avian species may use portions of potential project sites, including new 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 USFWS and CDFG. The MBTA protects over 800 species including, geese, ducks, shorebirds, raptors, songbirds, and many other relatively common species. 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 should be conducted on the project site following USFWS and/or CDFG guidelines. If no active avian nests are identified on or within the appropriate distance of construction areas, further mitigation may not 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 as required by USFWS between the construction activities and the nest site.

If active nest for protected avian species are found within the construction footprint or within the prescribed 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 USFWS or CDFG. These impacts are highly site specific, and assuming they are foreseeable, they would require a project-level analysis and mitigation plan.

#### Low-flow Diversions

Low-flow diversions could result in a barrier to the migration or movement of animals especially in the dry weather season by eliminating habitat dependant on those flows. However, this would cause dry weather flows in the watersheds to return to a more

natural, pre-development condition. Animal species that thrived in streams in the absence of nuisance flows should not be adversely impacted by habitat changes if the flows are eliminated.

#### Beach Sand Replacement

Sand replacement activities are temporary which would not result in introduction of new species of animals into an area, or in a barrier to the migration or movement of animals.

#### Resurfacing (Pebbling) Beaches

Beach sands are replaced with gravel or other larger particle-sized rock. This activity is temporary and would not result in introduction of new species of animals into an area, or in a barrier to the migration or movement of animals.

#### Beach Sand Sanitation

Sanitation of sands with thermal means is a temporary measure which would not result in introduction of new species of animals into an area, or in a barrier to the migration or movement of animals.

#### Bird Excluders

Bird excluders would not result in the introduction of a new animal species, but could result in barriers to the movement of birds. Bird excluders are designed to prevent birds from gathering on the beach. Excluders do not harm birds nor have any effect outside the installation area. The Port of Los Angeles installed a bird excluder on inner Cabrillo Beach in 2001 without discernable negative effects on birds. Responsible parties should consult with the CDFG and the USFWS as discussed above prior to implementing compliance strategies that pose a potentially significant impact to bird species so that the bird excluder can be designed the appropriate size and height to minimize unnecessary effects on birds.

#### Squawkers

Squawkers would not result in introduction of new species of animals into an area, but could result in a barrier to the movement of birds. Squawkers do not harm birds nor have any effect outside the audible area. Responsible parties should consult with the CDFG and the USFWS as discussed above prior to implementing compliance strategies that pose a potentially significant impact for bird species so that the squawker can be designed with the appropriate sound level to minimize unnecessary effects on birds. .

#### Enhanced Circulation Devices

Enhanced circulation would not result in introduction of new species of animals into an area, or in a barrier to the migration or movement of animals. No mitigation measures are required.

#### Wet-Weather Structural BMPs

Construction of reasonably foreseeable wet-weather structural BMPs likely would not restrict wildlife movement because the sizes of BMPs 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.

#### 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.

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

Answer: Less than significant with mitigation incorporated

#### Low-flow Diversions

Low-flow diversions divert dry-weather runoff which may potentially change the fish and wildlife habitat within the stream channels by changing the flow regime of the creeks. Low-flow diversions 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 dry 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 nonnative and invasive animal species. Impeding the propagation of invasive species is not a negative impact.

#### Beach Sand Replacement

Sand replacement activities could result in temporary impact to wildlife and fish in the construction zone. The number or diversity of animal species could be maintained by preserving them prior, during, and after the replacement of beach sand. Proper project planning can help mitigate the temporary impacts to the wildlife. Changes in beach permeability could affect animals such as sand microfauna or small sand crustaceans. The relatively small size of the beaches and the slight increase in sand permeability makes the impact on animal species less than significant. The Port of Los Angeles, for instance, is conducting a sand replacement project under a CEQA notice of exemption (NOE).

#### Resurfacing (Pebbling) Beaches

Resurfacing beaches with gravel or other larger particle-sized rock could result in temporary impact to wildlife and fish in the construction zone. The number or diversity of animal species could be maintained by preserving them prior, during, and after the replacement of beach sand. Proper project planning can help mitigate the temporary

impacts to the wildlife. Changes in beach permeability could affect animals such as sand microfauna or small sand crustaceans. The relative small size of the beaches and the slight increase in sand permeability makes the impact on animal species less than significant.

