Substitute Environmental Document

McGrath Lake PCBs, Organochlorine Pesticides and Sediment Toxicity TMDL

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

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EXECUTIVE SUMMARY

The California Regional Water Quality Control Board – Los Angeles Region is the Lead Agency for evaluating the environmental impacts of the proposed Total Maximum Daily Load (TMDL) for PCBs, organochlorine (OC) pesticides and sediment toxicity in McGrath Lake. This Substitute Environmental Document (SED) analyzes environmental impacts that may occur from reasonably foreseeable methods of implementing the proposed TMDL. This SED is based on the proposed TMDL that will be considered by the California Regional Water Quality Control - Los Angeles Region (Regional Board) and, if approved by the Regional Board, implemented through an amendment to the *Water Quality Control Plan - Los Angeles Region* (Basin Plan). The proposed TMDL is described in the Staff Report, Tentative Resolution and Tentative Basin Plan Amendment available on the Regional Board website. This SED analyzes foreseeable methods of compliance with the proposed 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 OC Pesticides PCBs and sediment toxicity TMDL as a Basin Plan Amendment. Approval of the SED is separate from approval of a specific project alternative or a component of an alternative. Approval of the SED refers to the process of: (1) addressing comments, (2) confirming that the Regional Board considered the information in the SED, and (3) affirming that the SED reflects independent judgment and analysis by the Regional Board (Section 10590 15090 of CEQA Guidelines (Title 14 of CCR)).

McGrath Lake is impaired for chlordane, DDT, and dieldrin (OC pesticides) in sediment, PCBs in sediment, and sediment toxicity. The exposure of the McGrath Lake ecosystem to chlordane, DDT, dieldrin, and PCBs has impaired the aquatic life (EST, WILD, RARE, WET) and recreation (REC 1, REC 2, COMM) beneficial uses of the lake. As a result, McGrath Lake was placed on the Clean Water Act 303(d) list of impaired waterbodies in 1998, 2002, and 2006.

A TMDL for PCBs, OC pesticides and sediment toxicity is required under section 303(d) of the Clean Water Act and mandated by a Consent Decree between Heal the Bay et al. and the United States Environmental Protection Agency (US EPA). This consent decree requires that all TMDLs for the Los Angeles Region be adopted within 13 years, and prescribes schedules for certain TMDLs. The objective of the TMDL for PCBs, OC pesticides and sediment toxicity is to restore the beneficial uses of McGrath Lake that are currently impaired by PCBs, pesticides and sediment toxicity, in accordance with Clean Water Act section 303(d).

The TMDL for PCBs, OC pesticides and sediment toxicity establishes load allocations (LAs) for non-point sources and provides for a 14 year implementation schedule. Load allocations are assigned to agriculture discharges to the lake and to the lake sediments.

This SED analyzes three Program Alternatives and two types of Implementation Alternatives that encompass actions within the jurisdiction of the Regional Board and implementing responsible parties. A No Project Alternative is analyzed to allow decision

makers to compare the impacts of approving a proposed alternative and its components compared with the impacts of not approving the proposed alternative. The SED analyzes the potential environmental impacts in accordance with significance criteria widely accepted by responsible parties in the McGrath Lake watershed for CEQA review. The TMDL does not specify types of projects, specific locations, or mitigation measures for those projects. Projects are specified, designed, constructed, operated, and mitigated for by the TMDL responsible parties. Consequently, this environmental analysis is structured in accordance with guidelines for a Tier 1 Program SED rather than a Tier 2 Project SED.

Approval of projects (i.e., project alternatives or components of project alternatives) refers to the decision of responsible parties to select and carry out an alternative or a component of an alternative. The components assessed at a project level have specific locations that will be determined by responsible parties implementing this TMDL. The project-level components may be subject to additional environmental review by responsible parties.

The SED finds that environmental impacts from the proposed TMDL are related to agricultural discharge treatment options and lake management projects. The types of projects include best management practices (BMPs), regional treatment systems, agriculture drainage diversion, and sediment capping/dredging projects. The SED identifies mitigation methods for impacts with potentially significant effects. The SED can be used by implementing responsible parties to expedite any additional environmental analysis of specific projects required to comply with the proposed TMDL. To the extent that there are unavoidable adverse environmental impacts, the benefits of this proposed TMDL outweigh these impacts.

As discussed in this SED, California Water Code section 13360 prohibits the Regional Board from specifying the manner of compliance with the TMDL. Methods of compliance and selection of specific BMPs and associated mitigation measures are the responsibility of the responsible parties for implementing the TMDL for PCBs, pesticides and sediment toxicity in McGrath Lake.

The alternatives analysis section of this SED discusses the program level alternatives for the TMDL for PCBs, pesticides and sediment toxicity in McGrath Lake and presents implementation alternatives to achieve compliance with the final load allocations. Some implementation alternatives are discussed in the SED as well. Site specific environmental impacts and the CEQA Checklist and Determination with in-depth analysis of each resource area, as well as other environmental considerations are also discussed.

PROJECT PURPOSE

The Regional Board proposes an amendment to the Basin Plan to incorporate a TMDL to reduce PCBs, pesticides and sediment toxicity in McGrath Lake. As further set forth herein, this project's purpose is twofold:

- To adopt a regulation that will guide Regional Board permitting, enforcement, and other actions to require responsible parties to take appropriate measures to restore and maintain applicable water quality standards pertaining to PCBs, pesticides and sediment toxicity in McGrath Lake.

- To establish a TMDL for McGrath Lake in compliance with the requirements of CWA section 303(d) in a manner timely enough to avert federal intervention in state water quality planning, which would occur as a result of United States Environmental Protection Agency's obligations under section 303(d) and under a federal consent decree that would require USEPA to establish these TMDLs if the State does not do so.

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

LEGAL BACKGROUND

The TMDL for PCBs, pesticides and sediment toxicity in McGrath Lake is designed to attain the water and sediment quality standards related impairments in this Lake. The TMDL is prepared pursuant to state and federal requirements to preserve and enhance water quality in McGrath Lake. The adoption of a TMDL is not discretionary and is compelled both by section 303(d) of the federal Clean Water Act (33 USC 1313(d)) and by a federal consent decree, Heal the Bay Inc., et al. v. Browner, et al. C 98-4825 SBA (United States District Court, Northern District of California, 1999) approved on March 22, 1999.

The Basin Plan sets water quality standards for surface waters and ground waters in the region. These standards are comprised of designated beneficial uses (both existing and potential) for surface and ground water, and numeric and narrative objectives or criteria necessary to support beneficial uses, and the state's antidegradation policy. Water quality standards are mandated for all waterbodies within the state under the Porter-Cologne Water Quality Act, and for waters of the United States, by the federal Clean Water Act. In addition, the Basin Plan describes implementation programs to protect all waters in the region. The Basin Plan guides implementation of the Porter-Cologne Water Quality Control Act (commencing at Section 13000 of the "California Water Code") and serves as the State Water Quality Control Plan applicable to McGrath Lake.

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. Waters identified as impaired are compiled and submitted biennially to USEPA as the state's "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 identified water, whether "listed" or not. Those TMDLs, the waters identified as impaired, and the 303(d) List, must be submitted to United States Environmental Protection Agency (USEPA) for approval under section 303(d)(2). Under the plain language of the CWA and as confirmed in *Cities of Arcadia v. SWRCB* (2006) 135 Cal.App.4th 1392, 1418, the CWA neither prohibits a Regional Board from identifying a water body as impaired and establishing a TMDL for it at essentially the same time, nor indicates that formal listing is a prerequisite to establishing a TMDL. In any event, the CWA requires TMDLs be established for all waters, impaired or not. While section 303(d)(1)(C) and (d)(1)(D) together require TMDLs for all waters identified as impaired, section 303(d)(3) requires TMDLs for all other waters, that is, those that have not been identified as impaired. Section 303(d)(3) TMDLs, however, are not subject to approval by USEPA. From California's perspective, no practical distinction exists between (d)(1) and (d)(3) TMDLs except the requirement for USEPA approval of the former under subdivision (d)(2). All TMDLs are ultimately memorialized in the basin plan, and are subject to implementation pursuant to California Water Code section 13242.

Section 303(d)(1)(C) requires TMDLs to be established at a level necessary to attain the applicable 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 and to non-point 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 an impaired reach or to an unimpaired upstream tributary.

As referenced above, 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 and TMDLs for such waters. If any identification or TMDL is disapproved, USEPA must establish its own TMDL or conduct his own identification.

The consent decree requires that all TMDLs for the Los Angeles Region, for 1998 303(d) listed waters, be adopted within 13 years. The consent decree also prescribed schedules for certain TMDLs. According to the consent decree, the TMDL for PCBs, pesticides and sediment toxicity in McGrath Lake must be approved or established by United States Environmental Protection Agency (USEPA) by March 2012.

The California Resources Agency has approved the Regional Water Boards' basin planning process as a "certified regulatory program" (Public Resources Code section 21080.5) that adequately satisfies the California Environmental Quality Act (CEQA) (Public Resources Code, Section 21000 et seq) requirements for preparing environmental documents. (14 Cal. Code Regs. § 15251(g); 23 Cal. Code Regs. § 3782.) As such, the Regional Water Board's basin planning documents together with an

Environmental Checklist are the "substitute documents" that contain the required environmental documentation under CEQA. (23 Cal Code Regs. § 3777.)

These Substitute Environmental Documents, including the accompanying tentative resolution, staff report and basin plan amendment for adoption by the Regional Board are being released for public comment. These documents along with any subsequent responses to comments prepared for this TMDL, fulfill the requirements of Public Resources Code section 21080.5 and 23 Cal Code Regulations §3777.

WATER QUALITY STANDARDS APPLICABLE TO THE WATERS SUBJECT TO THE TMDLS

CWA section 303(d)(1)(C) requires TMDLs to be established at a level necessary to implement the "applicable water quality standards". In this case, the applicable water quality standards include numerous designated beneficial uses and water quality objectives identified the Basin Plan for the Los Angeles Regional Board (Basin Plan). The Basin Plan (1994) defines 7 existing (E) or potential (P) beneficial uses for McGrath Lake (Table 4). McGrath Lake has existing beneficial uses to protect aquatic life that use the estuarine, wildlife, and wetland habitat (EST, WILD, and WET). The RARE use designation protects rare, threatened or endangered species that may utilize the lake and adjacent wetlands for foraging or nesting habitat. There are also potential beneficial uses associated with human use of the lake for commercial and sport fishing (COMM). The recreational use for water contact recreation (REC1) and non-contact water recreation (REC2) applies as an existing use for lake, but use is limited due to limited public access to the lake. Discharges of PCBs and pesticides to these waterbodies may impair beneficial uses associated with aquatic life (EST, WILD, RARE, and WET), human use of these resources (COMM), and recreational uses (REC1 and REC2).

CWC section 13241, the statute dictating the process to establish water quality objectives, includes among factors to consider in setting the level of any objective "the probable future beneficial uses of water". Over the objections of the Regional Board, the trial court, in the Los Angeles River and Ballona Creek Metals TMDLs (*Cities of Bellflower et al v. LARWQCB*, Los Angeles Superior Court # BS101732), ruled that the term "probable future beneficial uses" is not concurrent with the term "potential uses", as the Regional Board had argued. Instead, the court ruled that probable future uses are a subset of all potential uses. Whether or not the Regional Board had legal authority (as per the court's ruling) to designate only the subset "probable future uses" instead of the universe of "potential uses", the Regional Board has not done so. The only uses in the basin plan that are deemed attainable though not presently existing are designated as potential uses. These potential uses, having been approved by USEPA under CWA section 303(c), are the applicable state water quality standards.

McGrath Lake exceeds water quality objectives for PCBs, DDT, chlordane, dieldrin, and toxicity, all in sediment. McGrath Lake is included on the California 303(d) list of impaired waterbodies (LARWQCB, 1998, 2002, and 2006). The Clean Water Act requires that TMDLs be developed to restore the impaired waterbodies to their full beneficial uses.

WATER QUALITY OBJECTIVES

As stated in the Basin Plan, water quality objectives (WQOs) are intended to protect the public health and welfare and to maintain or enhance water quality in relation to the designated existing and potential beneficial uses of the water. The Basin Plan specifies both narrative and numeric water quality objectives. The following narrative water quality objectives are the most pertinent to this TMDL. These narrative WQOs may be applied to both the water column and the sediments:

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

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

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

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

USEPA established numeric water quality objectives for several pollutants addressed in this TMDL in the California Toxics Rule (CTR). The CTR establishes numeric aquatic life criteria for 23 priority toxic pollutants and numeric human health criteria for 92 priority toxic pollutants. These criteria are established to protect human health and the environment and are applicable to inland surface waters, enclosed bays and estuaries. The Regional Board evaluated sediment contaminants relative to sediment quality guidelines (SQGs). These SQGs are based on empirical data compiled from numerous field and laboratory studies.

PROBLEM IDENTIFICATION

McGrath Lake is impaired for chlordane, DDT, and dieldrin (OC pesticides) in sediment, PCBs in sediment, and sediment toxicity. These toxic organic chemicals are all persistent in the environment, have low water solubility, and are highly lipophilic. Thus, they share the characteristics of binding to soil particles, being stored in the fat tissue of exposed organisms, and creating long term environmental impairments. Because these chemicals become bound to soil, they are easily transported with runoff to surface waterbodies and expose aquatic organisms to their toxic effects. Moreover, all of these chemicals bioaccumulate as they move through the food chain, thereby not only spreading throughout the food chain, but increasing exposure as well. Finally, sediment toxicity has been observed at McGrath Lake, the toxicity was found to be due to the pesticides and PCBs. The exposure of the McGrath Lake ecosystem to chlordane, DDT, dieldrin, and PCBs has impaired the aquatic life (EST, WILD, RARE, WET) and recreation (REC 1, REC 2, COMM) beneficial uses of the lake. As a result, McGrath Lake was placed on the Clean Water Act 303(d) list of impaired waterbodies in 1998, 2002, and 2006.

ALTERNATIVES ANALYSIS

According to CEQA Guidelines section 15126.6:

> "An EIR shall describe a range of reasonable alternatives to the proposed project, or to the location of the project, that could feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation."

Under the regulation, the alternatives to be analyzed are limited to those that are feasible, would accomplish most of the basic objectives of the project, and would avoid or substantially lessen any of the significant effects of the project. "'Feasible means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors." (14 Cal. Code Regs. §15364.)

Notably, the purpose of the alternatives analysis is to ascertain whether alternatives exist that offer substantial environmental advantages over the project proposal….; and (2) may be 'feasibly accomplished in a successful manner' considering the economic, environmental, social and technological factors involved. (Guide to CEQA, Remy, Thomas, Moose, & Manley, 10th Ed. (1999), p. 432, citing, *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 566.)

DESCRIPTION OF ALTERNATIVES

In this alternatives analysis, the Regional Board has evaluated three potential program-level alternatives, set forth individually below. This analysis concludes that Alternatives 2 and 3 are not feasible, would not achieve the project's purposes, or would not result in less significant impacts than the project as proposed. The program alternatives include:

1) The TMDL as it is proposed for Regional Board adoption;

2) A TMDL established by the US EPA;

3) A No Program Alternative in which a TMDL is not implemented.

While a no-program alternative is unlawful, because a TMDL is required by Section 303(d) of the Clean Water Act and a federal consent decree, this alternative is analyzed to allow decision makers to compare the impacts of approving a proposed alternative and its components with the impacts of not approving a proposed alternative.

The substitute documents do not analyze a "partial" TMDL; for example, a TMDL which would achieve only 70% or only an 80% of the required reduction in target pollutants. This sort of alternative was considered and rejected because, to the extent that significant adverse environmental impacts would be created by compliance with this proposed TMDL, and to the extent that a "partial" TMDL may, in fact, have fewer of

those 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 target pollutants would not be established at a level necessary to implement the applicable water quality standards.

The components assessed at a program level generally are program elements that would be implemented as part of the 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 responsible parties implementing this TMDL. The specifics of the many projects which would make up a program alternative are discussed in the substitute environmental documents and include BMPs, regional treatment systems, agriculture drainage diversion, and sediment capping/dredging projects that are reasonably foreseeable to be implemented under the TMDL program alternatives. The project-level components will be subject to additional future environmental review, including review by responsible parties.

PROGRAM ALTERNATIVES

ALTERNATIVE 1 - THE TMDL AS IT IS PROPOSED FOR REGIONAL BOARD ADOPTION

This program alternative is based on the TMDL that is presently proposed for Regional Board consideration. The proposed TMDL focuses on the reduction of PCBs, pesticides, and sediment toxicity in McGrath Lake.

The TMDL LAs are established through an amendment to the Basin Plan. Load allocations are assigned to both non-point source discharges to the lake and internal sources from the lake sediments. This alternative provides a program for addressing the adverse impacts of PCBs, pesticides, and sediment toxicity through progressive controls in discharges to McGrath Lake through a 14 year schedule. This schedule is both reasonable and as short as practicable.

POTENTIAL ENVIRONMENTAL IMPACTS

Potential environmental impacts associated with this alternative are related to the implementation of LAs assigned to responsible parties. LAs for non-point sources will be implemented through two primary federal statues, Section 319 of the Clean Water Act of 1987 and Section 6217 of the Coastal Zone Act Reauthorization Amendments of 1990, and through provisions in the California Water Code, such as Conditional Waivers, WDRs, or Discharge Prohibitions. In accordance with these statutes, the state assesses water quality associated with non-point source pollution and develops programs to address NPS. In 2004, the SWRCB adopted the Policy for Implementation and Enforcement of the Non-point Source Pollution Control Program, which prescribes implementation and monitoring of management practices to address non-point source pollution.

