MORRO BAY – CAYUCOS WASTEWATER TREATMENT PLANT UPGRADE

Draft Environmental Impact Report

Prepared for
City of Morro Bay and
Cayucos Sanitary District

September 2010

ESA

NOTICE OF AVAILABILITY

Draft Environmental Impact Report

Date: September 17, 2010

To: Responsible Agencies, Trustee Agencies, Interested Parties

Lead Agency: City of Morro Bay

Project Title: Morro Bay–Cayucos Wastewater Treatment Plant Upgrade Project

Review Period: September 20, 2010 to November 4, 2010

State Clearinghouse No: 2008101138

Project Description: This Notice of Availability (NOA) has been prepared to notify agencies and interested parties that the City of Morro Bay as the Lead Agency has prepared a Draft Environmental Impact Report (Draft EIR) to provide the public and trustee agencies with information about the potential effects on the local and regional environment associated with the Morro Bay-Cayucos Wastewater Treatment Plant Upgrade (WWTP Upgrade Project or proposed project). The proposed project would provide full secondary treatment for all effluent discharged through its ocean outfall and to provide tertiary filtration capacity equivalent to the peak season dry weather flow (PSDWF) of 1.5 million gallons per day (mgd). The tertiary filtered effluent would meet Title 22 standards for disinfected secondary-23 recycled water and as such could be used for limited beneficial uses. The proposed project would accommodate future improvements to produce disinfected tertiary recycled water for unrestricted use in accordance with Title 22 standards. The Morro Bay and Cayucos Sanitary District anticipates reclaimed water end uses would include, but not be limited to, treatment process applications onsite at the WWTP, landscape irrigation around the perimeter of the WWTP, and offsite municipal and industrial (M&I) applications such as dust control, soil compaction, street cleaning, municipal landscape irrigation, and agricultural irrigation.

Project Location: The proposed project would be located at 160 Atascadero Road in the City of Morro Bay in San Luis Obispo County. The City of Morro Bay and the unincorporated community of Cayucos are located on the coast of California along State Route 1 approximately 14 miles northwest of the City of San Luis Obispo. The WWTP is located in the coastal zone and is adjacent to Morro Dunes R.V. Park and Trailer Storage, Morro Bay High School, Morro Creek, the City of Morro Bay Corporation Yard, and Hanson Heidelberg Cement Group (cement plant).

Public Review and Comments: The City of Morro Bay is soliciting comments from the public about the Draft EIR prepared for the proposed project. The Draft EIR will be used by the City of Morro Bay and

Cayucos Sanitary District when considering approval of the proposed project. Pursuant to Section 21091 of the Public Resources Code, the City has established a 45-day review period that begins **September 20, 2010** and ends **November 4, 2010**. Comments on the Draft PEIR should be sent to Rob Livick, Public Services Director at the address shown below.

Rob Livick, PE/PLS
City of Morro Bay, Public Services Department
955 Shasta Avenue, Morro Bay, CA 93442
(805) 772-6268 Fax
rlivick@morro-bay.ca.us

Document Availability: Copies of the Draft EIR are available as follows:

- City of Morro Bay Web Site (www.morro-bay.ca.us/water/water.htm);
- Cayucos Sanitary District Web Site (www.cayucossd.org)
- Morro Bay Public Library (625 Harbor Street, Morro Bay);
- Cayucos Library (248 S. Ocean Avenue, Cayucos);
- Morro Bay Public Services Department (955 Shasta Avenue, Morro Bay);
- Wastewater Treatment office (160 Atascadero Road, Morro Bay);
- Cayucos Sanitary District (200 Ash Street, Cayucos);
- ASAP reprographics – for purchase (495 Morro Bay Blvd, Morro Bay)