#### Beach Sand Sanitation

Sanitation of sands through thermal means could result in deterioration to existing wildlife sand microfauna or small sand crustacean habitat, temporarily. Proper project modeling, siting, and planning, such as minimizing the area to be treated can, mitigate impacts to the animal life.

#### Bird Excluders

Bird excluders are especially designed to discourage bird habitation on the beach and may potentially reduce the overall habitat for birds at the beach. The Port of Los Angeles installed a bird excluder on inner Cabrillo Beach in 2001 without discernable negative effects on birds. Responsible parties should consult with the California Department of Fish and Game (CDFG) and the U. S. Fish and Wildlife Service (USFWS) as discussed above prior to implementing compliance strategies that pose a potentially significant impact to bird species so that the bird excluder can be designed the appropriate size and height to minimize unnecessary effects on birds. Excluders do not harm birds nor have any effect outside the installation area.

#### Squawkers

Squawkers are designed to discourage bird habitation on the beach and may potentially reduce habitat for birds at the beach. Squawkers do not harm birds nor have any effect outside the audible area. Responsible parties should consult with the CDFG and the USFWS as discussed above prior to implementing compliance strategies that pose a potentially significant impact for bird species so that the squawker can be designed with the appropriate sound level to minimize unnecessary effects on birds.

#### Enhanced Circulation Devices

Enhanced circulation in harbors may potentially affect water current flow velocities and sediment transport relative to the existing conditions. This could possibly impact existing fish habitat. In addition, the action of the rotors or pumps themselves, may potentially impact fish. Mitigation measures are available to mitigate the damage. These devices can be designed with protective steel cages around the rotating propeller and fitted with screens. Proper sizing can be employed and suited to the biota in the harbor to avoid unnecessary disturbances and impacts. Proper project modeling, siting, and planning can help mitigate impacts to the animal life.

#### Wet-Weather Structural BMPs

Reasonably foreseeable wet-weather structural BMPs would not likely result in deterioration to existing fish and wildlife habitat. In some cases, detention/retention ponds, vegetated swales, and surface flow wetlands may actually provide important habitat for animals. Proper project modeling, siting, and planning can help mitigate impacts to the animal life.

### 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.

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

Answer: Less than significant with mitigation incorporated

The construction and installation of structural BMPs 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 is less than significant with mitigation incorporated. The noise associated with the construction and installation of structural BMPs would be the same as typical construction activities in urbanized areas, such as ordinary road and infrastructure maintenance and building activities. 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 prepared to identify the variety of available measures to limit the impacts from noise to adjacent homes and businesses.

Severe noise levels could be mitigated by implementing commonly-used noise abatement procedures, such as sound barriers, mufflers, and limiting construction and maintenance activities to times when these activities have lower impact, such as periods when there are fewer people near the construction area. Applicable and appropriate mitigation measures could be evaluated when specific projects are determined, depending upon proximity of construction activities to receptors.

### Low-flow Diversions

The construction and installation of low-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 is less than significant.

### Beach Sand Replacement

Beach sand replacement activities would result in temporary increase in existing noise levels. An operations plan for the specific construction and/or maintenance activities could be prepared to identify the variety of available measures to limit the impacts from noise to adjacent homes and businesses.

### Resurfacing (Pebbling) Beaches

Resurfacing beaches would result in temporary increase in existing noise levels. An operations plan for the specific construction and/or maintenance activities could be prepared to identify the variety of available measures to limit the impacts from noise to adjacent homes and businesses.

### Beach Sand Sanitation

The operation of sand sanitation would result in temporary increase in existing noise levels. An operations plan for the specific construction and/or maintenance activities could be prepared to identify the variety of available measures to limit the impacts from noise to adjacent homes and businesses.

### Bird Excluders

The installation of bird excluders 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 is less than significant

### Squawkers

Squawkers could potentially result in increase in existing noise levels. These devices can be properly designed and sited away from people to further reduce potential noise impacts. Responsible parties may choose to implement compliance strategies that result in less impact to noise level.