The load allocations assigned to the agriculture discharges to the lake via the Central Ditch will be implemented through a Conditional Waiver or other regulatory order. The load allocations assigned to the lake sediments will be implemented through a

Memorandum of Agreement (MOA) in accordance with the Water Quality Control Policy for Addressing Impaired Waters: Regulatory Structure and Options ("Policy"), a Cleanup and Abatement Order or other appropriate regulatory order.

During the development of the TMDL, the reasonably foreseeable means of compliance were examined. The implementation plan includes lake management strategies/lake treatment options that will be implemented directly at the lake and watershed strategies for dischargers to treat and reduce contaminant loading to the lake. Lake management strategies include sediment capping, dredging/hydraulic dredging, and monitored natural attenuation of contaminants. Watershed strategies for agricultural runoff include on-farm BMPs, regional watershed BMPs, regional treatment systems, and redirection of agriculture discharge. It is likely that a combination of implementation measures will be needed to achieve the LAs.

Potential adverse impacts to the environment stem principally from lake management strategies such as sediment capping and hydraulic dredging, on-farm BMPs, regional watershed BMPs, regional treatment systems, and redirection of agriculture discharge. Potential associated negative impacts can be avoided or mitigated by proper design, siting, and maintenance. In addition, the Regional Board determined that any significant impacts can be mitigated or that there are alternative means of compliance available.

ANALYSIS OF ALTERNATIVE 1

This alternative is reasonable and feasible. It accomplishes the project's purposes, as described in the Project Purpose section. It complies with state and federal law and the consent decree by establishing a TMDL as required by section 303(d). It also achieves the Regional Board's goal of removing impairments due to PCBs, pesticides and sediment toxicity from McGrath Lake over a reasonable implementation schedule.

ALTERNATIVE 2 – USEPA TMDL

This program alternative is based on a TMDL that would be established by the United States Environmental Protection Agency, pursuant to the consent decree. This would occur if the Regional Board fails to adopt a TMDL. Because the TMDL technical analysis would be similar to the Regional Board analysis, and because the same laws and regulations apply, it is assumed that the technical portions and LAs of this TMDL Program Alternative will be essentially the same as Program Alternative 1. In other words, any TMDL must implement the water quality objectives irrespective of which agency establishes it. However, because such a TMDL would not be implemented through a Basin Plan amendment, the LAs will be implemented directly through the conditional waiver or other order without consideration of a compliance schedule.

POTENTIAL ENVIRONMENTAL IMPACTS

Like Alternative 1, this TMDL program alternative also anticipates compliance through lake management strategies/lake treatment options that will be implemented directly at the lake and watershed strategies for dischargers to treat and reduce contaminant loading to the lake. Lake management strategies include sediment capping, dredging/hydraulic dredging, and monitored natural attenuation of contaminants. Watershed strategies for agricultural runoff include on-farm BMPs, regional watershed BMPs, regional treatment systems, and redirection of agriculture discharge.

Potential adverse impacts to the environment stem principally from lake management strategies such as sediment capping, hydraulic dredging, on-farm BMPs, regional watershed BMPs, regional treatment systems, and redirection of agriculture discharge. Potential associated negative impacts can be avoided or mitigated by proper design, siting, and maintenance. In addition, the Regional Board determined that any significant impacts can be mitigated or that there are alternative means of compliance available.

ANALYSIS OF ALTERNATIVE 2

Alternative 2 assumes the Regional Board would abdicate its responsibility under section CWA section 303(d), as delegated to it by CWC section 13160. This alternative does not achieve the project's purpose that the Regional Board comply with 303(d) to prevent federal assumption of water quality planning in California.

Further, if USEPA established the TMDL, any adverse impacts would be more significant, not less. The same LAs will need to be met and the same technological choices will be available under both this alternative, and Alternative 1. Alternative 1 will allow a measured implementation plan, resulting in full compliance in 14 years. Alternative 2, in contrast, will require compliance at the time of permit or waiver renewal. 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, temporal distribution of compliance measures resulting in less concentration of 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.

ALTERNATIVE 3 – NO PROGRAM ALTERNATIVE

This program alternative assumes that neither the USEPA nor the Regional Board implements a TMDL. While responsible parties could implement BMPs on a discretionary basis, this CEQA analysis is based on the assumption that no additional BMPs would be implemented in addition to those that are presently in place. However, the No Project TMDL is contrary to federal and state law and a court ordered Consent Decree between citizen plaintiffs and the US Environmental Protection Agency. Therefore, the failure to implement a TMDL is unlawful. Further, the no-program alternative does not achieve any of the projects purposes, and is inconsistent with the Regional Board's mission.

POTENTIAL ENVIRONMENTAL IMPACTS

To the extent that significant adverse environmental impacts would be created by compliance with the TMDL as proposed, a no program alternative may avoid those environmental impacts associated with compliance. However, a no program alternative would have none of the environmental benefits of the TMDL as proposed, and would not achieve the goals of the CWA or the Porter-Cologne Act.

RECOMMENDED PROGRAM ALTERNATIVE

This environmental analysis finds that Program Alternative 1 is the most environmentally advantageous alternative, has the least associated significant adverse impacts, and is the only alternative that would achieve all the project purposes.

Either Alternative 1 or 2 will restore beneficial uses in McGrath Lake and attain water and sediment quality standards. As such, either TMDL Alternative 1 or 2 represents a benefit to the environment. The key environmental difference between program Alternatives 1 and 2 is the establishment of an implementation schedule. Alternative 1 contains an implementation schedule that allows compliance projects to be spread out over time to lessen potential environmental impacts. Therefore, Alternative 2 would foreseeably result in more significant impacts, not less. The key programmatic difference between Alternatives 1 and 2 is that Alternative 1 maintains state responsibility and control over water quality planning in California; Alternative 2 abdicates that responsibility to USEPA. Alternative 1 therefore meets all project purposes and is the recommended alternative.

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 responsible parties 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 responsible parties. 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 (March 18, 2009) during which the manner of compliance was discussed. Potential compliance measures include BMPs such as cover crops and sediment traps and lake management projects such as hydraulic dredging.

The components assessed at a project level have specific locations which will be determined by responsible parties. The project-level components will be subject to additional future environmental review, including review by responsible parties implementing TMDL projects. This SED includes an extensive discussion of the project alternatives.

DESCRIPTION OF IMPLEMENTATION ALTERNATIVES

This section begins with a description of the lake management activities and BMPs and the type of sites where they might be placed in compliance with the TMDL for PCBs, pesticides and sediment toxicity in McGrath Lake.

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

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

Lake management activities may include projects and devices that are designed to reduce and manage toxic pollutant loading within the lake itself. This may include projects such as hydraulic dredging to remove polluted sediments. Described below are various lake management alternatives that may be implemented by responsible parties as part of TMDL compliance.

SEDIMENT CAPPING

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

DREDGING/HYDRAULIC DREDGING

Dredging is the removal of accumulated sediments from the lake bottom. In the case of McGrath Lake, the objective would be to remove the sediments that are contaminated with OC pesticides and PCBs. Therefore, it would be necessary to dredge to a depth that would ensure the removal of all contaminated sediments. A method of sediment removal from lakes is hydraulic dredging. A hydraulic dredge floats on the water and is approximately the size of boat. It has a flexible pipe that siphons a mix of water and sediment from the bottom of the lake. The flexible pipe is attached to a stationary pipe that extends to an off site location. The sediment that is removed from the lake bottom is pumped to a settling pond to dry prior to disposal. Hydraulic dredging does not require draining the lake or damage to the shoreline of the lake; however, it can cause damage to aquatic life, create short term turbid conditions, and low dissolved oxygen. Hydraulic dredging does require careful planning and mitigation for non-target disturbances.

MONITORED NATURAL ATTENUATION OF CONTAMINANTS

Natural attenuation encompasses the physical, chemical, and biological processes that the sediments may undergo, which over time will attenuate (i.e. reduce concentration

and bioavailability) the impacts of contamination. These are natural processes that will occur without other remediation actions. Monitoring would be required, as part of this remediation strategy, to demonstrate that contaminants are in fact attenuating and that human health and the environment are protected. A disadvantage of choosing natural attenuation as a remediation strategy is that it generally requires long periods of time to be effective. Based on current contamination levels at McGrath Lake, it is estimated that the average time required for natural attenuation is from 27 to 211 years depending on the contaminant.

BMP ALTERNATIVES

The LAs for agriculture discharges in this TMDL can be achieved through on-farm BMPs and regional solutions and/or other projects as outlined below. It is likely that a combination of implementation measures will be needed to achieve the LAs.

ON-FARM BMPS

On-farm BMPs would focus on individual growers implementing BMPs on individual parcels throughout the watershed. Effective BMPs to reduce pollutant loading would focus on sediment and erosion management practices because as discussed in Section 2 of the document, both OC pesticides and PCBs strongly bind to sediment particles that are transported with runoff. Irrigation management practices are also important to reduce and/or eliminate dry weather runoff from fields. Listed below are some practices that may be implemented by individual growers.

- ☐ Avoid bare fields by planting cover crops or leaving plant debris in field
- ☐ Minimize road erosion by grading or using gravel on roads
- ☐ Capture and reuse irrigation/stormwater runoff on site
- ☐ Use sediment traps at the end of fields to capture sediment from runoff
- ☐ Mitigate runoff before it leaves property with grassed swales and filter strips
- ☐ Conduct tests of irrigation systems to ensure efficiency and uniformity
- ☐ Inspect irrigation systems for breaks and leaks
- ☐ Divert water from non-cropped areas
- ☐ Use current weather information to determine irrigation requirements
- ☐ Stop irrigation if runoff occurs

REGIONAL SUB-WATERSHED BMPS

Regional watershed BMPs would be similar to on-farm BMPs, but they would be designed and implemented on a larger scale to address runoff from multiple parcels. For example, the Central Ditch is the largest drainage ditch in the sub-watershed. If the Central Ditch was redesigned as a vegetative treatment ditch, it would be acting as a regional BMP as well as continuing to convey runoff.

REGIONAL TREATMENT SYSTEM

The installation of a regional treatment system, such as a sand filter, to treat runoff prior to discharge into McGrath Lake is also a possible implementation option. A sand filter system typically contains two or more chambers. The first is the sedimentation chamber, which removes floatables and heavy sediment. The second chamber removes additional pollutants by filtering the runoff through a sand bed. Sand filters are able to effectively remove sediment (EPA, 1999). As previously discussed, OC pesticides and PCBs have a very strong binding affinity to sediment particles; therefore successfully reducing the sediment in the runoff will also reduce the pollutant load.

Additionally, the Los Angeles Regional Board is currently sponsoring research at the University of California Riverside to evaluate adsorbent materials and their ability to remove OC Pesticides from agriculture runoff. The experiments are laboratory based; variables considered in these experiments include flow rates and dissolved organic matter concentrations in the source water. The feasibility of transferring the materials to field scale projects will also be evaluated. Results of these experiments are expected by spring 2010.

REDIRECT AGRICULTURE DISCHARGE

It may be possible to redirect the agriculture discharge from the Central Ditch to a different receiving waterbody, such as the Edison Canal. The Edison Canal is a Water of the State located approximately ½ mile south of McGrath Lake and discharges to the Pacific Ocean. This implementation option would address the TMDL and achieve the Central Ditch load allocations by eliminating the agriculture discharge into McGrath Lake. The agriculture discharge would be redirected to a waterbody that has a larger assimilative capacity and is better suited to accept the discharge. Moreover, the agriculture discharge would still be regulated by the Conditional Waiver and required to achieve the water quality benchmarks and implement BMPs. Therefore, requirements of the Conditional Waiver would protect the water quality of the new receiving waterbody.

SETTINGS, IMPACTS, AND MITIGATION

INTRODUCTION

This section presents the environmental setting, impacts, and mitigation, where applicable, for the proposed implementation alternatives evaluated in this draft SED. The implementation alternatives for achieving compliance with the TMDL for PCBs, pesticides and sediment toxicity in McGrath Lake are described in detail in this document and in the TMDL Staff Report. Each of these implementation alternatives have been independently evaluated in this draft SED. The environmental setting for the TMDL for PCBs, pesticides and sediment toxicity is discussed, as well as the installation, operation, and maintenance activities associated with the TMDL implementation alternatives. There is also a discussion of the site-specific and device-specific environmental impacts from implementing the proposed TMDL. The environmental checklist, which includes the potential negative environmental impacts of the Implementation Alternatives is also included in this section.

APPROACH TO ENVIRONMENTAL SETTING AND IMPACT ANALYSIS

Any potential environmental impacts associated with the TMDL for PCBs, pesticides and sediment toxicity in McGrath Lake depend upon the specific compliance projects selected by the responsible parties. (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 the foreseeable methods of compliance, the reasonably foreseeable feasible mitigation measures, and the reasonably foreseeable alternative means of compliance, which would avoid or reduce the identified impacts.

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 McGrath Lake and surrounding area as shown in Figure 1. This area is the geographic area for assessing impacts of the different implementation alternatives, because the discharge of pollutants generated in this area to the lake 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 parties once their mode of achieving compliance with the 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.

PROGRAM LEVEL VERSUS PROJECT-LEVEL ANALYSIS

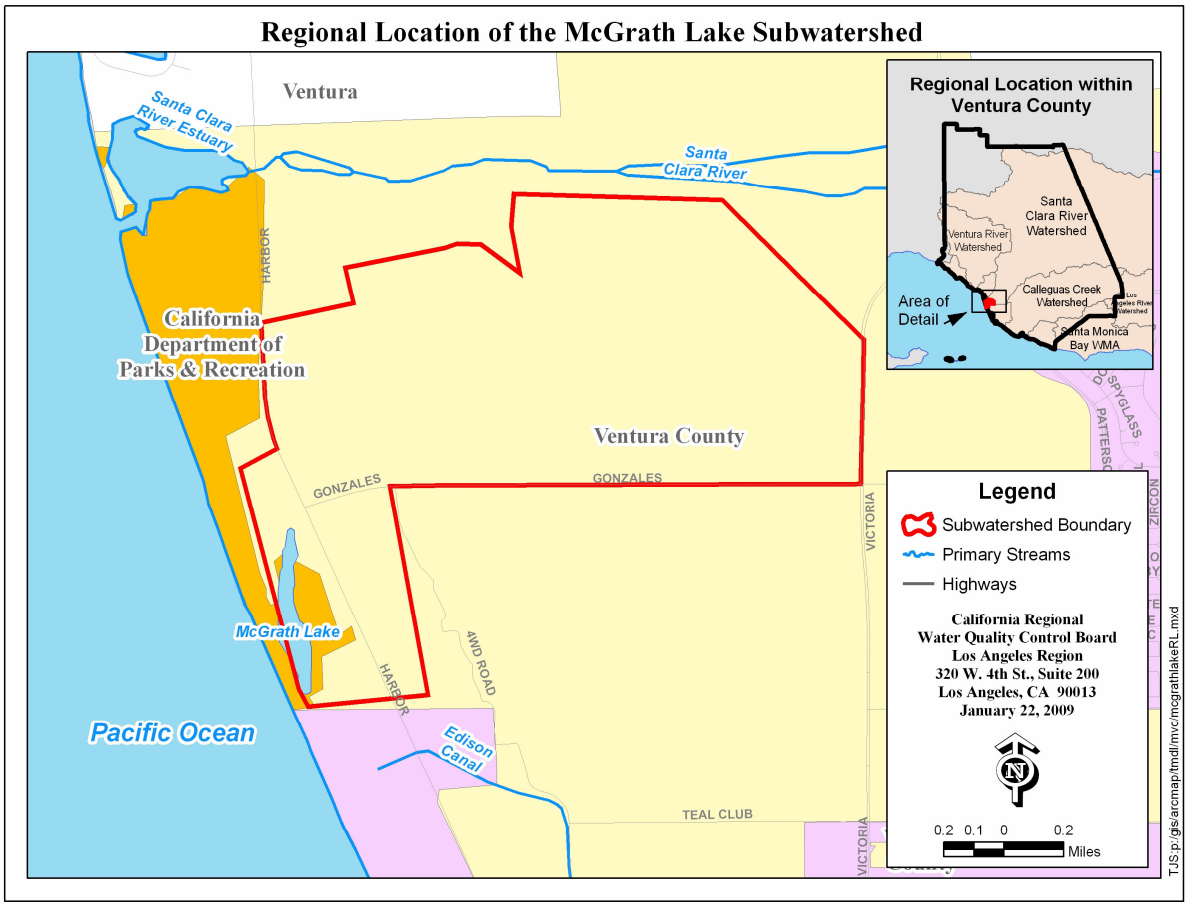
As previously discussed, the Regional Board is the lead agency for the TMDL program, while the responsible parties are the lead agencies for any and all projects implemented,

within their jurisdiction, to comply with the program. The Regional Board does not specify the actual means of compliance by which responsible parties 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 parties that will implement the water board's TMDL.

ENVIRONMENTAL SETTING

McGrath Lake is a small, back dune lake located in coastal Ventura County. Situated at the southern end of McGrath State Beach Park, the lake is south of the McGrath State Beach Campground and west of Harbor Blvd (Figure 1). Prior to urban development, back dune lakes were found throughout California, but have mostly disappeared in the southern part of the state. Much of the adjacent area to the east is used for agricultural operations (such as strawberries, celery and cut flowers). Just north of the lake is a small, active oil field and to the south is Mandalay Bay Generation Plant.