Public Meetings: Two public meetings will be held to receive public comments regarding the scope, content, and analysis provided of the Draft EIR. The meetings will include a brief presentation providing an overview of the proposed project and conclusions of the Draft EIR. After the presentation, oral comments will be accepted. Written comment forms will be supplied for those who wish to submit comments in writing at the public meeting; written comments may also be submitted anytime during the 45-day Draft EIR review period. The Draft EIR will be available for public review through **October 31, 2010**. The public meetings will be held as follows:

Date	October 4, 2010	October 14, 2010
Time	6:00 P.M.	6:00 P.M.
Location	Morro Bay Planning Commission Meeting Veterans Memorial Hall 209 Surf St. Morro Bay, CA	WWTP JPA Meeting Veterans Hall 10 Cayucos Drive Cayucos, CA

Deadline: All comments on the Draft EIR must be submitted in writing to Rob Livick at the City of Morro Bay Public Services Department at the address shown above by **5:00 PM on November 4, 2010**.

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EXECUTIVE SUMMARY

ES.1 Introduction

The City of Morro Bay as the Lead Agency has prepared this Draft Environmental Impact Report (Draft EIR) to provide the public and trustee agencies with information about the potential effects on the local and regional environment associated with the Morro Bay-Cayucos Wastewater Treatment Plant Upgrade (WWTP Upgrade Project or proposed project). The WWTP is owned and operated by the City of Morro Bay and Cayucos Sanitary District (CSD). The proposed project would provide full secondary treatment for all effluent discharged through its ocean outfall and provide tertiary filtration capacity equivalent to the peak season dry weather flow (PSDWF) of 1.5 million gallons per day (mgd). The tertiary filtered effluent would meet Title 22 standards for disinfected secondary-23 recycled water and as such could be used for limited beneficial uses. The proposed project would accommodate future improvements to produce disinfected tertiary recycled water for unrestricted use in accordance with Title 22 standards. The City of Morro Bay and CSD (collectively "MBCSD") anticipate reclaimed water end uses would include, but not be limited to, treatment process applications onsite at the WWTP, landscape irrigation around the perimeter of the WWTP, and offsite municipal and industrial (M&I) applications such as dust control, soil compaction, street cleaning, municipal landscape irrigation, and agricultural irrigation.

The proposed project would be located at 160 Atascadero Road in the City of Morro Bay in San Luis Obispo County. The City of Morro Bay and the unincorporated community of Cayucos are located on the coast of California along State Route 1 approximately 14 miles northwest of the City of San Luis Obispo. The WWTP is located in the coastal zone and is adjacent to Morro Dunes R.V. Park and Trailer Storage, Morro Bay High School, Morro Creek, the City of Morro Bay Corporation Yard, and Hanson Heidelberg Cement Group (cement plant).

This Draft EIR has been prepared in compliance with the California Environmental Quality Act (CEQA) of 1970 (as amended), codified at California Public Resources Code Sections 21000 et. seq.; the State *CEQA Guidelines* in the Code of Regulations, Title 14, Division 6, Chapter 3; and CEQA-Plus requirements of the State Water Resources Control Board.

Inquiries about the proposed project should be directed to:

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ES.2 Background

The WWTP is operated under a National Pollutant Discharge Elimination System (NPDES) Permit (No. CA0047881) issued by the US Environmental Protection Agency (USEPA) and the Central Coast Regional Water Quality Control Board (RWQCB.) The current NPDES permit allows for the discharge of a blend of primary and secondary treated effluent to the ocean through the existing 27-inch diameter outfall pipeline. This discharge is in accordance with Section 301(h) of the federal Clean Water Act that modifies the requirement for full secondary treatment in certain cases. MBCSD has made a commitment to the Central Coast RWQCB to phase out the need for the 301(h) modified discharge permit by upgrading the WWTP to at least full secondary treatment by March 2014. The proposed project would construct facilities to provide full secondary treatment for all effluent discharged through its ocean outfall and to provide enhanced treatment with tertiary filtration capacity equivalent to the PSDWF of 1.5 mgd.