### Enhanced Circulation Devices

The operation of enhanced circulation devices may result in temporary increases of existing noise levels. Oloids™, InStream™ units, circulation pumps emit noise levels in slight excess of ambient noise levels. Depending on the unit, the slight increase in ambient noise may or may not be significant compared to ambient noise levels. Strategic placement of the devices can reduce the likelihood of exposure to adverse noise levels that may result from the operation of circulation devices. The circulation devices can be reengineered and redesigned to further reduce the noise output. For instance, the devices can be installed with low noise-generating motors and sound dampening panels. Optimal operational timing may also reduce the duration of exposure to adverse noise levels.



### Wet-Weather Structural BMPs

The construction and installation of wet-weather structural BMPs 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 is less than significant.

### 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 and is therefore, less than significant.

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

Answer: Less than significant with mitigation incorporated

See response to 6. Noise. a.

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

Answer: Less than significant with mitigation incorporated

### 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.

In the unlikely event that construction is performed during night time hours, 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.

### 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.

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

Answer: No impact

It is not anticipated that reasonably foreseeable methods of compliance of structural and non-structural BMPs will result in substantial alteration of the present or planned land use of an area, they will not physically divide an established community, nor will they conflict with any land use plan.

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

Answer: No impact

Non-structural and/or structural BMPs will not increase the rate of use of any natural resources. Implementation of non-structural and/or 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 response to 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: Less than significant with mitigation incorporated

#### Low-flow Diversions

There is the possibility that hazardous materials (e.g., oil and gasoline) may be present or released during construction and installation activities, but potential risks of exposure can be mitigated with proper handling and storage procedures. All risks of exposure would be short term and would be eliminated with the completion of construction and installation activities. 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 designed and sites can be properly protected with fencing and signs to prevent accidental health hazards.

#### Beach Sand Replacement

There is the possibility that hazardous materials (e.g., oil and gasoline) may be present during beach sand replacement, but potential risks of exposure can be mitigated with proper handling and storage procedures. All risks of exposure would be short term and would be eliminated with the completion of replacement activities. Compliance with the requirements of California Occupational Health and Safety Administration CalOSHA and local safety regulations during beach sand replacement 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. During replacement the site can be properly protected with fencing and signs to prevent accidental health hazards.

#### Resurfacing (Pebbling) Beaches

There is the possibility that hazardous materials (e.g., oil and gasoline) may be present during resurfacing activities, but potential risks of exposure can be mitigated with proper handling and storage procedures. All risks of exposure would be short term and would be eliminated with the completion of resurfacing activities. Compliance with the requirements of California Occupational Health and Safety Administration CalOSHA and local safety regulations during resurfacing 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. During resurfacing the site can be properly protected with fencing and signs to prevent accidental health hazards.

#### Beach Sand Sanitation

There is the possibility that hazardous materials (e.g., oil and gasoline) may be present depending on equipment used to sanitize the beach, but potential risks of exposure can be mitigated with proper handling and storage procedures. All risks of exposure would be short term and would be eliminated with the completion of sanitation activities. Compliance with the requirements of California Occupational Health and Safety Administration CalOSHA and local safety regulations during sanitation 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. During sanitation the site can be properly protected with fencing and signs to prevent accidental health hazards.

#### Bird Excluders

There is the possibility that hazardous materials (e.g., oil and gasoline) may be present depending on equipment used to install the bird excluders on the beach, but potential risks of exposure can be mitigated with proper handling and storage procedures. All risks of exposure would be short term and would be eliminated with the completion of installation. Compliance with the requirements of California Occupational Health and

Safety Administration CalOSHA and local safety regulations during installation, of the bird excluder 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. During installation the site can be properly protected with fencing and signs to prevent accidental health hazards.

#### Squawkers

There is the possibility that hazardous materials (e.g., oil and gasoline) may be present depending on equipment used to install the squawker, but potential risks of exposure can be mitigated with proper handling and storage procedures. All risks of exposure would be short term and would be eliminated with the completion of installation. Compliance with the requirements of California Occupational Health and Safety Administration CalOSHA and local safety regulations during installation, of the squawker 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.