Figure 1. Regional Location of McGrath Lake Subwatershed.



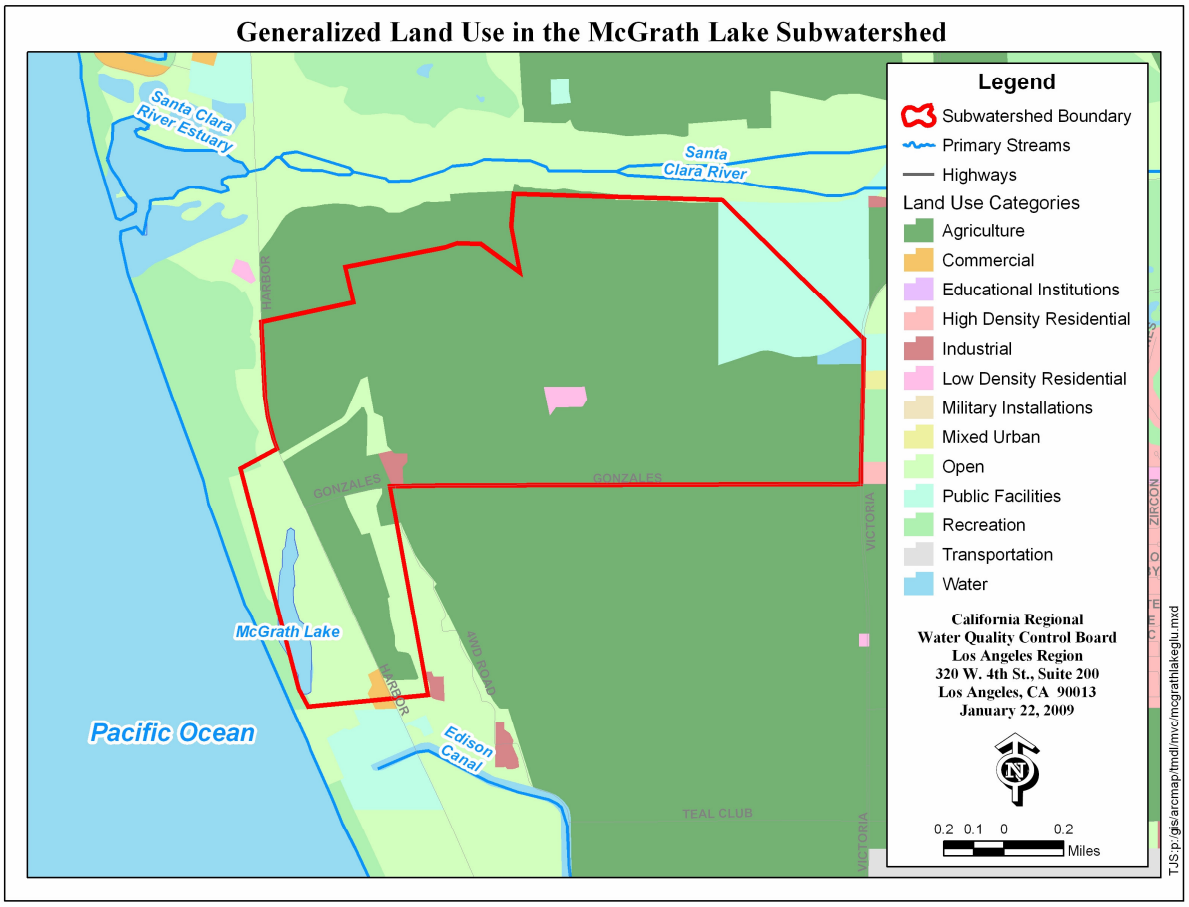
McGrath Lake is located with in the McGrath Lake sub-watershed, which is approximately 1,700 acres (URS, 2005) and part of the larger Santa Clara River watershed. The watershed is on the coastal edge of Ventura County and is in close proximity to the communities of Oxnard, Port Hueneme, Ventura and Mandalay Bay (Figure 2). The dominant land use in the McGrath Watershed is agriculture, accounting for approximately 78% of the total land use.

Table 3. Landuse in the McGrath Lake sub-watershed

Landuse	Acres	Percent of Total
Low Density Residential	6.1	0.50
Commercial	3.5	0.28
Industrial	4.7	0.38
Public Facilities	88.1	7.16
Open	153.0	12.43
Agriculture	954.5	77.59
Water	17.8	1.45
Recreation	2.6	0.21
Total for all classes	1230.3	100

Agricultural runoff and drainage dominate the inflow to the lake. The historical wetland complex that spanned the area impacted agricultural activities, so tile drains were installed in much of the watershed upstream of the lake. The drainage was then routed to the lake by a system of open air channels. During storm events, the agricultural lands and drainage canals may flood and water travels via overland flow to the lake.

Figure 2. Generalized Land Use in the McGrath Lake Subwatershed.



Prior to agricultural development within the region, the lake and surrounding area was part of the extensive wetland and floodplain complex of the Santa Clara River Delta. Tile drains installed in the region have allowed for extensive agriculture operations by greatly reducing the flooded soils and resulting wetlands. In 1958, Harbor Boulevard was built east of the lake, further disrupting the hydrological inputs to McGrath Lake. In addition to the lake serving as a repository for the agricultural drainage emanating further upstream in the watershed, the area has historically been used as a recreational feature. In 1961, ownership of most of the lake was transferred to California Department of Parks and Recreation as part of the new McGrath State Beach Park.

To keep flooding of the fields east of Harbor Boulevard to a minimum, artificial lake drainage activities have been conducted since before the state acquired the property. An artificial discharge of lake water to the state beach occurs through the use of pumps. When the surface elevation of the lake reaches 4.7 feet above sea level, pumps in the northern portion of the lake are turned on and water is transported across the dunes where it is discharged to the oceanward side of the dunes. The lake may also be drawn down in anticipation of large, incoming storm events. This practice is guaranteed in the deed transferring ownership of (most of) the lake to the state (the McGrath family or their representative were guaranteed the ability to regulate the elevation of the lake surface). Historically, during storm events that outpaced the pumps, the lake was artificially breached using large equipment. It appears this practice was last authorized in 1998 (McGrath Beach TMDL Administrative Record, p. 9-1) and is no longer utilized.

As demonstrated by the area-wide use of agricultural drains, groundwater is very shallow in the watershed. Groundwater inflows also constitute an input to the lake. Data is limited, but on at least one occasion, groundwater was noted as contributing as much as 3 inches/day to the lake elevation (URS, 2005; Pritchard and Provost, 2003). In general, the groundwater moves from southeast to northwest (KennedyJenks, 2002). Previous work indicates subsurface flows from the ocean to McGrath Lake only occur during the highest, high tides (URS, 2005). Such conditions may also occasionally result in waves overtopping the sand dunes (Anderson et al., 1998).

The lake is about 900 m long and 140 meters wide (at the broadest point; Jacobi et al, 1999). The most recent study of lake size indicates the lake covers approximately 12 acres in the southern portion of McGrath State Park (URS, 2005). The lake has a natural, mud bottom and natural edges. The average depth of McGrath Lake is just over 0.6 m and the deepest point is about 1.5 m, although these values may vary greatly due to the artificial management of the lake surface elevation. The eastern side of lake is dominated by a riparian-willow complex and the western side is sand dune (ESA, 2003). The habitat around the lake is unique and is utilized by a large number of migratory birds such as the Brown Pelican, Western Snowy Plover and the California Least Tern. The last remaining population of the endangered Ventura Marsh Milkvetch, which was once thought to be extinct, occurs just south of the lake (Federal Register, 2004).

BENEFICIAL USES OF MCGRATH LAKE

The Basin Plan (1994) defines 7 existing (E) or potential (P) beneficial uses for McGrath Lake (Table 4). McGrath Lake has existing beneficial uses to protect aquatic life that use the estuarine, wildlife, and wetland habitat (EST, WILD, and WET). The RARE use designation protects rare, threatened or endangered species that may utilize the lake and adjacent wetlands for foraging or nesting habitat. There are also potential beneficial uses associated with human use of the lake for commercial and sport fishing (COMM). The recreational use for water contact recreation (REC1) and non-contact water recreation (REC2) applies as an existing use for lake, but use is limited due to limited public access to the lake.

Table 4. Beneficial Uses of McGrath Lake (LARWQCB, 1994)

Hydro Unit No.	REC1	REC2	COMM	EST	WILD	RARE	WET[b]
403.11	E_d	E_d	P	E	E	E_e	E

E: Existing beneficial use
P: Potential beneficial use
b: Waterbodies designated as WET may have wetlands habitat associated with only a portion of the waterbody. Any regulatory action would require a detailed analysis of the area.
d: Limited public access precludes full utilization
e: One or more rare species utilize all oceans, bays, estuaries, and wetlands for foraging and/or nesting.

Discharges of PCBs and pesticides to these waterbodies may impair beneficial uses associated with aquatic life (EST, WILD, RARE, and WET), human use of these resources (COMM), and recreational uses (REC1 and REC2).

SITE SPECIFIC ENVIRONMENTAL ANALYSIS

Pursuant to Section 21159 of the Public Resources Code, an agency's environmental analysis must include an analysis of a reasonable range of specific sites. The following section includes a discussion of site-specific and device-specific environmental impacts for implementing the TMDL.

CEQA CHECKLIST AND DETERMINATION

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

	ENVIRONMENTAL CHECKLIST	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant	No Impact
	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**			
4.	**Plant Life. Will the proposal result in:**				
	a. Change in the diversity of species, or number of any species of plants (including trees, shrubs, grass, crops, microflora and aquatic plants)?	**X**			
	b. Reduction of the numbers of any unique, rare or endangered species of plants?	**X**			
	c. Introduction of new species of plants into an area, or in a barrier to the normal replenishment of existing species?	**X**			
	d. Reduction in acreage of any agricultural crop?	**X**			

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

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

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

	ENVIRONMENTAL CHECKLIST	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant	No Impact
	a. Creation of any health hazard or potential health hazard (excluding mental health)?	**X**			
	b. Exposure of people to potential health hazards?	**X**			
18.	**Aesthetics. Will the proposal result in:**				
	a. The obstruction of any scenic vista or view open to the public?	**X**			
	b. The creation of an aesthetically offensive site open to public view?	**X**			
19.	**Recreation. Will the proposal result in:**				
	a. Impact upon the quality or quantity of existing recreational opportunities?	**X**			
20.	**Archeological/Historical. Will the proposal:**				
	a. Result in the alteration of a significant archeological or historical site structure, object or building?	**X**			
21.	**Mandatory Findings of Significance**				
	a. 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. Short-term: Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals?				**X**

	ENVIRONMENTAL CHECKLIST	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant	No Impact
	c. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	**X**			
	d. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	**X**			

ENVIRONMENTAL IMPACT ANALYSIS

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

Answer: No Impact

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

Sediment Capping

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

Dredging/Hydraulic Dredging

Dredging/Hydraulic dredging involves the removal of the top layers of sediment, primarily unconsolidated silt, and would not be of the depth or scale to result in unstable conditions or changes in the geological substructures.

Monitored Natural Attenuation of Contaminants

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

BMP ALTERNATIVES

On-farm BMPs

On-farm BMPs would not be of the size or scale to result in unstable earth conditions or in changes in geologic substructures.

Regional Sub-Watershed BMPs

Regional watershed BMPs, such as vegetated ditches, would not be of the size or scale to result in unstable earth conditions or in changes in geologic substructures.

Regional Treatment System

Construction of regional treatment systems, like sand filters, would not be of the size or scale to result in unstable earth conditions or in changes in geologic substructures. Construction of treatment facilities requires relatively shallow earthwork.

Redirect Agriculture Discharge

Redirecting agriculture discharge would not be of the size or scale to result in unstable earth conditions or in changes in geologic substructures. Construction of diversion facilities requires relatively shallow earthwork.

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

Answer: Potentially Significant

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

Sediment Capping

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

Dredging/Hydraulic Dredging

Dredging/Hydraulic dredging involves the removal of the top layers of sediment, primarily unconsolidated silt, and would not be of the depth or scale to result in disruptions, compaction or overcoming of the soil. Contaminated layers of sediment and soil in the lake bottom will be removed and displaced; however, this displacement is considered a positive impact. Dewatering of dredged material could result in disruptions, compaction or overcoming of the soil. Materials should be disposed of away from areas with loose or compressible soils or areas with slopes that could destabilize from dewatered material.

Monitored Natural Attenuation of Contaminants

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

BMP ALTERNATIVES

On-farm BMPs

On-farm BMPs involve source control measures and sediment retention and would not be of the size or scale to result in disruptions, displacements, compaction, or overcoming of the soil.

Regional Sub-Watershed BMPs

Regional sub-watershed BMPs involve sediment retention or vegetated filtration and would not be of the size or scale to result in disruptions, displacements, compaction, or overcoming of the soil. Because the TMDL area has shallow groundwater and tile drains, significant infiltration, which could result in disruptions to the soil, is not expected to occur and is not a feasible implementation alternative.

Regional Treatment System

Construction of regional treatment systems, like sand filters, could potentially result in disruptions, displacements, compaction or overcoming of the soil. This impact could be mitigated to less than significant levels if devices are properly designed and sited in areas where the risk of soil disruption is minimal.

Redirect Agriculture Discharge

Redirecting agriculture discharge would not result in disruptions, displacements, compaction or overcoming of the soil because construction of diversion facilities requires relatively shallow earthwork.

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

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

Answer: Less than Significant

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

Sediment Capping

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

Dredging/Hydraulic Dredging

Dredging/hydraulic dredging requires temporary storage of the dredged material for drying prior to disposal. The area where the dredged material is contained and stored for drying may be impacted by a temporary change in topography or surface relief features. This impact would be temporary and short-term. To mitigate potential impacts, the dredged material should be properly disposed of in a timely manner.

Monitored Natural Attenuation of Contaminants

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

BMP ALTERNATIVES

On-farm BMPs

On-farm BMPs would have minimal interaction with and impact on underlying soils and structures and impacts would not be of the size or scale to result in change in topography or ground surface relief features.

Regional Sub-Watershed BMPs

Regional sub-watershed BMPs would have minimal interaction with and impact on underlying soils and structures and impacts would not be of the size or scale to result in change in topography or ground surface relief features.

Regional Treatment System

Construction of regional treatment systems, like sand filters, would have minimal interaction and impact on underlying soils and structures and impacts would not be of the size or scale to result in change in topography or ground surface relief features.

Redirect Agriculture Discharge

Redirecting agriculture discharge would have minimal interaction and impact on underlying soils and structures and impacts would not be of the size or scale to result in change in 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 feature?

Answer: Potentially Significant

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

Sediment Capping

The storage of sediment capping material prior to use may result in physical landscape changes that could cause the destruction, covering, or modification of any unique geologic or physical feature. This impact is temporary and exists only for the duration of the capping operation. Temporary staging of the capping material may help mitigate potential impacts.

Dredging/Hydraulic Dredging

The storage of dredged material may result in physical landscape changes that could cause the destruction, covering, or modification of any unique geologic or physical feature. This impact is temporary and exists only for the duration of the dredging operation. Temporary staging of the dredged material may help mitigate potential impacts of dredging.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not expected to result in the destruction, covering or modification of any unique geologic or physical feature.

BMP ALTERNATIVES

On-farm BMPs

On-farm BMPs are not of the size or scale to result in the destruction, covering or modification of any unique geologic or physical feature.

Regional Sub-Watershed BMPs

Regional sub-watershed BMPs would not be of the size or scale to result in the destruction, covering or modification of any unique geologic or physical feature.

Regional Treatment System

Construction of regional treatment systems, like sand filters, would not be of the size or scale to result in the destruction, covering or modification of any unique geologic or physical feature.

Redirect Agriculture Discharge

Redirecting agriculture discharge would have minimal interaction with and impact on underlying soils and structures and impacts would not be of the size or scale to result in the destruction, covering or modification of any unique geologic or physical feature.

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

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

Answer: Potentially Significant

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

Sediment Capping

The storage of sediment capping material prior to use may result in increase in wind or water erosion of soils. This impact is temporary and exists only for the duration of the capping operation. Temporary staging of the capping material may help mitigate potential impacts.

Dredging/Hydraulic Dredging

Hydraulic dredging is not expected to result in increased wind or water erosion of soil. The containment and storage of dredged materials may be subject to erosion processes during drying. This erosion may occur as a short-term impact and can be mitigated by measures to minimize offsite sediment movement, such as covering dredged materials during windy or rainy conditions. Once the dredged material is dry and disposed of, potential erosion processes will cease.

Monitored Natural Attenuation of Contaminants

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

BMP ALTERNATIVES

On-farm BMPs

On-farm BMPs would not result in any increase in wind or water erosion of soils, either on or off the site. Furthermore, on-farm BMPs generally decrease wind or water erosion of soils, which is considered a positive impact.

Regional Sub-Watershed BMPs

Regional sub-watershed BMPs would not result in any increase in wind or water erosion of soils, either on or off the site. Furthermore, regional BMPs generally decrease wind or water erosion of soils, which is considered a positive impact.

Regional Treatment System

Sand and media filters consist of coarser grade sediment that is less likely to be susceptible to erosion than finer grained material or uncovered soils. Construction of regional treatment systems, like sand filters, could result in erosion of soils onsite. Construction plans should minimize clearing and grading activities and phase construction to limit soil exposure, stabilize exposed soils immediately, protect steep slopes and cuts, and install sediment controls (USEPA, 2005).