ES.3 Project Objectives

The objectives of the proposed project are as follows:

- Comply with the secondary treatment standards contained in 40 CFR Part 133;[1]
- Phase out the need for a 301(h) modified discharge permit;
- Minimize flooding impacts onsite at the WWTP and adjoining properties; and
- Accommodate future installation of reclamation capability to meet Title 22 requirements for disinfected tertiary recycled water for unrestricted use.

ES.4 Project Description

The proposed project would replace the existing WWTP with new upgraded facilities and would demolish existing facilities. Implementation of the proposed project would upgrade the WWTP to provide secondary treatment to all wastewater effluent with tertiary filtration capacity of 1.5 mgd. The existing onsite composting program would be discontinued; dewatered sludge produced at the new treatment facilities would be hauled offsite for composting or otherwise processed and disposed in accordance with federal and state regulations. The physical improvements associated with the new treatment facilities include construction of the following, as shown in **Figure ES-1**:

- Influent Pump Station
- Residuals Facility
- Oxidation Ditches
- Secondary Clarifiers,
- RAS/WAS Pump Station
- Secondary Pump Station
- Tertiary Filter
- Chlorine Contact Basin/Chemical Station
- Utility Water Station
- Standby Power Generator
- IWMA Household Hazardous Waste Drop-Off Facility
- Maintenance Building
- Operations Building

[1] 2002 Code of Federal Regulations (CFR) Title 40, Protection of the Environment, Chapter 1, Environmental Protection Agency, Part 133, Secondary Treatment Regulation.

In addition, two new paved access roads would be installed from Atascadero Road, one to provide access to the WWTP for staff, maintenance vehicles, and deliveries, and one to provide separate public access to the Operations Building. New security fencing and landscaping would be installed around the perimeter of the project area. The configuration of facilities shown in **Figure ES-1** is preliminary and subject to change during the design engineering process for the proposed project.