#### Enhanced Circulation Devices

There is the possibility that hazardous materials (e.g., oil and gasoline) may be present or released during installation of enhanced circulation devices, but potential risks of exposure can be mitigated with proper handling and storage procedures. All risks of exposure would be short term and would be eliminated with the completion of installation. In addition, depending on the type of the enhanced circulation device used, some oil or gasoline may be used in the operation or maintenance of the device. 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 designed and sites can be properly protected with fencing and signs to prevent accidental health hazards.

#### Wet-Weather Structural BMPs

There is the possibility that hazardous materials (e.g., oil and gasoline) may be present during construction and installation activities, but potential risks of exposure can be mitigated with proper handling and storage procedures. All risks of exposure would be short term and would be eliminated with the completion of construction and installation activities. Compliance with the requirements of California Occupational Health and Safety Administration CalOSHA and local safety regulations during installation, operation, and maintenance of these BMPs 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.

### Non-Structural BMPs

Non-structural and structural BMPs will not 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.

**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 and wet-weather BMPs such as vegetated swales and the use of porous pavement would be placed in existing storm drains, swales and parking lots, no additional space would be necessary. Some wet-weather 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: Less than significant with mitigation incorporated

Non-structural and/or 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 would be temporary, 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 construction traffic, 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.

#### Enhanced Circulation Devices

Enhanced circulation devices could potentially impact waterborne traffic. Proper siting and location of these devices will mitigate the impacts. Additional signs and directional buoy and lines can help direct traffic away from circulation devices in the harbors.

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

Answer: Less than significant with mitigation incorporated

#### Structural BMPs

Structural BMPs, such as low-flow diversions, may affect existing parking facilities, if maintenance requires use of existing parking. Available parking in an area could be reduced 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. Small infrastructure projects, themselves, such as low flow diversions and wet-weather BMPs such as vegetated swales and the use of porous pavement would not displace parking because they would be placed in existing storm drains, swales and parking lots, no additional space would be necessary. Some wet-weather BMPs such as additional detention and infiltration basins could require space, but such BMPs are small and would not require significant space. To mitigate impacts to parking, responsible agencies can emphasize the use of non-space taking or underground BMPs such as porous pavement or underground cisterns for infiltration. .

#### Non-Structural BMPs

It is not reasonably foreseeable that non-structural BMPs would have effects on existing parking facilities, or demand for new parking.

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

Answer: Less than significant

Structural BMPs

Depending on the structural BMPs selected, 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.

Non-Structural BMPs

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

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

Answer: Less than significant

See response to "Transportation/Circulation." 13.b., and 13.c.

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

Answer: Less than significant with mitigation incorporated

It is not reasonably foreseeable that structural BMPs (except enhanced circulation BMP as discussed below) would result in alterations to waterborne, rail or air traffic.

Enhanced Circulation Devices

Enhanced circulation devices could potentially impact waterborne traffic. The potential impacts would be limited and short-term. Additional signs and directional buoys and lines can help direct traffic away from circulation devices in the harbors. Proper siting and location of these devices will mitigate the impacts.

Non-Structural BMPs

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

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

Answer: Less than significant with mitigation incorporated

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

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

**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: Less than significant with mitigation incorporated

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. In any case, 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.

**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: Less than significant with mitigation incorporated

### 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 fire 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.

**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: Less than significant with mitigation incorporated

### Structural BMPs

During construction and installation of low-flow diversions, 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. In the unlikely event that the municipalities might install facilities on a scale that could alter a park or recreational facility, the structural BMP could be designed in such a way as to be incorporated into the park or recreational facility.

### 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.

**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: Less than significant with mitigation incorporated

### Structural BMPs

Structural BMPs and infrastructure improvements could potentially impact public service requiring additional maintenance to ensure proper operation. Certain enhanced circulation devices only require annual maintenance and 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.