Redirect Agriculture Discharge

Construction of pipes or trenches to redirect agriculture discharge could result in an increase in wind or water erosion of soils, either on or off the site. Construction plans should minimize clearing and grading activities and phase construction to limit soil exposure, stabilize exposed soils immediately, protect steep slopes and cuts, and install sediment controls (USEPA, 2005).

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

1 Earth. f. Will the proposal result in changes in 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

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

Sediment Capping

Sediment capping will not increase lake sedimentation. There is a change in the lake bed under this implementation alternative, but it is a positive change and improves water quality in the lake. There may be increased clean sediment suspension in the lake during capping. This impact is temporary and exists only for the duration of the capping operation and this impact is generally not significant.

Dredging/Hydraulic Dredging

Dredging/hydraulic dredging will modify the lake bed by removing materials that have been deposited in the lake from years of sedimentation processes. Hydraulic dredging will not increase lake sedimentation. There is a change in the lake bed under this implementation alternative, but it is a positive change and improves the water quality in lake. There may be increased sediment resuspension in the lake; however this impact is temporary and generally not significant.

Monitored Natural Attenuation of Contaminants

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

BMP ALTERNATIVES

On-farm BMPs

On-farm BMPs would result in changes siltation, deposition or erosion, which may modify the bed of the lake, but it is a positive change and improves the lake.

Regional Sub-Watershed BMPs

Regional sub-watershed BMPs would result changes in siltation, deposition or erosion by decreasing the sediment that is discharged to the lake, which may modify the bed of the lake. However, this sediment is contaminated with legacy pollutants and preventing its discharge to the lake is a positive change that improves the lake water quality.

Regional Treatment System

Regional treatment systems may impact siltation or deposition of sand in the lake. Reduction in siltation in the lake may be considered a positive impact as these sediments are contaminated with legacy pollutants.

Redirect Agriculture Discharge

Redirecting agriculture discharge could result in changes in siltation, deposition or erosion which may modify the channel of stream or the bed of the lake. This change may be considered a positive impact as the deposition of contaminated sediments to the lake would be reduced.

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

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

It is not anticipated that reasonably foreseeable methods of lake management would be of the size or scale to result in an exposure of people or property to geological hazards such as earthquakes, landslides, mudslides, ground failure, or similar hazards.

BMP ALTERNATIVES

It is not anticipated that reasonably foreseeable methods of BMP alternatives would be of the size or scale to 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: Potentially Significant

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

Sediment Capping

Sediment capping will require the use of heavy equipment; for example, capping equipment and trucks to transport capping material. The adverse impacts to ambient air quality may result from short-term operation of the capping equipment and an increase in truck traffic for capping material transportation. These impacts are temporary and can be mitigated. Mitigation measures for increased air emissions due to increased vehicle trips or for heavy equipment due to capping operations may include, but are not limited to, the following: 1) use of construction and maintenance vehicles with lower-emission engines, 2) use of soot reduction traps or diesel particulate filters, 3) use of emulsified diesel fuel, and 4) proper maintenance of vehicles and equipment so they operate cleanly and efficiently.

Dredging/Hydraulic Dredging

Dredging/hydraulic dredging will require the use of heavy equipment; for example, the dredge itself and trucks to transport dredged material. The adverse impacts to ambient air quality may result from short-term operation of the dredge and increased in truck traffic for dredged material transportation. These impacts are temporary and can be

mitigated. Mitigation measures for increased air emissions due to increased vehicle trips or for heavy equipment due to hydraulic dredging operations may include, but are not limited to, the following: 1) use of construction and maintenance vehicles with lower-emission engines, 2) use of soot reduction traps or diesel particulate filters, 3) use of emulsified diesel fuel, and 4) proper maintenance of vehicles and equipment so they operate cleanly and efficiently.

Monitored Natural Attenuation of Contaminants

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

BMP ALTERNATIVES

On-farm BMPs

Short term and increases in traffic during the construction and installation of on-farm BMPs and long-term intermittent increases in traffic caused by ongoing maintenance of these devices (e.g., delivery of materials and maintenance activities) are potential sources of increased air pollutant emissions. Construction activities could also potentially cause re-suspension of dry sediments. However, emission levels for potentially emitted pollutants are expected to be below the SCAQMD Air Quality Significance thresholds considering the scale of the TMDL program. Furthermore, the reduction of particulate emissions due to decreased road erosion as a result of paving or graveling roads would be a positive impact.

Regional Sub-Watershed BMPs

Regional sub-watershed BMPs involve sediment retention or vegetated filtration and would not result in an increase in air emissions. Short term and increases in traffic during the construction and installation of regional sub-watershed BMPs and long-term intermittent increases in traffic caused by ongoing maintenance of these devices (e.g., delivery of materials and maintenance activities) are potential sources of increased air pollutant emissions. Construction activities could also potentially cause re-suspension of dry sediments. However, emission levels for potentially emitted pollutants are expected to be below the SCAQMD Air Quality Significance thresholds considering the scale of the TMDL program. Furthermore, because only a few facilities would be needed to treat discharges from multiple farms on a regional scale, the impacts would be less than significant.

Regional Treatment System

Short term and increases in traffic during the construction and installation of regional treatment systems and long-term intermittent increases in traffic caused by ongoing maintenance of regional treatment system (e.g., delivery of materials and maintenance activities) are potential sources of increased air pollutant emissions. Construction activities could also potentially cause re-suspension of dry sediments. However, emission levels for potentially emitted pollutants are expected to be below the SCAQMD Air Quality Significance thresholds considering the scale of the TMDL program. Furthermore, because only a few facilities would be needed to treat discharges from multiple farms on a regional scale, the impacts would be less than significant.

Redirect Agriculture Discharge

Short term increases in traffic and emissions during the construction of diversion facilities are potential sources of increased air pollutant emissions. However, emission levels for potentially emitted pollutants are expected to be below the SCAQMD Air Quality Significance thresholds considering the scale of the TMDL program. Long-term impacts are not expected because maintenance of the newly constructed agricultural drain would be similar to existing drains in the TMDL area.

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

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

Answer: Potentially Significant

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

Sediment Capping

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

Dredging/Hydraulic Dredging

Dredging/hydraulic dredging may result in objectionable odors due to the anaerobic nature of sediments. Odors could be released during the dredging process. Dewatering of dredged material could cause odor issues. However, this odor would be temporary and localized to personnel operating the dredge and would quickly dissipate and not be a significant impact. Objectionable odors may also be created due to exhaust from the operation of equipment and vehicles, but these impacts are temporary and localized to the area of operation of heavy equipment. BMPs such as those recommended by the SCAQMD can be implemented to mitigate air quality impacts

Monitored Natural Attenuation of Contaminants

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

BMP ALTERNATIVES

On-farm BMPs

On-farm BMPs may be a source of objectionable odors if design allows for water stagnation. Improper design or maintenance of on-farm BMPs may lead to clogging and stagnation of water creating objectionable odors. Vegetated systems require inspection and maintenance, replacing diseased and dead or dying plants to prevent build-up of detritus, and replacement of existing plants to increase efficiency (WERF, 2005).

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

Regional Sub-Watershed BMPs

Regional sub-watershed BMPs may be a source of objectionable odors if design allows for water stagnation. Improper design or maintenance of regional sub-watershed BMPs may lead to clogging and stagnation of water creating objectionable odors. Vegetated systems require inspection and maintenance, replacing diseased and dead or dying plants to prevent build-up of detritus, and replacement of existing plants to increase efficiency (WERF, 2005).

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

Regional Treatment System

Regional treatment systems may be a source of objectionable odors if design allows for water stagnation. Improper design or maintenance of regional treatment system may lead to clogging and stagnation of water creating objectionable odors. Vegetated systems require inspection and maintenance, replacing diseased and dead or dying plants to prevent build-up of detritus, and replacement of existing plants to increase efficiency (WERF, 2005).

Mitigation measures to eliminate odors caused by stagnation could include covers, aeration, filters, barriers, and/or odor suppressing chemical additives. Devices could be inspected to ensure that intake structures are not clogged or pooling water. During maintenance, odorous sources could be uncovered for as short of a time period as possible. To the extent possible, treatment systems could be designed to minimize stagnation of water (e.g., allow for complete filtration within 48 hours) and installed to increase the distance to sensitive receptors in the event of any stagnation.

Redirect Agriculture Discharge

Redirecting agriculture discharge may be a source of objectionable odors if design allows for water stagnation. Proper design that allows for sufficient hydraulic head and routine monitoring, inspection, and maintenance can help prevent equipment malfunctions and water stagnation. Mitigation measures to eliminate odors caused by stagnation could include covers, aeration, filters, barriers, and/or odor suppressing chemical additives.

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

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

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

It is not anticipated that reasonably foreseeable methods of lake management projects 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.

BMP ALTERNATIVES

It is not reasonably foreseeable that BMPs, diversion channels, and treatment facilities would result in 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 freshwaters.

Answer: Potentially Significant

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

Sediment Capping

During sediment capping water movement within the lake may be impacted, however this impact is temporary and only exists during the capping process. Sediment capping is not expected to permanently change currents or the direction of water movements in the lake, after the capping has been completed.

Dredging/Hydraulic Dredging

Dredging/hydraulic dredging involves the usage of a floatable dredge similar to the size of a boat for the removal of the top layers of sediment. During dredging, water movement within the lake may be impacted, however this impact is temporary and only exists during the hours in which the dredge is operating. Hydraulic dredging at McGrath Lake is not expected to permanently change currents or the direction of water movements in the lake, after the dredging has been completed.

Monitored Natural Attenuation of Contaminants

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

BMP ALTERNATIVES

On-farm BMPs

On-farm BMPs may result in changes in currents, or the course of direction or water movements in freshwaters by mitigating runoff, and diverting water from non-cropped areas. However, this would be a positive impact as it would increase water use efficiency and reduce the contaminated water currently being discharged to the lake. Most on-farm BMPs would focus on sediment removal and improved irrigation and would not result in significantly decreased flows to the lake. Furthermore, the TMDL staff report demonstrates that lake levels will likely be maintained by groundwater flow if surface water flow is redirected. If necessary, mitigation measures to maintain minimal flow to support habitat related beneficial uses could be reviewed and approved by the California Department of Fish and Game (CDFG) and United States Fish and Wild Life Service (USFWS).

Regional Sub-Watershed BMPs

Regional sub-watershed BMPs may result in changes in currents, or the course of direction or water movements in freshwaters by mitigating runoff, and diverting water from non-cropped areas. However, this would be a positive impact as it would reduce the contaminated water currently being discharged to the lake. Regional BMPs would focus on sediment removal and filtration and would not result in significantly decreased flows to the lake. Furthermore, the TMDL staff report demonstrates that lake levels will likely be maintained by groundwater flow if surface water flow is redirected. If necessary, mitigation measures to maintain minimal flow to support habitat related beneficial uses could be reviewed and approved by the California Department of Fish and Game (CDFG) and United States Fish and Wild Life Service (USFWS).

Regional Treatment System

Regional treatment system, such as sand filters, may impede or slow overland flow if not properly designed and maintained. Devices should be designed to allow adequate drainage of water and maintained to remove clogged material to mitigate this impact. Reductions in dry and wet-weather flow could have potential negative impacts on minimum flows required to support aquatic life in the lake. However, the TMDL staff report demonstrates that lake levels will likely be maintained by groundwater flow if

surface water flow is redirected. Potential impacts to dry and wet-weather flow should be considered at the project level. If necessary, mitigation measures to maintain minimal flow to support habitat related beneficial uses could be reviewed and approved by the California Department of Fish and Game (CDFG) and United States Fish and Wild Life Service (USFWS).

Redirect Agriculture Discharge

A change in freshwater movement may occur if compliance with the TMDL is achieved through redirecting agriculture discharge. Reductions in dry and wet-weather flow could have potential negative impacts on minimum flows required to support aquatic life in the lake. However, the TMDL staff report demonstrates that lake levels will likely be maintained by groundwater flow if surface water flow is redirected. Potential impacts to dry and wet-weather flow should be considered at the project level. If necessary, mitigation measures to maintain minimal flow to support habitat related beneficial uses could be reviewed and approved by the California Department of Fish and Game (CDFG) and United States Fish and Wild Life Service (USFWS).

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

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

Answer: Potentially Significant

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

The lake management alternatives are not expected to change the adsorption rate, drainage pattern, or rate and amount of surface runoff, except potentially the hydraulic dredging alternative. Hydraulic dredging involves the removal of lake bed sediment and has minimal affect on surface sediments. To the extent that temporary staging of dredged materials, use of construction equipment, and maintenance or other vehicles may cause significant compaction of soils such that they significantly impact absorption rates, construction BMPs and mitigation measures are available to mitigate the potential impact.

BMP ALTERNATIVES

On-farm BMPs

Changes in drainage patterns and the rate and amount of surface water runoff will occur if a portion of stormwater/irrigation runoff is diverted or captured and reused to achieve

compliance with the TMDL. However, this would be a positive impact as it would increase water use efficiency and reduce the contaminated water currently being discharged to the lake. In addition, most on-farm BMPs would focus on sediment removal and improved irrigation and would not result in significantly decreased flows to the lake. Furthermore, the TMDL staff report demonstrates that lake levels will likely be maintained by groundwater flow if surface water flow is redirected. Potential negative impacts to dry and wet-weather flow could be considered at the project level. If necessary, mitigation measures to maintain minimal flow to support habitat related beneficial uses could be reviewed and approved by the CDFG and the USFWS.

Regional Sub-Watershed BMPs

Changes in drainage patterns and the rate and amount of surface water runoff will occur if a portion of stormwater/irrigation runoff is diverted or captured and reused to achieve compliance with the TMDL. However, this would be a positive impact as it would reduce the contaminated water currently being discharged to the lake. Regional BMPs would focus on sediment removal and filtration and would not result in significantly decreased flows to the lake. Furthermore, the TMDL staff report demonstrates that lake levels will likely be maintained by groundwater flow if surface water flow is redirected. Potential negative impacts to dry and wet-weather flow could be considered at the project level. If necessary, mitigation measures to maintain minimal flow to support habitat related beneficial uses should be reviewed and approved by the CDFG and the USFWS.

Regional Treatment System

Changes in drainage patterns and the rate and amount of surface water runoff will occur if a portion of stormwater/irrigation runoff is diverted or captured and treated to achieve compliance with the TMDL. However, the TMDL staff report demonstrates that lake levels will likely be maintained by groundwater flow if surface water flow is reduced. Potential negative impacts to dry and wet-weather flow could be considered at the project level. If necessary, mitigation measures to maintain minimal flow to support habitat related beneficial uses could be reviewed and approved by the CDFG and the USFWS.

Sand filters are flow-through devices that may cause a change in the rate of surface water runoff. These units may impede or slow overland flow and cause flooding of upstream farms. This negative impact can be mitigated through design of sand filters with flow splitters or overflow/bypass structures and by performing regular maintenance of these devices.

Redirect Agriculture Discharge

Changes in drainage patterns and the rate and amount of surface water runoff will occur if the agriculture drainage is redirected. However, the TMDL staff report demonstrates that lake levels will likely be maintained by groundwater flow if surface water flow is redirected. Potential negative impacts to dry and wet-weather flow could be considered at the project level. If necessary, mitigation measures to maintain minimal flow to support habitat related beneficial uses should be reviewed and approved by the CDFG and the USFWS.

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

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

Answer: Potentially Significant

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

Dredging/hydraulic dredging is not expected to alter the course of flood waters. Sediment capping could decrease the depth of the lake and raise the lake elevation above sea level, which might cause groundwater level to rise in the agriculture fields east of Harbor Blvd. To keep flooding of the fields east of Harbor Blvd to a minimum, lake drainage activities have been conducted since before the state acquired the property. With this lake drainage practice in place, the implementation of sediment capping would not be expected to change the course of flow of flood waters.

BMP ALTERNATIVES

On-farm BMPs

The use of on-farm BMPs could alter the current course of water flow into the lake by mitigating runoff and diverting water from non-cropped areas. However, this would be a positive impact as it would increase water use efficiency and reduce the contaminated water currently being discharged to the lake. Most on-farm BMPs would focus on sediment removal and improved irrigation and would not result in significantly decreased flows to the lake. Furthermore, the TMDL staff report demonstrates that lake levels will likely be maintained by groundwater flow if surface water flow is redirected. To mitigate any potential impacts, on-farm BMPs should be designed to treat only runoff from the farm.

Regional Sub-Watershed BMPs

The use of regional sub-watershed BMPs could alter the current course of water flow into the lake by mitigating runoff, and diverting water from non-cropped areas. .However, this would be a positive impact as it would reduce the contaminated water currently being discharged to the lake. Regional BMPs would focus on sediment removal and filtration and would not result in significantly decreased flows to the lake. Furthermore, the TMDL staff report demonstrates that lake levels will likely be maintained by groundwater flow if surface water flow is redirected. To mitigate any potential impacts, regional sub-watershed BMPs should be designed to treat only small water runoff from the farms. Potential impacts to the course of flow of flood waters may

be considered a positive impact, as on-farm BMPs are likely to reduce the flow rate need for additional stormwater conveyance infrastructure.