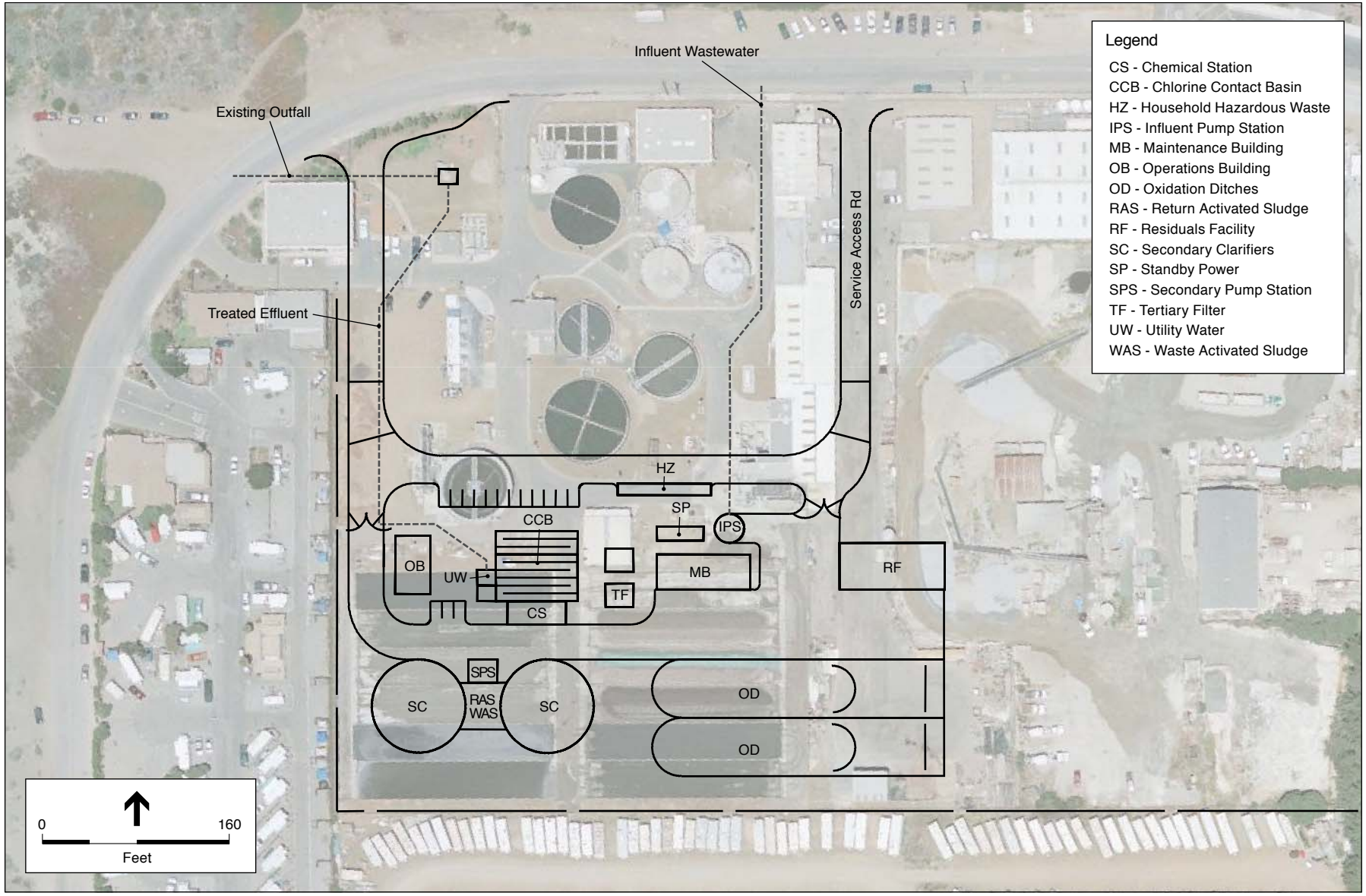
Treatment Facilities

The proposed project would include installation of an extended aeration activated sludge process (EAAS) to treat the entire effluent stream at a PSDWF of approximately 1.5 mgd. The general treatment concept includes pretreatment of influent wastewater, extended aeration with oxidation ditches and secondary clarifiers, tertiary filtration, effluent disinfection, and solids handling.

The proposed project would involve the installation of a new Influent Pump Station that would lift wastewater influent and subsequently flow to the Residuals Facility. Installation would consist of submersible pumps located in a below-grade wet well with multiple pumps with variable speed drives to meet expected range of influent flow with overlapping capacities. The Residuals Facility would include screening and grit removal units for pretreatment of the influent wastewater to screen out large objects, such as inert debris, rags, and plastics, and to remove grit (gravel, sand, and silts) for protection of the downstream treatment processes. The Residuals Facility would house pretreatment facilities and sludge dewatering facilities involving actions such as screening, grit removal, and conditioning of sludge prior to dewatering.

The proposed project would also construct Oxidation Ditches that utilizes an EAAS treatment process with secondary clarifiers to achieve removal of biological oxygen demand (BOD), total suspended solids (TSS), and ammonia (NH3) and to produce high quality effluent suitable for tertiary filtration. Wastewater would flow from the oxidation ditches to the Secondary Clarifiers and Pump Station, which involve open-air circular tanks that provide gravity separation of the suspended biological solids produced by the oxidation ditch and where the clarified effluent forms a clear water zone above the sludge blanket that would be lifted to the tertiary filters by the Secondary Pump Station.

Secondary treated effluent is pumped from the secondary clarifiers to the tertiary filter to further improve effluent quality, where it would then be disinfected at the chlorine contact basin (CCB) utilizing sodium hypochlorite (bleach) for disinfection and sodium bisulfite to remove any chlorine residual prior to discharge through the ocean outfall. The CCB would be an open-air two-chamber basin to facilitate operation and maintenance functions and to accommodate future reclaimed water production. A utility water station would be installed to provide tertiary filtered water for ancillary water demands onsite including industrial plant processes that are not subject to human contact, such as enclosed spray water and seal water, as well as include a truck filling station for disinfected secondary-23 recycled water for potential offsite uses such as soil compaction, concrete mixing, dust control, roadway cleaning, and flushing sewers. The use of tertiary filtered water onsite at the WWTP is exempted under Title 22 (See Chapter 1).