### 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.

**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: Less than significant with mitigation incorporated

### 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

Although the beaches are already monitored for bacterial indicators, implementation of the TMDLs will result in the need for some increased monitoring on the beaches to track compliance with the TMDLs. However, no impact on the environment would be expected from these monitoring activities. Increased trash removal, added enforcement of harbor discharge ordinances, local litter and pet waste ordinances, outreach and education, and discouragement of feral cat and bird feeding by local residents may potentially impact government services. Enlisting enforcement and clean-up volunteers may help mitigate adverse impacts associated with non-structural BMPs.

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

Answer: Less than significant with mitigation incorporated

#### 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.

Reasonable 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.

Operation of enhanced circulation devices may require fossil fuels and electricity. Enhanced circulation devices typically are intended to run continuously. For example, one device consumes 3.5 amps at 110 VAC. The energy consumption for operating enhanced circulation can be mitigated with the installation of solar panels or by designing a system which does not run continuously, but only during critical parts of the day or tide.

#### Non-Structural BMPs

Increases 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 non-fuel consuming enforcement vehicles like bicycles.

**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: Less than significant with mitigation incorporated

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: Less than 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.

**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. Structural BMPs can be manually inspected and maintained without any communications system required. 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 lines. 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

Reasonably foreseeable methods of compliance may cause a potentially significant impact upon sewer utilities. Low-flow diversions involve the diversion of dry weather flows in storm drains to local Publicly Owned Treatment Works (POTWs). Diversions are retrofitted in existing storm drains discharging into harbor waters. High-flow bypasses are also installed along with the diversions. These bypasses can mitigate and prevent impacts to flooding. 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 POTW treatment capacity.

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

The Regional Board is prohibited from specifying the exact means of compliance. Responsible parties can choose to implement compliance strategies that result in less or no impact on sewer utilities and stormwater drainage.

#### 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,

**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: Less than significant with mitigation incorporated

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 stormwater runoff. The alterations and/or additions to stormwater 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 responses to the questions.

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.

**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: Less than significant with mitigation incorporated

Structural BMPs

The installation of structural BMPs may generate construction debris. Additionally, installed structural BMPs 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. 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.

Non-Structural BMPs

Most non-structural BMPs will not result in a need for new systems, or substantial alterations to the solid waste and disposal systems because none of the BMPs would introduce any physical effects that could impact this characteristic.

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

Answer: Less than significant with mitigation incorporated

### Structural BMPs

As discussed in Item 1, 2, 3, and 13, the installation of structural BMPs could have an effect on earth, air, water, and transportation/circulation. Structural BMPs could increase the risk of unstable earth conditions, which could pose a physical risk to persons in the area should a slope fail. Construction, installation, and maintenance of structural BMPs could increase the amount of pollutants the air, which could have an effect on health. Some structural BMPs such as detention and infiltration basins could potentially result in additional habitat and/or standing water which can provide habitat for mosquitoes which can be carriers of disease. Maintenance of structural BMPs could also increase traffic, which could potentially decrease the safety of pedestrians. Additionally, heavy machinery and materials that may be used during construction and installation of structural BMP could pose physical and/or chemical risks to human health.

Potential impacts to earth could be avoided or mitigated through proper geotechnical investigations, siting, design, and ground and groundwater level monitoring to ensure that structural BMPs are not employed in areas subject to unstable soil conditions as discussed in item 1. Potential health hazards attributed to installation and maintenance of structural BMPs can be mitigated by use of OSHA construction and maintenance health and safety guidelines. Potential health hazards attributed to BMP maintenance can be mitigated through OSHA industrial hygiene guidelines. Installation of non vector-supporting structural BMPs can help mitigate vector production from standing water. Structural BMPs can be designed and sites can be properly protected to prevent accidental health hazards as well as prevent vector production. Vector control agencies may also be employed as another source of mitigation. Structural BMPs 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. Potential impacts to transportation/circulation can be reduced or eliminated if maintenance activities are 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. Appropriate planning, design, siting, and implementation can reduce or eliminate potential health hazards due to the installation of structural BMPs.