Regional Treatment System

Regional treatment systems, such as sand filters, could alter its current course of flow into the lake if the design capacity is exceeded. This negative impact can be mitigated through proper design and maintenance of regional treatment system. The size of the contributing drainage area should not exceed standard specifications. Devices should be designed to allow bypass of flows that exceed the design capacity. Bypass should be installed for flows that exceed treatment capacities. Furthermore, the TMDL staff report demonstrates that lake levels will likely be maintained by groundwater flow if surface water flow is reduced.

Redirect Agriculture Discharge

Redirecting agriculture discharge would alter its current course of flow into the lake. However, the TMDL staff report demonstrates that lake levels will likely be maintained by groundwater flow if surface water flow is redirected.

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

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

Answer: Potentially Significant

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

Sediment Capping

Sediment capping may reduce lake depth and would result in a change in the amount of surface water in the lake. This impact could be mitigated by current lake drainage practices.

Dredging/Hydraulic Dredging

Dredging/hydraulic dredging could remove water from the lake system. The goal of dredging/hydraulic dredging is to remove years of accumulated sediment and restore the lake depth to a level that will improve water quality. The increase in lake depth would provide greater storage area for water in the lake. This would be considered to be a positive impact and would help to improve water quality.

Monitored Natural Attenuation of Contaminants

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

BMP ALTERNATIVES

On-farm BMPs

A change in the amount of surface water may occur if compliance with the TMDL is achieved through on-farm BMPs. McGrath Lake supports sensitive freshwater wetland habitat. Reductions in dry and wet-weather flow could have potential negative impacts on minimum flows required to support and protect the wetland habitat. However, this would be a positive impact as it would increase water use efficiency and reduce the contaminated water currently being discharged to the lake. Most on-farm BMPs would focus on sediment removal and improved irrigation and would not result in significantly decreased flows to the lake. Furthermore, the TMDL staff report demonstrates that lake levels will likely be maintained by groundwater flow if surface water flow is redirected. Potential impacts to dry-weather flow should be considered at the project level. If necessary, mitigation measures to maintain minimal flow to support habitat related beneficial uses could be reviewed and approved by the CDFG and the USFWS.

Regional Sub-Watershed BMPs

A change in the amount of surface water may occur if compliance with the TMDL is achieved through regional sub-watershed BMPs. McGrath Lake supports sensitive freshwater wetland habitat. Reductions in dry and wet-weather flow could have potential negative impacts on minimum flows required to support and protect the wetland habitat. However, this would be a positive impact as it would reduce the contaminated water currently being discharged to the lake. Regional BMPs would focus on sediment removal and filtration and would not result in significantly decreased flows to the lake. Furthermore, the TMDL staff report demonstrates that lake levels will likely be maintained by groundwater flow if surface water flow is redirected. Potential impacts to dry-weather flow should be considered at the project level. If necessary, mitigation measures to maintain minimal flow to support habitat related beneficial uses could be reviewed and approved by the CDFG and the USFWS.

Regional Treatment System

A change in the amount of surface water may occur if compliance with the TMDL is achieved through regional treatment system. Sand filters may impede or slow overland flow if not properly designed and maintained and could change the amount of surface water. Devices should be designed to allow adequate drainage of water and maintained to remove clogged material to mitigate this impact. Flow bypasses should be installed to divert stormwater in excess of treatment capacity. McGrath Lake supports sensitive freshwater wetland habitat. Reductions in dry and wet-weather flow could have potential negative impacts on minimum flows required to support and protect the wetland habitat. However, the TMDL staff report demonstrates that lake levels will likely be maintained by groundwater flow if surface water flow is redirected. Potential impacts to dry-weather flow should be considered at the project level. If necessary, mitigation measures to

maintain minimal flow to support habitat related beneficial uses should be reviewed and approved by the CDFG and the USFWS.

Redirect Agriculture Discharge

Redirecting agriculture discharge could change in the amount of surface water in the lake. Reductions in dry and wet-weather flow could have potential negative impacts on minimum flows required to support and aquatic life in the lake. However, the TMDL staff report demonstrates that lake levels will likely be maintained by groundwater flow if surface water flow is redirected. Potential impacts to dry-weather flow should be considered at the project level. If necessary, mitigation measures to maintain minimal flow to support habitat related beneficial uses could be reviewed and approved by the CDFG and the USFWS.

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

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

Answer: Potentially Significant

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

The TMDL will improve sediment and surface water quality with respect to PCBs, Pesticides, and sediment toxicity.

Sediment Capping

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

Dredging/Hydraulic Dredging

Dredging/hydraulic dredging will cause a potential positive impact to surface water quality by increasing the lake depth which will help to promote a healthy lake system. It is anticipated that temperature changes will continue to reflect seasonal changes and that dissolved oxygen in the lake will be reflective of lake mixing cycles. Hydraulic dredging does disturb the sediments and can cause increased turbidity during dredging

activities; however, this impact is temporary and generally not significant. Dredging will not create permanent increased turbidity conditions.

After dredging, the sediments would be dewatered and it is possible that the water from dredged sediments could be discharged into surface waters. If so, the discharge should avoid any alteration of surface water quality.

Monitored Natural Attenuation of Contaminants

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

BMP ALTERNATIVES

On-farm BMPs

The use of on-farm BMPs will result in a change in the quality of surface water. Some BMPs have multiple pollutant treatment potential. This will positively impact water quality and associated aquatic life and water supply beneficial uses of surface waters.

Regional Sub-Watershed BMPs

The use of regional sub-watershed BMPs will result in a change in the quality of surface water. Some BMPs have multiple pollutant treatment potential. This will positively impact water quality and associated aquatic life and water supply beneficial uses of surface waters.

Regional Treatment System

The use of regional treatment system will result in a change in the quality of surface water. This will positively impact water quality and associated aquatic life and water supply beneficial uses of surface waters. Regional treatment systems have multiple pollutant treatment potential. Sand filters have been effective at removing metals as well as bacteria and other pollutants (WERF, 2005).

Redirect Agriculture Discharge

Redirecting agriculture discharge would result in a change in the quality of surface water. This will positively impact water quality and associated aquatic life and water supply beneficial uses of the lake as the deposition of contaminated sediments to the lake would be reduced.

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

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

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

Answer: Potentially significant

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

It is not anticipated that any of the lake management implementation alternatives will result in an alteration of the direction or rate of groundwater flow.

BMP ALTERNATIVES

On-farm BMPs

The use of on-farm BMPs may result in alteration of the direction or rate of flow of groundwater if on-farm BMPs reduce water flow to the lake. The use of on farm BMPs could alter the current course of flow into the lake by mitigating runoff, and diverting water from non-cropped areas. If lake water level is decreased by reduced flow to the lake, groundwater level around the lake may decrease also and saltwater intrusion may happen. However, most on-farm BMPs would focus on sediment removal and improved irrigation and would not result in significantly decreased flows to the lake. Furthermore, the TMDL staff report demonstrates that lake levels will likely be maintained by groundwater flow if surface water flow is redirected. This impact can be mitigated by maintaining water level in the lake. On-farm BMPs should be designed not to cause significant decrease in water level of the lake.

Regional Sub-Watershed BMPs

The use of regional sub-watershed BMPs may result in alteration of the direction or rate of flow of groundwater if regional sub-watershed BMPs reduce water flow to the lake. The use of regional sub-watershed BMPs could alter the current course of flow into the lake by mitigating runoff, and diverting water from non-cropped areas. If lake water level is decreased by reduced flow to the lake, groundwater level around the lake may decrease also and saltwater intrusion may happen. However, most regional sub-watershed BMPs would focus on sediment removal and improved irrigation and would not result in significantly decreased flows to the lake. Furthermore, the TMDL staff report demonstrates that lake levels will likely be maintained by groundwater flow if surface water flow is redirected. This impact can be mitigated by maintaining water level in the lake. Regional sub-watershed BMPs should be designed not to cause significant decrease in water level of the lake.

Regional Treatment System

The use of a regional treatment system is not expected to result in alteration of the direction or rate of flow of groundwater.

Redirect Agriculture Discharge

Redirecting agriculture discharge could result in alteration of the direction or rate of flow of groundwater. If lake water level is decreased by reduced flow to the lake, groundwater level around the lake may decrease also and saltwater intrusion may happen. However, the TMDL staff report demonstrates that lake levels will likely be maintained by groundwater flow if surface water flow is redirected. This impact can be mitigated by maintaining water level in the lake. Redirecting agriculture discharge should be designed not to cause significant decrease in water level of the lake.

3 Water g. Will the proposal result in change in the quantity or quality of groundwater, either through direct additions or withdrawals or through interception of an aquifer by cuts or excavations.

Answer: Potentially Significant

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

The reasonably foreseeable lake management implementation alternatives act upon the surface water of McGrath Lake and will not include direct additions or withdrawals of groundwater or interception of an aquifer by cuts or excavations.

BMP ALTERNATIVES

On-farm BMPs

The use of on-farm BMPs may result in change in the quantity or quality of groundwater, either through direct additions or withdrawals. Sea water intrusion may occur if groundwater level is lowered by reduced water flow to the lake. However, most on-farm BMPs would focus on sediment removal and improved irrigation and would not result in significantly decreased flows to the lake. Furthermore, the TMDL staff report demonstrates that lake levels will likely be maintained by groundwater flow if surface water flow is redirected. This impact can be mitigated by maintaining water level in the lake. On-farm BMPs should be designed not to cause significant decrease in water level of the lake.

Regional Sub-Watershed BMPs

The use of regional sub-watershed BMPs may result in change in the quantity or quality of groundwater, either through direct additions or withdrawals. Sea water intrusion may occur if groundwater level is lowered by reduced water flow to the lake. However, most regional sub-watershed BMPs would focus on sediment removal and improved irrigation and would not result in significantly decreased flows to the lake. Furthermore, the TMDL staff report demonstrates that lake levels will likely be maintained by groundwater flow if surface water flow is redirected. This impact can be mitigated by maintaining water level in the lake. Regional sub-watershed BMPs should be designed not to cause significant decrease in water level of the lake.

Regional Treatment System

Regional treatment systems are not expected to result in a change in the quantity or quality of groundwater, either through direct additions or withdrawals or through interception of an aquifer by cuts or excavations.

Redirect Agriculture Discharge

Redirecting agriculture discharge may result in change in the quantity or quality of groundwater, either through direct additions or withdrawals. Sea water intrusion may occur if groundwater level is lowered by reduced water flow to the lake. However, the TMDL staff report demonstrates that lake levels will likely be maintained by groundwater flow if surface water flow is redirected. This impact can be mitigated by maintaining water level in the lake. Redirecting agriculture discharge should be designed not to cause significant decrease in water level of the lake.

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

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

Answer: No Impact

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

It is not anticipated that reasonably foreseeable lake management implementation alternatives will result in a substantial reduction in the amount of water otherwise available for public water supplies.

BMP ALTERNATIVES

It is not reasonably foreseeable that BMP alternatives would result in a substantial reduction in the amount of water otherwise available for public water supplies.

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

Answer: Potentially Significant

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

The lake management implementation alternatives are implemented directly in McGrath Lake and not anticipated to result in exposure of people or property to water related hazards such as flooding or tidal waves.

BMP ALTERNATIVES

On-farm BMPs

Implementation may result in flooding hazards if on-farm BMPs keep water on site so that the soil on site reaches water holding capacity during storm events. This potential impact can be mitigated by proper irrigation practices during the storm season.

Regional Sub-Watershed BMPs

Implementation may result in flooding hazards if regional sub-watershed BMPs keep water on site so that the soil on site reaches water holding capacity during storm events. This potential impact can be mitigated by proper irrigation practices during the storm season.

Regional Treatment System

Implementation may result in flooding hazards if a regional treatment system is not properly designed and constructed to allow for bypass of stormwater during storms that exceed design capacity. This potential impact can be mitigated through proper design. Potential risks of flooding due to clogging of devices with debris can be avoided by regular maintenance and inspection prior to storms.

Redirect Agriculture Discharge

Redirecting agriculture discharge may result in flooding hazards if the different receiving waterbody exceeds capacity during storms. Redirecting agriculture discharge should be designed not to cause flooding hazards.

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

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

Answer: Potentially Significant

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

Sediment Capping

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

Dredging/Hydraulic Dredging

Dredging/hydraulic dredging may have the potential to reduce aquatic plant species. Particularly in shallow areas, there may impacts to aquatic vegetation. Hydraulic dredging in areas with dense vegetation beds can cause clogging of the dredge pipeline. It is often suggested that temporary plant control such as harvesting take place prior to hydraulic dredging activities. Recolonization of dredged areas is typically gradual, but provides the opportunity to improve the vegetative habitat to enhance the ecology of the lake. Hydraulic dredging does not disturb the shoreline and will not impact aquatic or terrestrial vegetation directly along the shore. Hydraulic dredging has overall fewer impacts to the lake when compared with traditional dredging methods.

Dredging my also impact the ability of rooted aquatic vegetation to colonize the main body of the lake. The amount of sediment removed (i.e. the new depth) and the associated light penetration will be critical to the ability of submerged plants to grow. However, some rooted plant re-growth is expected and is desirable for lake habitat and function. It is not expected that hydraulic dredging will be done to a depth that would prevent the re-establishment of desired and healthy aquatic plants.

Monitored Natural Attenuation of Contaminants

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

BMP ALTERNATIVES

On-farm BMPs

If on-farm BMPs are used, impact to plant life in terms of diversity of species, number of species, or number of unique, rare or endangered species could occur if facilities are located in critical habitat. On-farm BMPs may be sited away from critical habitat. In general, on-farm BMPs would be sited on existing agriculture land. It is not reasonably foreseeable for responsible parties to construct and site devices in such a manner as to adversely impact species diversity.

To the extent that on-farm BMPs could impact the number or diversity of species, proper timing may need to be exercised to avoid construction during critical periods of plant and animal development. Consultation with agencies including the CDFG and USFWS, having jurisdiction over identified resources would occur to identify specific mitigation measures such as restoration efforts designed to re-vegetate unique, rare or endangered species of plants. 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 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 and animal species occur on the project site, mitigation measures can be developed in consultation with the CDFG and the USFWS. Responsible parties should endeavor to avoid compliance measures that could result in reduction of the numbers of any unique, rare or endangered species of plants. Plant number and species diversity could be maintained by either preserving them prior to, during, and

after installation of BMPs or by re-establishing and maintaining the plant communities post construction.

Most on-farm BMPs would focus on sediment removal and improved irrigation and would not result in significantly decreased flows to the lake that could impact lake plant species. Furthermore, the TMDL staff report demonstrates that lake levels will likely be maintained by groundwater flow if surface water flow is redirected. However, if necessary, potential impacts to dry-weather flow could be considered at the project level. Mitigation measures to maintain minimal flow to support downstream plant life-related beneficial uses could be reviewed and approved by the CDFG and USFWS.

Regional Sub-Watershed BMPs

If regional sub-watershed BMPs are used, impact to plant life in terms of diversity of species, number of species, or reduce the number unique, rare or endangered species could occur if facilities are located in critical habitat. Regional sub-watershed BMPs may be sited away from this critical habitat. In general, regional BMPs would be sited on existing agriculture land and it is not reasonably foreseeable for responsible parties to construct and site devices in such a manner as to adversely impact species diversity.

To the extent that regional BMPs could impact the number or diversity of species, proper timing may need to be exercised to avoid construction during critical periods of plant and animal development. Consultation with agencies including the CDFG and USFWS, having jurisdiction over identified resources would occur to identify specific mitigation measures such as restoration efforts designed to re-vegetate unique, rare or endangered species of plants. 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 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 and animal species occur on the project site, mitigation measures can be developed in consultation with the CDFG and the USFWS. Responsible parties should endeavor to avoid compliance measures that could result in reduction of the numbers of any unique, rare or endangered species of plants. Plant number and species diversity could be maintained by either preserving them prior to, during, and after installation of BMPs or by re-establishing and maintaining the plant communities post construction.

Regional BMPs would focus on sediment removal and filtration and would not result in significantly decreased flows to the lake to could impact plant life. Furthermore, the TMDL staff report demonstrates that lake levels will likely be maintained by groundwater flow if surface water flow is redirected. However, if necessary, potential impacts to dry-weather flow could be considered at the project level. Mitigation measures to maintain minimal flow to support downstream plant life-related beneficial uses could be reviewed and approved by the CDFG and USFWS.

Regional Treatment System

If regional treatment system is used, impact to plant life in terms of diversity of species, number of species, or reduce the number unique, rare or endangered species could

occur if facilities are located in critical habitat. Regional treatment system may be sited away from this critical habitat. It is not reasonably foreseeable for responsible parties to construct and site devices in such a manner as to adversely impact species diversity.

To the extent that regional treatment systems could impact the number or diversity of species, proper timing may need to be exercised to avoid construction during critical periods of plant and animal development. Consultation with agencies including the CDFG and USFWS, having jurisdiction over identified resources would occur to identify specific mitigation measures such as restoration efforts designed to re-vegetate unique, rare or endangered species of plants. 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 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 and animal species occur on the project site, mitigation measures can be developed in consultation with the CDFG and the USFWS. Responsible parties should endeavor to avoid compliance measures that could result in reduction of the numbers of any unique, rare or endangered species of plants. Plant number and species diversity could be maintained by either preserving them prior to, during, and after installation of facilities or by re-establishing and maintaining the plant communities post construction.

Regional treatment system could result in reduced flows, particularly during dry weather, and may adversely impact downstream plant life. However, the TMDL staff report demonstrates that lake levels will likely be maintained by groundwater flow if surface water flow is reduced. If necessary, potential impacts to dry-weather flow should be considered at the project level. Mitigation measures to maintain minimal flow to support downstream plant life-related beneficial uses should be reviewed and approved by the CDFG and USFWS.