SOURCE: MWH, 2010.

Morro Bay Cayucos Wastewater Treatment Plant EIR . 208013

Figure ES-1
Project Location

Future Reclaimed Water Facilities and Ancillary Facilities

New treatment facilities would be designed to accommodate future improvements to meet Title 22 requirements for disinfected tertiary-treated effluent for unrestricted use. Future upgrades would include an additional tertiary filter, reclaimed water pump station, ancillary onsite components to allow for beneficial reuse of reclaimed water at the WWTP, and improvements to the truck filling station to facilitate offsite municipal and industrial (M&I) beneficial uses using water trucks for distribution. No offsite distribution infrastructure for reclaimed water is anticipated at this time.

The proposed project would include new operations and maintenance buildings that would house new administrative offices, laboratory, the control room, locker rooms, a conference and break room, workshop, tools and spare parts, and bridge crane and electrical room. The Household Hazardous Waste Drop-Off Facility would be relocated as part of the proposed project. Due to space constraints, the placement of engineered fill and the relocation of the Drop-off Facility would be deferred until the end of the WWTP Upgrade Project construction and after the existing WWTP facilities are demolished. If relocated onsite at the WWTP, the Drop-off Facility would be similarly sized and placed on engineered fill to raise the facility above the 100-year flood elevation or the facility would be designed to be removed in the event of flooding. The relocated facility would be positioned to provide accessibility for the public.

Biosolids Management

The proposed project would change the process for sludge management at the WWTP. Currently, primary and secondary sludges produced at the WWTP are processed with anaerobic digesters and sludge drying beds. Dried solids are either hauled offsite for further treatment or composted onsite in windrows. The new WWTP would be located in the portion of the site that contains the existing sludge drying beds. The sludge drying beds would be demolished for placement of engineered fill to raise the site above the 100-year flood elevation and to support the new treatment facilities. The proposed project would involve construction of new sludge dewatering facilities that would be consolidated within a common Residuals Facility, along with screenings and grit removal, to centralize truck traffic and better accommodate the potential for future odor control. All dewatered sludge produced at the new WWTP would be hauled offsite for further processing for reuse (i.e., compost) or for disposal.

A temporary solids handling facility would be required to provide sludge dewatering during construction of the new WWTP. During construction, in lieu of routing the digested sludge to the existing sludge drying beds, the digested sludge would be dewatered with temporary equipment and hauled off-site for disposal. MBCSD would furnish and operate the temporary solids handling facilities. Two approaches would be evaluated during preliminary design of the proposed project:

- Leasing of temporary sludge dewatering equipment; or
- Pre-purchase of sludge dewatering equipment that would subsequently be relocated at the Residuals Facility for permanent installation as part of the WWTP Upgrade Project.

Project Construction

Construction of new replacement facilities would be completed prior to the demolition of existing structures. This ensures that the wastewater treatment process is established and that service is not interrupted while the WWTP is being upgraded. Construction, startup, and commissioning of the proposed WWTP would take approximately 24 months. Site clearing, placement of engineered fill, and subsoil stabilization would need to be completed before facility construction could begin. Site preparation of the entire construction area would take anywhere from 3 to 12 months depending upon the type of subsoil mitigation that is needed. Subsoil mitigation could consist of preloading and/or ground improvement such as vibro-compaction as used in the previous WWTP construction. The project facilities would be implemented one at a time, with potential overlap of construction phases. Excavation would be ongoing for the duration of project construction. Project construction is explained in greater detail in Chapter 2.0.