### 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.

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

Answer: Less than significant with mitigation incorporated

See response to 17. Human Health. a.

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

Answer: Less than significant with mitigation incorporated

#### Low-flow Diversions

Construction of low-flow diversions could potentially result in a temporary impairment of scenic vista or view open to the public and create 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.

#### Beach Sand Replacement

Temporary impacts to aesthetics could occur during the replacement of beach sand. This replacement impact would be localized and short-term, lasting during the normal working hours at specific locations. Excess excavated material shall be removed from the site immediately. After construction, the scenic vista or view would return to the condition it was prior to the construction.

#### Resurfacing (Pebbling) Beaches

Beach sand replacement with gravel or other larger particle-sized rock could cause the obstruction of scenic vista or view open to the public during excavation and replacement. During construction, BMPs like screening and landscaping can help mitigate aesthetic impacts during excavation and replacement. In addition, the visitors and swimmers may prefer seeing beach sand rather than large sized gravel or rocks. Responsible agencies can take aesthetic value and public preferences into account in terms of rock type (gravel, pebbles) and color into account when planning a beach resurfacing.

#### Beach Sand Sanitation

Temporary impacts to aesthetics could occur during the sanitation of beach sand. This sanitation impact would be localized and short-term, lasting for the duration of sanitation at specific locations. Excess excavated material shall be removed from the site immediately. Thermal sanitation involves the use of steam generators and other equipment which can be portable. After thermal sanitation, the scenic vista or view would return to the condition it was prior to the construction.

#### Bird Excluders

Construction of bird excluders could potentially result in a temporary impairment of scenic vista or view open to the public and create aesthetically offensive site open to the public view. Construction BMPs like screening and landscaping can help mitigate aesthetic impacts during construction of the bird excluder. Bird excluders are especially designed to discourage bird habitation on the beach and would essentially impact the



visual characteristic of the area in which they will be located. The use of thinner steel poles and lines may help mitigate the potential aesthetic impact.

#### Squawkers

Temporary impacts to aesthetics can occur during the installation of squawkers. Proper location and siting can mitigate aesthetical impacts associated with squawkers. Squawkers can be redesigned to simulate and blend into the nearby surroundings mitigating potential aesthetic impacts.

#### Enhanced Circulation Devices

Enhanced circulation in harbors could potentially result in impairments of scenic vista or view open to the public and create an aesthetically offensive site open to the public view. Enhanced circulation devices can be redesigned to simulate the appearance of rocks and other natural pieces of scenery. Strategic placement of enhanced circulation devices may also help mitigate the aesthetic impact of the devices.

#### Wet-Weather Structural BMPs

Construction of wet-weather structural BMPs could potentially result in a temporary impairment of scenic vista or view open to the public and create aesthetically offensive site open to the public view. 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 should not be stored on public streets. Excess excavated material should be removed from the site immediately. Once constructed, densely vegetated biofiltration systems may actually improve the aesthetic appeal of highly urbanized, industrial, and agricultural locations.

#### 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.

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

Answer: Less than significant with mitigation incorporated

See response to 18. Aesthetics. a.

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

Answer: Less than significant with mitigation incorporated

### Structural BMPs

During construction and installation of structural BMPs, beaches or other recreational areas could be temporarily affected. Construction activities could potentially be performed near or within a beach 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 or recreational area, the structural BMPs could be designed in such a way as to be incorporated into the beach 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.

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

Answer: No impact

Non-structural and structural BMPs would involve no change to the physical environment either directly or indirectly and would have no impact on cultural resources.

### **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: Less than significant with mitigation incorporated

Taken all together, the potential impacts of the project will not cause a significant degradation to the environment. 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.

**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: Less than significant with mitigation incorporated

Each compliance measure is expected to have nominal environmental impacts if performed properly. However, this TMDL will require many individual projects to comply region-wide, which may have potential program-level, and project-level cumulative effects upon the region. Mitigation measures are available for most of these impacts.

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

Answer: Less than significant with mitigation incorporated

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.