Redirect Agriculture Discharge

Redirecting agriculture discharge could result in reduced flows downstream, particularly during dry weather, and may adversely impact downstream plant life. However, the TMDL staff report demonstrates that lake levels will likely be maintained by groundwater flow if surface water flow is redirected. If necessary, potential impacts to dry-weather flow should be considered at the project level. Mitigation measures to maintain minimal flow to support downstream plant life-related beneficial uses should be reviewed and approved by the CDFG and USFWS.

To the extent that redirecting agricultural discharges could impact the number or diversity of species, proper timing may need to be exercised to avoid construction during critical periods of plant and animal development. Consultation with agencies including the CDFG and USFWS, having jurisdiction over identified resources would occur to identify specific mitigation measures such as restoration efforts designed to re-vegetate unique, rare or endangered species of plants. 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 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 and animal species occur on the project site, mitigation measures shall be developed in consultation with the CDFG and the USFWS. Responsible parties should endeavor to avoid compliance measures that could result in reduction of the numbers of any unique, rare or endangered species of plants. Plant number and species diversity could be maintained by either preserving them prior to, during, and after installation of facilities or by re-establishing and maintaining the plant communities post construction.

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

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

Answer: Potentially Significant

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

Lake management implementation alternatives may have the potential to reduce aquatic plant species in certain areas (see Plant Life a.). 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 parties should endeavor to avoid compliance measures that could result in reduction of the numbers of any unique, rare or endangered species of plants.

BMP ALTERNATIVES

See response to Response to 4. Plant life. a.

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

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

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

Answer: Potentially Significant

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

Sediment Capping

Sediment capping may have the potential to introduce new plant species into the lake if the capping equipment has not properly been decontaminated in between projects. However, this risk can be easily mitigated by ensuring that there are approved procedures for capping equipment cleaning after each project. It is expected that capping will reduce the establishment of some aquatic vegetation; however, it is not expected that it will prevent the replenishment of species to healthy habitat levels.

Dredging/Hydraulic Dredging

Dredging/hydraulic dredging may have the potential to introduce new plant species into the lake if the dredging contractor has not properly decontaminated the dredge in between projects. However, this risk can be easily mitigated by ensuring that there are approved procedures for dredging cleaning after each project. It is expected that dredging will reduce the establishment of some aquatic vegetation; however it is not expected that it will prevent the replenishment of species to healthy habitat levels.

Monitored Natural Attenuation of Contaminants

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

BMP ALTERNATIVES

On-farm BMPs

Vegetated on-farm BMPs may be used, which could result in the introduction of new species of plants into an area. To the extent possible, vegetated on-farm BMPs should be planted with native species. The use of exotic invasive species or other plants listed in the Exotic Pest Plant of Greatest Ecological Concern in California (CalEPPC, 1999) should be prohibited.

Regional Sub-Watershed BMPs

Vegetated regional sub-watershed BMPs may be used, which could result in the introduction of new species of plants into an area. To the extent possible, vegetated regional sub-watershed BMPs should be planted with native species. The use of exotic invasive species or other plants listed in the Exotic Pest Plant of Greatest Ecological Concern in California (CalEPPC, 1999) should be prohibited.

Regional Treatment System

Regional treatment systems, such as sand filters, are not anticipated to result in the introduction of new species of plants into an area, or in a barrier to the normal replenishment of existing species. However, to the extent that the construction, operation, or maintenance of the devices may potentially result in the introduction of new species of plants to the area, the devices can be redesigned and sited in the subsurface to mitigate this potential impact.

Redirect Agriculture Discharge

Redirecting agriculture discharge is not anticipated to result in introduction of new species of plants into an area, or in a barrier to the normal replenishment of existing species. However, to the extent that the construction, operation, or maintenance of the devices may potentially result in the introduction of new species of plants to the area, the devices can be redesigned and sited in the subsurface to mitigate this potential impact.

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

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

Answer: Potentially Significant

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

McGrath Lake is used for agricultural drainage purposes, but not used as a supply of agriculture irrigation water. The available lake management practices are unlikely to lead to a conversion of agricultural land to other uses. It is not anticipated that the implementation of lake management implementation alternatives will result in a reduction in acreage of any agriculture crop.

BMP ALTERNATIVES

On-farm BMPs

On-farm BMPs, if directly implemented on farm land, may result in reduction in acreage of agricultural crops. To the extent possible, on-farm BMPs, such as cover crops, should be implemented in a way that does not result in reduction in acreage of any agricultural crop.

Regional Sub-Watershed BMPs

Regional sub-watershed BMPs, if directly implemented on farm land, may result in reduction in acreage of agricultural crops. To the extent possible, regional sub-watershed BMPs, such as vegetation of the Central Ditch, should be implemented in a way that does not result in reduction in acreage of any agricultural crop.

Regional Treatment System

Regional treatment systems, if directly implemented on farm land, may result in reduction in acreage of agricultural crops. To the extent possible, regional treatment system should be implemented in a way that does not result in reduction in acreage of any agricultural crop.

Redirect Agriculture Discharge

Redirecting agriculture discharge is unlikely to lead to a conversion of agricultural land to other uses.

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

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

Answer: Potentially Significant

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 projects that may impact animal life both protected and non-protected. Appropriate measures such as bird, habitat, and nesting surveys for the protection of birds should be taken in conjunction with all construction, operation and maintenance activities at the lake.

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

Sediment Capping

Sediment capping represents a significant project and, in general, impacts are expected; however; with proper planning and care, some impacts can be short lived and mitigated. The capping is only in a small area of the lake at a time and the impacts are limited to the area of operation. Since the lake is maintained as an aquatic habitat during capping, other parts of the lake can act as refuge areas for mobile species until activities are completed.

The goal of a capping project is normally to change the nature of the lake substrate. As a result, after the capping is complete, the new substrate can be inhospitable to the previous benthic community and a reestablishment of the organisms is typically gradual.

Moreover, other species (fish or birds) often rely upon the benthic community for food. A considerable reduction in the food source for this species may cause an adverse impact. Bird species may be required to travel to other areas in search of food; this may reduce the diversity of bird observed at the lake. Fish populations would be subject to in lake conditions, however their food source may temporarily supplemented in order to mitigate this impact.

Sediment capping would be a large project taking place at the lake and will create noise and may require the removal of some shallow water vegetation that is often used as bird habitat. It is expected that this would impact bird species at the lake. Mitigation measures will be required to ensure the least disturbance possible. These measures could include a bird and habitat survey to identify sensitive species and suitable habitat areas. Nesting surveys could also be conducted to ensure that disturbing activities do not take place during the nesting season. Due to the potential impacts, a sediment capping operation should be fully analyzed on a lake wide basis at the project level. The long term benefits to animal life by implementation of the TMDL outweighs short term negative impacts.

Dredging/Hydraulic Dredging

Dredging/hydraulic dredging represents a significant project and, in general, impacts are expected; however; with proper planning and care, some impacts can be short lived and mitigated. The dredge is only capable of working in a small area of the lake at a time and the impacts are limited to the area of operation. Since the lake is maintained as an aquatic habitat during dredging, other parts of the lake can act as refuge areas for mobile species until activities are completed.

However, a reduction in benthic invertebrate species and a reduction in habitat available for benthic invertebrates are expected as the sediment and associated biota are removed from the lake. In areas of the lake were the sediments are toxic these impacts are reduced, but if areas with an active benthic community exist, the impact is generally unavoidable. The goal of a dredging project is normally to change the nature of the lake substrate, and as a result, even after the dredging is complete, the new substrate can be inhospitable to the previous benthic community and a reestablishment of the organisms is typically gradual.

Moreover, other species (fish or birds) often rely upon the benthic community for food. A considerable reduction in the food source for this species may cause an adverse impact.

Bird species may be required to travel to other areas in search of food; this may reduce the diversity of bird observed at the lake. Fish populations would be subject to in lake conditions, however their food source may temporarily supplemented in order to mitigate this impact.

Hydraulic dredging would be a large project taking place at the lake and will create noise and may require the removal of some shallow water vegetation that is often used as bird habitat. It is expected that this would impact bird species at the lake. Mitigation measures will be required to ensure the least disturbance possible. These measures could include a bird and habitat survey to identify sensitive species and suitable habitat areas. Nesting surveys could also be conducted to ensure that disturbing activities do not take place during the nesting season. Due to the potential impacts a hydraulic dredging operation should be fully analyzed on a lake wide basis at the project level. The long term benefits to animal life by implementation of the TMDL outweighs short term negative impacts.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not expected to result in change in diversity of species, or numbers of any species of animals from the current condition. However, it would allow sediments to remain contaminated for longer periods of time. Based on current contamination levels at McGrath Lake, it is estimated that the average time required for natural attenuation is from 27 to 211 years depending on the contaminant.

BMP ALTERNATIVES

See Response to 4. Plant life. a.

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

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

Answer: Potentially Significant

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

Depending on the lake management alternative implemented, direct or indirect impacts to special-status animal species may possibly occur during and after construction or implementation activities. If special-status species are present during activities such as dredging, 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/refuge
- Destruction or abandonment of active nest(s)/den sites
- Direct loss of occupied habitat

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

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

Mitigation measures, however, could be implemented to ensure that special status animals are not negatively impacted, nor their habitats diminished. For example, when the specific projects are developed and sites identified, a focus protocol animal survey and/or a search of the California Natural Diversity Database (CNDDB) 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 construction/implementation activities 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.

BMP ALTERNATIVES

Impact to plant and animal life in terms of diversity of species, number of species, or reduction in the number of unique, rare or endangered species would likely occur if facilities are not properly designed and maintained.

Also see Response to 4. Plant life. a.

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

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

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

Answer: Potentially Significant

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

Sediment Capping

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

Dredging/Hydraulic Dredging

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

Monitored Natural Attenuation of Contaminants

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

BMP ALTERNATIVES

It is not reasonably foreseeable that implementation of BMPs, diversion channels, and treatment facilities will result in the introduction of a new animal species.

A travel route is generally described as a landscape feature (such as a ridgeline, canyon, or riparian strip) within a larger natural habitat area that is used frequently by animals to facilitate movement and provide access to necessary resources (e.g. water, food, den sites). Wildlife corridors are generally an area of habitat, usually linear in nature, which connect two or more habitat patches that would otherwise be fragmented or isolated from one another. BMPs, diversion channels, and treatment facilities should not be constructed in areas such as these.

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

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

If BMPs are implemented at locations where they would cause foreseeable adverse impacts on species migration or movement patters, mitigation measures could be implemented to ensure that impacts which may result in a barrier to the migration or movement of animal is less than significant. Any site-specific wildlife crossings should be evaluated in consultation with CDFG. If a wildlife crossing would be significantly impacted in an adverse manner, then the design of the project should include a new wildlife crossing in the same general location. If construction occurs during the avian breeding season for special status species and/or MBTA-covered species, generally February through August, then prior (within 2 weeks) to the onset of construction activities, surveys for nesting migratory avian species would be conducted on the project site following CDFG and/or USFWS guidelines. If no active avian nests are identified on or within 200 feet of construction areas, no further mitigation would be necessary.

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

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

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

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

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

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

Answer: Potentially Significant

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

Sediment Capping

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

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

Dredging/Hydraulic Dredging

Dredging/hydraulic dredging will require the removal of some aquatic vegetation and removal of benthic community habitat (fine organic sediments). The removal of aquatic vegetation would reduce wildlife habitat primarily for birds, however; it is expected that enough vegetation would remain in place to prevent a significant impact. Moreover, the habitat areas reduced by dredging operations would gradually re-colonize.

In addition, the removal of dredged materials will reduce the fine organic sediments in large parts of the lake, which is generally where benthic aquatic invertebrates reside. This impact would be unavoidable and the removal of contaminated sediment material is the goal of a dredging operation. It is expected that the benthic community will gradually re-colonize as well.

In general the dredging operation is expected to deepen the lake and improve water clarity in the main body of the lake. This will improve the ability of rooted aquatic vegetation to colonize portions of the main body of the lake creating healthy habitat for fish. This would be a positive impact as a result of hydraulic dredging.

Monitored Natural Attenuation of Contaminants

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

on current contamination levels at McGrath Lake, it is estimated that the average time required for natural attenuation is from 27 to 211 years depending on the contaminant.

BMP ALTERNATIVES

On-farm BMPs

Implementation of the TMDL will considerably improve fish habitat by removing contaminants from the McGrath Lake subwatershed. A change in the amount of surface water may occur. Reductions in dry and wet-weather flow could have potential negative impacts on minimum flows required to support and protect the wetland habitat. However, the TMDL staff report demonstrates that lake levels will likely be maintained by groundwater flow if surface water flow is reduced. If necessary, potential impacts to dry-weather flow could be considered at the project level. Mitigation measures to maintain minimal flow to support habitat related beneficial uses could be reviewed and approved by the CDFG and USFWS.

Regional Sub-Watershed BMPs

Implementation of the TMDL will considerably improve fish habitat by removing contaminants from the McGrath Lake subwatershed. A change in the amount of surface water may occur. Reductions in dry and wet-weather flow could have potential negative impacts on minimum flows required to support and protect the wetland habitat. However, the TMDL staff report demonstrates that lake levels will likely be maintained by groundwater flow if surface water flow is reduced. If necessary, potential impacts to dry-weather flow could be considered at the project level. Mitigation measures to maintain minimal flow to support habitat related beneficial uses could be reviewed and approved by the CDFG and USFWS.

Regional Treatment System

Implementation of the TMDL will considerably improve fish habitat by removing contaminants from the McGrath Lake subwatershed. A change in the amount of surface water may occur. Sand filters are flow through devices. Sand filters may impede or slow overland flow if not properly designed and maintained and could change the amount of surface water. Reductions in dry and wet-weather flow could have potential negative impacts on minimum flows required to support and protect the wetland habitat. However, the TMDL staff report demonstrates that lake levels will likely be maintained by groundwater flow if surface water flow is reduced. If necessary, potential impacts to dry-weather flow could be considered at the project level. Mitigation measures to maintain minimal flow to support habitat related beneficial uses could be reviewed and approved by the CDFG and USFWS.

Redirect Agriculture Discharge

A change in the amount of surface water may occur. Reductions in dry and wet-weather flow could have potential negative impacts on minimum flows required to support and protect the wetland habitat. However, the TMDL staff report demonstrates that lake levels will likely be maintained by groundwater flow if surface water flow is reduced. If necessary, potential impacts to dry-weather flow could be considered at the project level.

Mitigation measures to maintain minimal flow to support habitat related beneficial uses could be reviewed and approved by the CDFG and USFWS.

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

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

Answer: Potentially Significant

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

Sediment Capping

There will be noise associated with sediment capping operations. It is expected that the noise levels will be greater than ambient noise; however, the increased noise will be temporary and can be mitigated. Noise mitigation measures should be implemented and may include the selection of quieter running equipment and providing supplemental noise shielding around engines and pumps. County noise ordinances should be reviewed to ensure compliance prior the initiation of the project.

Dredging/Hydraulic Dredging

There will be noise associated with a Dredging/hydraulic dredging operation. It is expected that the noise levels will be greater than ambient noise; however, the increased noise will be temporary and can be mitigated. Analysis for other hydraulic dredging operations found that community noise equivalent levels (CNEL) of 60dBA can be exceeded for locations within 2,000 feet of the dredge (Bolinas Lagoon Ecosystem Restoration Feasibility Study, 2002). Mitigation measures may include the selection of quieter running equipment and providing supplemental noise shielding around engines and pumps. City or county noise ordinances could also be reviewed to ensure compliance prior the initiation of the project.

Monitored Natural Attenuation of Contaminants

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

BMP ALTERNATIVES

Construction of on-farm and regional BMPs, diversion channels, and treatment facilities could involve temporary noise, although no major construction activities are anticipated. Increases in ambient noise levels from construction activities are expected to be less

than significant once mitigation measures have been properly applied. Mitigation measures include the use of newer equipment with improved noise muffling, use of installation methods or equipment that will provide the lowest level of noise and ground vibration impact, turning off idling equipment, and use of noise barriers.

Diversion pumps may also result in an increase in existing noise levels. These pumps can be site below surface and the use of noise reducing barriers can be employed to mitigate the increase in noise levels.

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

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

Answer: Potentially Significant

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

Sediment Capping

There will be noise associated with sediment capping operations (see 6 Noise a). Personnel conducting the capping operation and/or working in the general area may be exposed to severe noise levels. This would require that all personnel be required to wear ear protection in order to mitigate this exposure in addition to the noise mitigation measures previously described (6 Noise a.).

Dredging/Hydraulic Dredging

There will be noise associated with a Dredging/hydraulic dredging operation (see 6 Noise a). Personnel conducting the dredging operation and/or working in the general area may be exposed to severe noise levels. This would require that all personnel be required to wear ear protection in order to mitigate this exposure. In addition to the noise mitigation measures previously described (6 Noise a.).

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not expected to result in exposure of people to severe noise levels.

BMP ALTERNATIVES

Implementation BMP alternatives may entail short-term disturbances during construction, operation, and maintenance of BMPs, diversion channels, and treatment

facilities. The specific project impacts can be mitigated by standard noise abatement techniques including sound barriers and insulation to reduce noise from pumps, motors, fans, etc., passive design BMPs that do not require frequent maintenance, and noise monitoring to ensure levels remain below acceptable levels. It is not foreseeable that implementation of the TMDL will result in exposure of people to severe noise levels once mitigation measures are implemented.