ES.5 Project Alternatives

An EIR must describe a range of reasonable alternatives to the proposed project or alternative project locations that could feasibly attain most of the basic project objectives and would avoid or substantially lessen any of the significant environmental impacts to the proposed project. The alternatives analysis must include the "No Project Alternative" as a point of comparison. The No Project Alternative includes existing conditions and reasonably foreseeable future conditions that would exist if the proposed project were not approved (*CEQA Guidelines* §15126.6). The following alternatives are discussed further in Chapter 6, Alternatives Analysis. CEQA also requires that an EIR identify an environmentally preferred alternative (*CEQA Guidelines* §15126.6[e][2]).

No-Project Alternative

According to Section §15126.6(e) of the *CEQA Guidelines*, discussion of the No-Project Alternative must include a description of existing conditions and reasonably-foreseeable future conditions that would exist if the project were not approved. Under the No-Project Alternative, no new facilities would be constructed at the WWTP. Operation of the existing WWTP would continue under a 301(h) modified NPDES permit and the secondary treatment facilities would continue to be constrained to the current secondary treatment capacity.

Alternative 1: Full Secondary Treatment

Alternative 1 is similar to the proposed project, except the tertiary filter modules would not be installed. Under Alternative 1, all wastewater entering the WWTP would receive full secondary treatment and all discharges through the ocean outfall would meet full secondary treatment requirements. Effluent discharged from the WWTP would comply with future NPDES permit requirements.

Alternative 2: Membrane Bioreactor (MBR)

Alternative 2 includes the construction of a new MBR facility at the WWTP and facilities for direct hauling of sludge and demolition of the existing WWTP, similar to the proposed project. Following the upgrade, the WWTP would have the ability to treat the full design PSDWF of 1.5 mgd. The total effluent flow would receive secondary treatment, membrane filtration, and disinfection before being discharged into the ocean. The effluent quality produced by the MBR would be higher than the proposed project and would comply with future NPDES permit requirements. All treated effluent at the new MBR facility would meet the standards for disinfected tertiary recycled water as defined by Title 22. The proposed project would produce disinfected secondary-23 recycled water with provisions for future improvements to produce 0.4 mgd of disinfected tertiary recycled water.

Alternative 3: Chorro Valley Location

Under Alternative 3, the City of Morro Bay would construct additional wastewater treatment facilities in a new location separate from the existing WWTP. Cannon Associates prepared a feasibility study for the City of Morro Bay that identified the preferred potential location for a stand-alone treatment plant at the eastern edge of the City (Cannon Associates, 2007). The new treatment plant would divert 49 to 92 percent of raw wastewater from the existing WWTP, depending on the potential diversion point. The new treatment plant would provide tertiary treatment followed by reverse osmosis (RO) processes. Effluent would be discharged into San Bernardo Creek. Under Alternative 3, the new facility would not include onsite biosolids treatment or composting.

Under Alternative 3, depending on the diversion point to the new upstream treatment plant and the associated flow volume diversion, the City of Morro Bay's ADWF into the existing WWTP would be reduced from approximately 0.84 mgd to between 0.43 and 0.08 mgd. As a result, the combined ADWF from both the City and Cayucos Sanitary District (CSD) into the existing WWTP would be between 0.72 mgd and 0.37 mgd depending on the upstream diversion point. The current CSD ADWF into the existing WWTP is 0.29 mgd (Cannon Associates, 2007). Under Alternative 3, all wastewater entering the existing WWTP would receive full secondary treatment and all discharges through the ocean outfall would meet full secondary requirements. In addition, most of the facilities at the existing WWTP also would require rehabilitation or replacement under Alternative 3 for continued operation.

ES.6 Summary of Impacts

Table ES-1, at the end of this chapter, presents a summary of the impacts and mitigation measures identified for the proposed project. The complete impact statements and mitigation measures are presented in Chapter 3, Environmental Setting, Impacts, and Mitigation Measures. The level of significance for each impact was determined using significance criteria (thresholds) developed for each category of impacts; these criteria are presented in the appropriate sections of Chapter 3. Significant impacts are those adverse environmental impacts that meet or exceed the significance thresholds; less-than-significant impacts would not exceed the thresholds.