## **7. OTHER ENVIRONMENTAL CONSIDERATIONS**

This section evaluates several other environmental considerations of reasonably foreseeable methods of complying with the bacteria 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 or 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 bacteria 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 are no other TMDLs adopted for Harbor Beaches of Ventura County. Nearby 303(d) list impairments for which TMDLs will likely be developed in the future include: Channel Islands Harbor-lead and zinc; Ventura Harbor, Ventura Keys-coliform; and Ventura Marina Jetties-DDT and PCBs. When other TMDLs are developed in the future, the programmatic cumulative impacts will be analyzed in the SED documents for those TMDLs. None of the implementation approaches for other TMDLs should disrupt any structural BMPs as applied for bacteria. In fact, potential implementation strategies discussed in this SED for the bacteria TMDL may contribute to the implementation of other TMDLs near the Harbor Beaches of Ventura County in the future. Likewise, implementation of other TMDLs near the Harbor Beaches of Ventura County, such as the Ventura Keys coliform, may contribute to the implementation of this bacteria TMDL.

### **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 bacteria 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 bacteria 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. Because these installations, related emissions are temporary, 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 bacteria TMDL involves installation activities occurring simultaneously at a number of surface sites in the bacteria 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 including are available as discussed in the checklist. In addition, the fact that structural BMPs 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 bacteria 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 bacteria 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 Harbor Beaches of Ventura County bacteria TMDL area,
- 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 could indirectly 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 bacteria 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 bacteria 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 bacteria 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 Ventura is governed by the County of Ventura 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 agencies within the bacteria 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 THE COMPLIANCE WITH THE PROPOSED TMDL TO INDUCE GROWTH.**

### Direct Growth Inducement

Because the reasonably foreseeable methods of compliance with the proposed bacteria TMDL focus on non-structural and structural BMPs which are located throughout the bacteria TMDL area, the bacteria 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 of structural BMPs to comply with the proposed TMDL would occur over a four and five year period for dry-weather at the Channel Islands Harbor Beaches and Harbor Cove Beach, respectively, and a ten year period for all three beaches. 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. 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 structural BMPs 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. SCAG estimates that the SCAG region had over 405,000 unemployed persons (City of Los Angeles, 2005).

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 bacteria 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 bacterial impairment at Harbor Beaches of



Ventura County (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 bacteria hazards at beaches, parks, 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 bacteria TMDL against the unavoidable environmental risks in determining whether to recommend that the Regional Board approve 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 bacteria 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 bacteria hazards and increasing the aesthetic experience at beaches. 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 and the 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 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. These mitigation measures in most cases are routine measures to ease the expected and routine impacts attendant with ordinary minor construction projects and infrastructure maintenance in an urbanized environment. Routine construction and maintenance of power lines, sewers, streets, etc. are regular and expected incidents of living in urban environments such as the Ventura County. Sewer and power line maintenance, street sweeping, traffic alterations, and environmental impacts from them already occur and are expected. This project will foreseeably require many more such projects, but their individual impacts are not expected to be extraordinary in the magnitude or severity of impacts. Specific projects, that may have a significant impact, would therefore be subject to a separate environmental review. The lead agency for subsequent projects would be obligated to mitigate any impacts they identify, for example by mitigating potential flooding impacts by designing the BMPs with adequate margins of safety. Notably, in almost all circumstances, where unavoidable or unmitigable 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, 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 storm water 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 at Harbor Beaches of Ventura County, but it may result in short-term localized significant adverse impacts to the environment as a variety of small construction projects may be undertaken at many places throughout the watershed over a period of 10 years. 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 Harbor Beaches of Ventura County (Kiddle Beach, Hobie Beach, and Harbor Cove Beach) Bacteria 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 (Wat. C. § 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. (14 Cal. Code Regs., § 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 those local agencies, the necessity of implementing the federally required TMDL and removing the bacterial impairment from the Harbor Beaches of Ventura County (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:

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Deborah J. Smith  
Interim Executive Officer

## 10. DOCUMENT PREPARERS

This document was prepared by Dr. Kang-Shi Wang, Man Voong, and Dr. L.B. Nye of the Los Angeles Regional Water Quality Control Board.

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