Potential noise impacts and associated mitigation mitigations for each implementation alternative are presented in Noise. 6.a.

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

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

Answer: Less than Significant

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

Sediment Capping

Sediment capping is not anticipated to produce a new source of light or glare. Should night time capping activities be proposed, or should lighting be used to increase safety around equipment, potential impacts should be evaluated at the project level. A lighting plan could be prepared to include shielding on all light fixtures and address limiting light trespass and glare through the use of shielding and directional lighting methods, including but not limited to, fixture location and height. Potential mitigation efforts may also include screening and low-impact lighting. Additional lighting from operation is intermittent and short-term.

Dredging/Hydraulic Dredging

Dredging/Hydraulic dredging is not anticipated to produce a new source of light or glare. Should night time dredging activities be proposed, or should lighting be used to increase safety around dredging facilities or equipment, potential impacts should be evaluated at the project level. A lighting plan could be prepared to include shielding on all light fixtures and address limiting light trespass and glare through the use of shielding and directional lighting methods, including but not limited to, fixture location and height. Potential mitigation efforts may also include screening and low-impact lighting. Additional lighting from operation is intermittent and short-term.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not expected to produce new light or glare.

BMP ALTERNATIVES

Implementation of the proposed BMP alternatives is not likely to produce new light or glare because none of the reasonably foreseeable means of compliance involve additional lighting. Should lighting be used to increase safety around BMPs, diversion channels, or treatment facilities, potential impacts should be evaluated at the project level. A lighting plan could be prepared to include shielding on all light fixtures and address limiting light trespass and glare through the use of shielding and directional lighting methods, including but not limited to, fixture location and height. Potential mitigation efforts may also include screening and low-impact lighting. Additional lighting from construction is intermittent and short-term.

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

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

Answer: Potentially Significant

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

Selecting a dewatering site for dredged materials might require a change in land use. These impacts will be temporary and limited in duration to the period of dredging. Sediment capping could result in the loss of a coastal back dune lake, as the lake is already shallow and additional sediment would further reduce its depth, which could result in loss of recreational land use. To the extent that there could be land use impacts, these potential land use conflicts are best addressed at the project level. The various stakeholders that might choose these alternatives will need to identify local land use plans as part of a project-level analysis to ensure that projects comply with permitted use regulations and are consistent with land use plans, general plans, specific plans, conditional uses, or subdivisions.

BMP ALTERNATIVES

BMP alternatives, such as detention basins on farms, could result in loss of agricultural lands. Diversion may require additional ditches, which could require change in land use.

However, ditches can be sited along existing roadways to avoid changes in land use. To the extent possible, BMPs, diversion ditches, and treatment facilities should be implemented in a way that does not result in substantial reduction in acreage of any agricultural crop. To the extent that there could be land use impacts at a specific location, these potential land use conflicts are best addressed at the project level. Since, the Regional Board cannot specify the manner of compliance with the TMDL the Regional Board can not specify the exact location of structural treatment devices. The various stakeholders that might install these devices will need to identify local land use plans as part of a project-level analysis to ensure that projects comply with permitted use regulations and are consistent with land use plans, general plans, specific plans, conditional uses, or subdivisions.

Regional treatment systems can be specifically designed to accommodate limited land area. For example, underground sand filters are well adapted for applications with limited land area and are most useful where multiple uses of land area are required. They can be placed adjacent to roadways without imposing a safety hazard and can function satisfactorily in the area below elevated roadways or ramps (FHWA, 2007).

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

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

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

Answer: Less than significant

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

Lake management implementation alternatives will not increase the rate of use of any natural resources. Implementation of lake management alternatives should not require quarrying, mining, or the extraction of locally important mineral resources. Operation and construction of the lake management alternatives and maintenance vehicles could increase the use of fossil fuels, and may require the use of electricity. Fuel and energy consumption are discussed in greater detail in item 15 Energy, listed below. Sediment capping changes existing lake elevation, which could affect the natural resources along

the fringes of the lake. However, lake drainage activities have been conducted since before the state acquired the property to keep flooding of the fields east of Harbor Blvd to a minimum. With this lake drainage practice, the impact of sediment capping on the natural resources along the fringes of the lake would be minimal.

BMP ALTERNATIVES

It is not reasonably foreseeable that installation and maintenance of BMPs and treatment devices would significantly increase the rate of use of any natural resources or cause substantial depletion of any nonrenewable natural resource. Installation and maintenance of BMPs and treatment devices would not require quarrying, mining, dredging, or extraction of locally important mineral resources. Some types of treatment facilities may consume electricity to operate pumps, etc., but not at levels which would cause impacts. Furthermore, facilities can be designed to operate hydraulically without the need for pumps.

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

Answer: Less than significant

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

See response to 9 Natural Resources a.

BMP ALTERNATIVES

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, chemical or radiation) in the event of an accident or upset conditions?

Answer: Potentially Significant

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

There is the possibility that hazardous materials (e.g. methane, oil and gasoline) may be present during implementation and/or operation of lake management alternatives.

Potential risk of exposure and explosion can be mitigated with proper handling and storage procedures. Compliance with the requirements of California Occupational Health and Safety Administration (Cal OSHA) and local safety regulations during installation, operations, and maintenance of these alternatives would help to prevent any worksite accidents or accidents involving the release of hazardous materials into the environment. Mitigation may include properly storing hazardous materials in protected areas with fencing and signs to prevent health hazards.

BMP ALTERNATIVES

Implementation of BMPs, diversion channels, and treatment facilities is not likely to 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. Nor should it result in any increased exposure to hazards or hazardous material. While some use of hazardous materials (e.g., paint, oil, gasoline) is likely during construction, potential risks of exposure can be mitigated with proper handling and storage procedures.

The health and safety plan prepared for any project should address potential effects from cross contamination and worker exposure to contaminated soils and water and should include a plan for temporary storage, transportation and disposal of contaminated soils and water. Compliance with the requirements of 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.

Fluids and sediment must be removed from underground sand filters and could pose a risk of release of hazardous substances if not handled in a timely manner and disposed of appropriately. Contaminated sand removed from sand filters can be removed to landfill (WERF, 2005). Maintenance of underground sand and media filters may pose risks to maintenance workers. Mitigation measures to avoid these risks include requiring workers to obtain hazardous materials maintenance, record keeping, and disposal activities training, OSHA-required Health and Safety Training, and OSHA Confined Space Entry training.

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

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

Answer: Less than significant

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

It is not anticipated that reasonably foreseeable methods of compliance will result in an impact to population in altering the location, distribution, density, or growth rate of human population of an area. Potential implementation strategies would not directly or indirectly induce population growth in the area, or displace people.

BMP ALTERNATIVES

It is not foreseeable that implementation of BMPs, diversion channels, and treatment facilities would alter the location, distribution, density, or growth rate of the human population of an area. Potential implementation strategies including structural BMPs, would not directly or indirectly induce population growth in the area, or displace people.

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

Answer: Less than significant

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

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. The lake management implementation alternatives will be take place in the lake itself and will not impact the few residential areas in the TMDL area or create a need for additional housing.

BMP ALTERNATIVES

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. There is a small percentage of residential land use in the TMDL area and responsible parties would not need to impact existing housing in order to site on-farm BMPs, regional BMPs, treatment systems, or new channels for diversion of discharge.

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

Answer: Potentially Significant

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

It is not anticipated that reasonably foreseeable methods of compliance will result in the generation of substantial vehicular movement. The lake management implementation alternatives will be take place in the lake itself and will not impact nearby roads or result in substantial additional vehicular movement.

BMP ALTERNATIVES

The proposal may result in additional vehicular movement during installation of BMPs, diversion channels, and treatment facilities. On-farm BMPs would occur on private land and would not impact nearby roads or result in substantial additional vehicular movement. Regional BMPs, regional treatment systems, and diversion of agriculture drainage could potentially impact Harbor Blvd and Gonzalez Road with additional vehicular movement. These impacts will be temporary and limited in duration to the period of installation. In order to reduce the impact of construction traffic,

implementation of a construction management plan for specified facilities could be developed to minimize traffic impacts upon Harbor Blvd and Gonzalez Road. A construction traffic management plan could address traffic control for any street closure, detour, or other disruption to traffic circulation. The plan could identify the routes that construction vehicles will 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 tripping, location points for ingestion 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. Potential impacts could also be reduced by limiting or restricting hours of construction so as to avoid peak traffic times and by providing flagging to facilitate traffic movement.

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

13 Transportation/Circulation b. Will the proposal result in effects on existing parking facilities, or demand for new parking?

Answer: No Impact

LAKE MANAGEMENT IMPLEMENTATION ACTIVITIES

It is not anticipated that lake management implementation alternatives will result in impacts to existing parking facilities. There are no parking facilities in the vicinity of the lake.

BMP ALTERNATIVES

It is not anticipated that BMP alternatives will result in impacts to existing parking facilities. There are no parking facilities in the vicinity of the farms, roads, or drainage ditches in the TMDL area that would be impacted by installation of on-farm BMPs, regional BMPs and treatment systems, or redirection of drainage.

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

Answer: Potentially Significant

LAKE MANAGEMENT IMPLEMENTATION ACTIVITIES

It is not anticipated that reasonably foreseeable methods of compliance will result in the substantial impact upon existing transportation systems. The lake management

implementation alternatives will be take place in the lake itself and will not impact nearby roads; therefore there is no expectation of any substantial impact upon existing transportation systems.

BMP ALTERNATIVES

Depending on the implementation strategy chosen, the proposal may result in temporary alterations to Harbor Blvd and Gonzalez Road during construction of regional BMPs and treatment facilities or redirection of agriculture drainage. The potential impacts are 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 flagging to facilitate traffic movement. The applicability of sand filters to roadway projects has been demonstrated (FHWA, 2007). Regional BMPs and treatment systems, such as sand filters, can be installed on roads or streets, which could potentially impact public rights of way. Potential impacts should be considered and mitigated at the project level. Potential mitigation measures include proper design and siting of regional BMPs and treatment systems and installation of signage to direct and control traffic.

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

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

Answer: Potentially Significant

LAKE MANAGEMENT IMPLEMENTATION ACTIVITIES

It is not anticipated that reasonably foreseeable methods of compliance will result in the alterations to present patterns of circulation or movement of people and/or goods. The lake management implementation alternatives will be take place in the lake itself and will not impact nearby roads or resulting changes to present patterns of circulation or movement of people and/or goods.

BMP ALTERNATIVES

See response to “Transportation/Circulation.” 13.a. and 13.c.

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

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

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

Answer: Less than significant

LAKE MANAGEMENT IMPLEMENTATION ACTIVITIES

Lake management implementation alternatives will not result in any foreseeable alterations to waterborne, rail, or air traffic. Currently, limited public access precludes full utilization of the lake for REC 1 and REC 2 beneficial uses, so no impacts to waterborne traffic are expected.

BMP ALTERNATIVES

It is not expected that on-farm BMPs, regional BMPs, regional treatment systems, or diversion of agriculture drainage would result in alterations to waterborne, rail or air traffic.

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

Answer: Potentially Significant

LAKE MANAGEMENT IMPLEMENTATION ACTIVITIES

It is not anticipated that reasonably foreseeable methods of compliance will result in an increase in traffic hazards to motor vehicles, bicyclists or pedestrians. The lake management implementation alternatives will be take place in the lake itself and will not impact nearby roads or result in an increase in traffic hazards to motor vehicles, bicyclists or pedestrians.

BMP ALTERNATIVES

The foreseeable methods of compliance may entail short-term disturbances during construction of regional BMPs, regional treatment systems or diversions of agriculture drainage. 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 parties 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.

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

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 services?

Answer: Less than significant

LAKE MANAGEMENT IMPLEMENTATION ACTIVITIES

All lake management activities occur directly on the lake and are not anticipated to directly or indirectly impact or result in a need for new or altered governmental services in the area of fire protection services.

BMP ALTERNATIVES

It is not reasonably foreseeable that this proposal will have an effect upon or result in a need for new or altered governmental facilities for fire protection services, the construction of which could cause significant environmental impacts. There is potential for temporary delays in response time of fire vehicles due to road closure/traffic congestion during construction activities. The responsible parties 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.

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 services?

Answer: Less than significant

LAKE MANAGEMENT IMPLEMENTATION ACTIVITIES

All lake management activities occur directly on the lake and are not anticipated to directly or indirectly impact or result in a need for new or altered governmental services in the area of police protection services.

BMP ALTERNATIVES

It is not reasonably foreseeable that this proposal will have an effect upon or result in a need for new or altered governmental facilities for police protection services, the construction of which could cause significant environmental impacts. This is because compliance with the TMDL would not result in development of land uses for residential, commercial, and/or industrial uses nor would it result in increased growth. There is potential for temporary delays in response time of police vehicles due to road closure/traffic congestion during construction activities. The responsible parties 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.

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

Answer: No Impact

LAKE MANAGEMENT IMPLEMENTATION ACTIVITIES

All lake management activities occur directly on the lake and are not anticipated to directly or indirectly impact or result in a need for new or altered governmental services in the area of altered school services.

BMP ALTERNATIVES

Proposed implementation strategies for this TMDL include on-farm and regional BMPs, drainage diversions, and regional treatment facilities. It is not foreseeable that this proposal will result in a need for new or altered governmental facilities for schools, the construction of which could cause significant environmental impacts.

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: No Impact

LAKE MANAGEMENT IMPLEMENTATION ACTIVITIES

It is not anticipated that reasonably foreseeable methods of compliance will result in a need for new or altered governmental services in the area of parks or other recreational facilities. See also 19 “Recreation” a.

BMP ALTERNATIVES

It is not anticipated that reasonably foreseeable methods of compliance will result in a need for new or altered governmental services in the area of parks or other recreational facilities because there is no recreational land use in the sub-watershed where BMPs, diversions, and treatment facilities could be located (Figure 2).

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: No Impact

LAKE MANAGEMENT IMPLEMENTATION ACTIVITIES

Lake management implementation alternatives are activities on the lake itself and are not anticipated to result in a need for any new or altered maintenance of public facilities, including roads.

BMP ALTERNATIVES

The proposal will result in the need for increased maintenance of BMPs, diversion channels, and treatment facilities. However, these facilities would be owned and operated by agriculture dischargers and would not be public facilities.

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

Answer: Potentially Significant

LAKE MANAGEMENT IMPLEMENTATION ACTIVITIES

It is not anticipated that reasonably foreseeable methods of compliance will result in a need for any other new or altered governmental services.

BMP ALTERNATIVES

Implementation of project alternatives could result in new mosquito breeding habitat and would require additional services of vector control. This potential adverse impact can be mitigated by designing systems that minimize stagnant water conditions and/or by requiring oversight and treatment of those systems by vector control agencies. Stagnant water is minimized by allowing for rapid filtration. Washington State Department of Ecology recommends that sand filters empty in 24 hours (SMMWW, 2005). Certain systems, such as underground sand filters maintain a pool of water. These systems should be avoided where vectors are a concern, unless the local vector control agency approves their use (Caltrans, 2002). However, oversight and treatment by vector control agencies may also be an option. BMPs should be covered to seal vectors out, but contain access doors to facilitate inspection and mosquito suppression by vector control agencies. Basic housekeeping practices such as removal of debris and upkeep of vegetative pretreatment devices to prevent clogging and stagnation will prevent vector breeding (CASQA, 2003).

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

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

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

Answer: Potentially Significant

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

The lake management implementation alternatives 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.

Installation and operation of the lake management alternatives will require energy and fuel for heavy equipment, machinery, and vehicles. Energy demand during implementation are temporary. Responsible parties can mitigate fuel and energy consumption during dredging or capping through the use of more energy efficient vehicles and equipment.

BMP ALTERNATIVES

Implementation of BMPs, diversion channels, and treatment strategies should not result in the use of substantial 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 related heavy equipment, vehicles, and machinery require the use of fuel and electricity to operate. Maintenance vehicles also require fuel and energy. Use of more fuel efficient equipment may help mitigate the extra fuel and energy consumption associated with temporary construction and maintenance activities.

Pumps that require electricity may be incorporated into treatment systems and diversions; however, operation of pumps is not expected to place substantial increases on existing energy supply. Responsible parties may avoid the use of pumps in treatment systems by siting and designing them to allow for sufficient hydraulic head in order to operate by gravity flow.

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

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

Answer: Less than significant

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

See response to 15. Energy a. Implementation of lake management alternatives and compliance with the TMDL will not increase demand on existing energy sources or require the development of new sources.

BMP ALTERNATIVES

b. See response to "15. Energy. a."

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

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

Lake management implementation alternatives are not of the size or scale to require new power or natural gas utilities. The machinery used for dredging and capping would not likely require connection to power or natural gas utilities.

BMP ALTERNATIVES

It is not reasonably foreseeable that implementation BMPs, diversion channels, or treatment facilities would result in a substantial increase need for new systems, or substantial alterations to power or natural gas utilities. Some projects may require moderate amounts of electricity to operate pumps and treatment units; however, operation of pumps is not expected to place substantial increases on existing energy supply such that new or altered utilities would be required.

There is a utility corridor (oil line, fiber optics, power line) along Harbor that could be affected by implementing some of the regional BMPs, treatment systems, and drainage diversion alternatives. To the extent possible, BMPs, diversion channels, and treatment facilities should be cited in a way that would not affect the utility corridor.

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

Answer: No Impact

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

Lake management implementation alternatives are not expected to require new or substantial alterations to the communication system. Lake management alternatives will

not result in any new residential, retail, industrial or any other development projects that would require communication systems.

BMP ALTERNATIVES

Implementation alternatives may entail short-term construction of structural BMPs, diversion channels, and treatment facilities. It is anticipated that construction and maintenance crews will use various communication systems, such as telephones, cell phones, and radios. These types of communication devices and systems are used daily by the construction and maintenance personnel as part of regular business activities. It is not expected that the implementation of the TMDLs would create undue stress on the established communication systems and will not require substantial alterations to the current communication system or a new communication system.

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

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

Lake management implementation alternatives are not expected to require new or substantial alterations to the water supply system.

BMP ALTERNATIVES

It is not reasonably foreseeable that implementation of BMPs, diversion channels, and treatment facilities will result in a substantial increase in the need for new systems, or substantial alterations to water utilities. Potential projects to comply with the TMDL will not result development of any large residential, retail, industrial or any other development projects that would significantly increase the demand on the current water supply facilities or require new water supply facilities.

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: Less than Significant

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

Lake management implementation alternatives are not expected to require new or substantial alterations to the sewer or septic tanks, as the alternatives are not anticipated to generate extensive waste entering the sewer or septic systems or require excavation such that a substantial alteration to sewer or septic systems would be required.

BMP ALTERNATIVES

It is not foreseeable that BMPs, diversion channels, and treatment facilities will result in a substantial increase need for new systems, or substantial alterations to sewers 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: stormwater drainage?

Answer: Less than Significant

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

Lake management implementation alternatives are not expected to require new or substantial alterations to the stormwater drainage system, as the lake management alternatives would have no interaction with the stormwater drainage system.

BMP ALTERNATIVES

Implementation of BMPs, diversion channels, and treatment facilities in the agricultural lands would have minimal or no interaction with the stormwater drainage system.

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 disposal?

Answer: Less than significant

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

Sediment Capping

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

Hydraulic Dredging

The purpose of hydraulic dredging is to remove sediments from the lake bottoms. This dredged material requires disposal. One option for disposal of dredged materials is a landfill site; this could potentially impact solid waste utilities. McGrath Lake is listed on the 303(d) for OC Pesticides and PCBs, which are present in the sediment. This potential impact is related to the amount of dredged material requiring disposal. The project specific planning of a dredging operation will decide the depth to which the lake will be dredged and the potential impact to solid waste disposal will be fully analyzed at that time. The staff report provides a rough estimate of the volume of sediments that will need to be disposed of at a landfill. The range is from 53,692-155,319 cubic yards. Existing landfills in the area likely have adequate capacity to accommodate this amount of material. Impacts on the disposal of solid waste would be less than significant. It is not foreseeable that this proposal will result in a need for new systems, or substantial alterations to solid waste and disposal utilities.

BMP ALTERNATIVES

Nominal amounts of construction debris may be generated by installation of BMPs, diversion channels, or treatment systems. Construction debris can be recycled at aggregate recycling centers or disposed of at landfills. Improved sorting and recycling methods can reduce the total amount of disposable waste. Existing landfills in the area have adequate capacity to accommodate this limited amount of construction debris. Impacts on the disposal of solid waste would be less than significant. It is not foreseeable that this proposal will result in a need for new systems, or substantial alterations to solid waste and disposal utilities.

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

Answer: Potentially Significant

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

Personnel conducting the sediment capping/dredging activities may be exposed to contaminated sediment and this may be a potential health hazard. To mitigate this potential impact, a health and safety plan should be prepared and implemented for any project to address potential health hazards. Compliance with the requirements of Cal OSHA and local safety regulations during implementation of these alternatives 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.

BMP ALTERNATIVES

It is reasonably foreseeable that hazards or hazardous materials could be encountered during the installation of BMPs, diversion channels, and treatment facilities. Due to historical use of pesticides in the area, these facilities could be proposed in areas with contaminated soils or groundwater. The use of hazardous materials (e.g., paint, oil, gasoline) and potential for accidents is also likely during installation.

To the extent that installation of BMPs, diversion channels, and treatment facilities could involve work with or near hazards or hazardous materials, potential risks of exposure can be mitigated with proper handling and storage procedures. The health and safety plan prepared for any project should address potential effects from cross contamination and worker exposure to contaminated soils and water and should include a plan for temporary storage, transportation and disposal of contaminated soils and water. Compliance with the requirements of Cal OSHA 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.

Implementation of BMPs, diversion channels, and treatment facilities could create a potential health hazard if facilities are not properly maintained to include vector (mosquito) control. This potential adverse impact can be mitigated by designing

systems that minimize stagnant water conditions and/or by requiring oversight and treatment of those systems by vector control agencies. Stagnant water is minimized by allowing for rapid filtration. Washington State Department of Ecology recommends that sand filters empty in 24 hours (SMMWW, 2005). Certain BMPs, such as underground sand filters maintain a pool of water. These BMPs should be avoided where vectors are a concern, unless the local vector control agency approves their use (Caltrans, 2002). However, oversight and treatment by vector control agencies may also be an option. BMPs should be covered to seal vectors out, but contain access doors to facilitate inspection and mosquito suppression by vector control agencies. Basic housekeeping practices such as removal of debris and upkeep of vegetative pretreatment devices to prevent clogging and stagnation will prevent vector breeding (CASQA, 2003).

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

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

Answer: Potentially Significant

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

Lake management implementation alternatives are not expected to expose people to a potential health hazard. To the extent that the operation, installation, and maintenance of lake management alternatives may potentially result in the exposure of potential health hazards, a health and safety plan should be prepared and implemented for any project to address potential health hazards. Compliance with the requirements of Cal OSHA and local safety regulations during implementation of these alternatives 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.

BMP ALTERNATIVES

See response to 17. Human Health a.

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

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

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

Answer: Potentially Significant

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

Sediment Capping

There may be visual impacts associated with open space areas that are used for the staging of sediment capping activities and for the temporary piling of capping material. This will temporarily impact the scenic view of the lake and surrounding area. The obstruction of the scenic view of McGrath Lake will only be impacted during actual capping activities. This is not a permanent view obstruction; therefore this impact is not considered potentially significant.

Dredging/Hydraulic Dredging

Dredging/hydraulic dredging will require that a dredge be floating on the lake in order to remove sediment materials. In addition, there may be visual impacts associated with open space areas that are used for the staging of dredging activities and for the temporary piling of material removed from the lake bottom. This will temporarily impact the scenic view of the lake and surrounding area. The obstruction of the scenic view of McGrath Lake will only be impacted during actual dredging activities. This is not a permanent view obstruction; therefore this impact is not considered potentially significant.

BMP ALTERNATIVES

BMPs, diversion channels, and treatment facilities could be aesthetically offensive if not properly designed, sited, and maintained. Underground structures do not present aesthetics issues (WERF, 2005). However, above ground structures, such as sand filters, can present aesthetic problems if constructed with vertical concrete walls (CASQA, 2003) or if designed as rectangular concrete structures (WERF, 2005).

Many structural BMPs can be designed to provide habitat, recreational areas, and green spaces in addition to improving water quality. Standard architectural and landscape architectural practices can be implemented to reduce impacts. Screening and landscaping may also be used to mitigate aesthetic effects.

Redirecting agriculture discharge may result in reduced water level in the lake. See response to 3 water d.

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

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

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

Answer: Potentially Significant

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

Lake management implementation alternatives may temporarily or partially obstruct the scenic view of McGrath Lake (see 18 Aesthetics a.) however they will not create permanent offensive sites open to public view. Capping could decrease the depth of the lake, which could result in an aesthetically offensive site. This impact could be mitigated by studies on the amount of capping necessary to address the contaminated sediments. If impacts could not be mitigated, responsible parties would likely opt for an alternative lake management alternative. Cleanup of the central ditch could destroy habitat and create an aesthetically offensive site. Mitigation for this potential impact could include preserving plants prior to and during cleanup or by re-establishing and maintaining plant communities post cleanup. Efforts cold be made to use hand tools and machinery with the least amount of impact on habitat.

BMP ALTERNATIVES

See response to 18 Aesthetics a.

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

19. Recreation a. Will the proposal result in impact upon the quality or quantity of existing recreation opportunities?

Answer: Potentially Significant

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

Lake management implementation alternatives have the potential to impact the quality of existing recreation opportunities. They are not anticipated to impact the quantity of recreation opportunities.

Lake management implementation alternatives will likely require preparation and staging areas to be used during operation and/or installation. This may temporarily impact areas of the State Beach. However all potential impacts will be limited and temporary equipment and materials are to be removed at the completion of implementation activities.

The TMDL will improve surface water quality. The improved water quality and improve ecosystem health the quality of recreational opportunities at McGrath Lake will be positively impacted.

BMP ALTERNATIVES

The installation of regional BMPs, diversion channels, and treatment facilities may temporarily impact the usage of existing recreational sites. If facilities were located along Harbor Blvd, their construction could temporarily impact access to the State Park campground. Mitigation measures include the incremental installation of the facilities to avoid impacts to nearby recreational sites. The responsible agency may also redesign the facilities to be less obtrusive or choose a less disruptive implementation strategy such as a non-structural alternative.

Implementation of the TMDL will have a positive impact on the quality and quantity of recreational opportunities by protecting recreation, commercial and sport fishing, and aquatic life-related beneficial uses.

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

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

Answer: Potentially Significant

LAKE MANAGEMENT IMPLEMENTATION ALTERNATIVES

Lake management implementation alternatives are not expected to impact a historical structure or building. These implementation alternatives will take place in the lake itself and will not impact historical structures.

Hydraulic dredging may have the potential to uncover an archeological site and artifacts. This potential impact could be mitigated by monitoring by a qualified archaeologist or, in the event that cultural resources are discovered, consultation with an archaeologist to assess the significance and conduct site treatment, including recordation, evaluation, and data recovery.

BMP ALTERNATIVES

Implementation of BMPs, diversion channels, and treatment facilities could potentially cause the alteration of historical or archeological resources, paleontological resources, or disturbance of human remains. The site-specific presence or absence of these resources is unknown because the specific locations for facilities will be determined by responsible parties at the project level. Installation of these systems could result in minor ground disturbances, which could impact cultural resources if they are sited in locations containing these resources and where disturbances have not previously occurred. Mitigation measures for potential impacts could include project redesign, such as the relocation of facilities outside the boundaries of archeological or historical sites and consultation with a qualified archaeologist.

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

21. Mandatory Findings of Significance.

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

Answer: Potentially Significant

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

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

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

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 alternatives 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 McGrath Lake and will have significant beneficial impacts to the environment over the long term.

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

Answer: Potentially Significant

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

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

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

Answer: Potentially Significant

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

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

OTHER ENVIRONMENTAL CONSIDERATIONS

This section evaluates several other environmental considerations of reasonably foreseeable methods of complying with the TMDL, specifically:

- Cumulative Impacts of the Program Alternatives (as required by CEQA Guidelines Section 15130);
- Potential Growth-Inducing Effects of the Program Alternatives (as required by CEQA Guidelines Section 15126); and
- Unavoidable Significant Impacts (as required by CEQA Guidelines Section 15126.2).

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 parties, the cumulative impact analysis included here entails consideration of 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 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.

PROGRAM CUMULATIVE IMPACTS

Compliance with the TMDL for PCBs, pesticides and sediment toxicity in McGrath Lake, will include BMPs such as sand filters and filter strips, which also reduce pollutant loading of other pollutants not just pollutants specified in this TMDL. Also, lake management alternative such as hydraulic dredging may remove other pollutants residing in the sediment. Thus these implementation alternatives will potentially contribute to the implementation of other TMDLs in the future and reduce overall pollutant loading to the lake.

Currently there is another TMDL adopted for the McGrath Beach: the McGrath Beach Bacteria TMDL. The TMDL for PCBs, pesticides and sediment toxicity in McGrath Lake have a secondary benefit in reducing bacteria loading to the McGrath Beach. Implementation of the McGrath Beach Bacteria TMDL involves reducing pumping activities and treating or ceasing discharges to the McGrath Beach. Impacts from implementation to comply with the TMDL for PCBs, pesticides and sediment toxicity in McGrath Lake and the McGrath Beach Bacteria TMDL are expected to be not cumulative in effect.

PROJECT CUMULATIVE IMPACTS

It is not anticipated that implementation of the TMDL would cause project cumulative impacts. Many of the potentially significant impacts associated with TMDL implementation occur in the resource areas of water, plant, and animal life. These impacts would stem mainly from the implementation of lake management activities. Lake management activities would likely be encompassed under one project to remediate the contaminated lake sediments and would therefore avoid cumulative impacts with multiple projects. On-farm BMPs are generally source control and sediment retention projects that would have less than significant impacts that would not cause cumulative impacts. In contrast, larger regional BMPs, treatment systems, and diversion of agriculture drainage could have potentially significant impacts. However, the regional nature of these projects (i.e., addressing discharges from several farms in a centralized manner) reduces the potential for cumulative impacts.

GROWTH-INDUCING IMPACTS

This section presents the following:

- an overview of the CEQA Guidelines relevant to evaluating growth inducement,
- a discussion of the types of growth that can occur in the McGrath Lake Watershed,
- a discussion of obstacles to growth in the watershed, and
- an evaluation of the potential for the TMDL Program Alternatives to induce growth.

CEQA GROWTH-INDUCING GUIDELINES

Growth-inducing impacts are defined by the State CEQA Guidelines as:

> 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.

(CEQA Guidelines, Section 15126.2(d)).

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

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

TYPES OF GROWTH

The primary types of growth that occur within the proposed 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 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 TMDL area and other parties 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 Ventura County is governed by the Ventura County 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.

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.

POTENTIAL FOR COMPLIANCE WITH THE PROPOSED TMDL TO INDUCE GROWTH

Direct Growth Inducement

Because the reasonably foreseeable methods of compliance with the proposed TMDL focus on lake management activities, BMPs, diversion channels, and treatment facilities which are located throughout the TMDL area, the 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.

Implementation of the proposed TMDL would occur over a 14 year time period. Installation and maintenance spending for compliance could generate jobs throughout the region and elsewhere where goods and services are purchased or used to install structural treatment devices and implement lake management activities. The creation of jobs in the region is considered a benefit. Although the construction/implementation activities associated with the TMDL would increase the economic opportunities in the area and region, this construction is not extensive enough, given the size and duration of potential implementation projects, to result in or induce substantial or significant population or land use development growth.

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 TMDL area.

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.

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 hazards and increasing the aesthetic experience at the lake. In addition, habitat carries a significant non-market economic value. Enhancement of habitat beneficial uses will also have positive indirect economic and social benefits. The environmental impact analysis section of this SED identifies the anticipated environmental effects for each resource area, identifies mitigation measures for potentially significant impacts, and determines that impacts after implementation of mitigation are insignificant.

STATEMENT OF OVERRIDING CONSIDERATIONS AND DETERMINATION

The Regional Board staff has balanced the economic, legal, social, technological, and other benefits of this proposed 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 TMDL outweigh the unavoidable adverse environmental effects, and that such adverse environmental effects are acceptable under the circumstances.

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

The Staff Report, Basin Plan amendment, and this SED provide the necessary information pursuant to Public Resources Code section 21159 to conclude that properly designed and implemented lake management activities, on-farm and regional BMPs, regional treatment systems, and diversion of agriculture drainage 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 parties can and should implement the recommended mitigation measures.

For this TMDL, mitigation measures are available to reduce environmental impacts to less than significant levels and in most cases are routine measures that are typically used in construction projects and lake management. This project will foreseeably require these types of projects and their individual impacts are not expected to be extraordinary in the magnitude or severity of impacts. The TMDL may require projects typical of lake management activities, such as sediment capping and dredging to improve water quality. For these activities, there are mitigation measures available to reduce environmental impacts. Mitigation measures, including but not limited to covering capping/dredge piles and adhering to Material Safety Data Sheets instructions when handling chemicals, are expected to reduce environmental impacts to less than significant levels.

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

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 load allocations, pursuant to federal regulations, would need to be complied with upon incorporation into the conditional waivers. (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 McGrath Lake, but it may result in short-term localized significant adverse impacts to the environment as a variety of small construction projects may be undertaken in the vicinity of McGrath Lake of approximately 7 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 TMDL for PCBs, pesticides and sediment toxicity in McGrath Lake and this checklist provide the necessary information pursuant to Public Resources Code section 21159 to conclude that properly designed and implemented lake management activities and structural or non-structural BMPs, diversion channels, and treatment facilities should mitigate and generally avoid significant adverse effects on the environment, and all parties 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 parties that will be responsible for implementing this TMDL, and those parties 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 responsible parties, the necessity of implementing the federally required TMDL and removing the PCBs, pesticides and sediment toxicity impairment from McGrath Lake (an action required to achieve the express, national policy of the Clean Water Act) remains.

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

PRELIMINARY STAFF DETERMINATION

☐ The proposed project COULD NOT have a significant effect on the environment, and, therefore, no alternatives or mitigation measures are proposed.

☑ The proposed project MAY have a significant or potentially significant effect on the environment, and therefore alternatives and mitigation measures have been evaluated.

Signature	Date
Printed Name	For

Note: Authority cited: Sections 21083 and 21087, Public Resources Code. Reference: Sections 21080(c), 21080.1, 21080.3, 21082.1, 21083, 21083.3, 21093, 21094, 21151, Public Resources Code; Sundstrom v. County of Mendocino, 202 Cal.App.3d 296 (1988); Leonoff v. Monterey Board of Supervisors, 222 Cal.App.3d 1337 (1990).

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