Table ES-1 indicates the measures that will be implemented to avoid, minimize, or otherwise reduce significant impacts to a less-than-significant level.

ES.7 Areas of Known Controversy

The *CEQA Guidelines* Section 15123 requires the Executive Summary of an EIR to identify areas of controversy known to the Lead Agency, including issues raised by agencies and the public. For the proposed project, the areas of known controversy include: water quality issues associated with the WWTP ocean discharge, potential effects of the WWTP ocean discharge on marine organisms, the potential to produce recycled water for beneficial reuse; potential objectionable odors from the project site; offsite flooding impacts associated with a new WWTP footprint; hazardous materials use and safety; aesthetic impacts to the site and surrounding area. This Draft EIR addresses each of these issues in Chapters 3 and 4, as described below.

ES.8 Organization of this EIR

This Draft EIR has been organized into the following chapters:

ES. Executive Summary. This chapter summarizes the contents of the Draft EIR.

1. Introduction and Project Background. This section discusses the CEQA process and the purpose of the Draft EIR.

2. Project Description. This section provides an overview of the proposed project, describes the need for and objectives of the proposed project, and provides detail on the characteristics of the proposed project.

3. Environmental Setting, Impacts and Mitigation Measures. This chapter describes the environmental setting and identifies impacts of the proposed project for each of the following environmental resource areas: Aesthetics; Air Quality and Greenhouse Gas Emissions; Biological Resources; Cultural Resources; Geology, Soils, Seismicity and Mineral Resources; Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use, Agriculture, Forestry, and Recreation; Noise and Vibration; Public Services and Utilities; Transportation and Traffic; and Environmental Justice. Measures to mitigate the impacts of the proposed project are presented for each resource area.

4. Cumulative Impacts. This chapter describes the potential impacts of the proposed project when considered together with other related projects in the project area.

5. Growth Inducement. This chapter describes the potential for the proposed project to induce growth.

6. Alternatives Analysis. This chapter presents an overview of the alternatives development process and describes the alternatives to the proposed project that were considered.

7. Report Preparers. This chapter identifies authors and consultants involved in preparing this Final PEIR, including persons and organizations consulted.

8. Acronyms.

TABLE ES-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE MORRO BAY-CAYUCOS WASTEWATER TREATMENT PLANT UPGRADE

Impacts	Mitigation Measures	Significance after Mitigation
Aesthetics		
3.1-1: Implementation of the proposed project could impact scenic vistas and views from scenic viewpoints.	3.1-1: MBCSD shall ensure that new facility designs include non-glare exterior coatings (including walls) that are colored to blend in with the surrounding structures and landscape.	Less than significant
3.1-2: Implementation of the proposed project could impact the visual character of the project site and its surroundings.	None required.	Less than significant
3.1-3: Implementation of the proposed project could create a new source of light or glare that could adversely affect day or nighttime views in the area.	3.1-2: MBCSD shall ensure that all exterior lighting is shielded and directed downward to minimize impacts to nighttime views. In addition, highly reflective finishes shall not be used in the design for proposed structures.	Less than significant
Air Quality and Greenhouse Gas Emissions		
3.2-1: Construction and operation of the proposed project could violate air quality standards or contribute substantially to an existing or projected air quality violation.	3.2-1a: MBCSD shall require the construction contractor to prepare a Construction Activity Management Plan (CAMP) for submission to SLOCAPCD. Prior to initiation of construction, the CAMP shall be approved by SLOCAPCD. The CAMP shall include mitigation measures to minimize ROG and NOx, including but not limited to the following Standard Mitigation Measures recommended by the CAMP Guidelines: a. Maintain all construction equipment in proper tune according to manufacturer's specifications; b. Fuel all off-road and portable diesel powered equipment with ARB certified motor vehicle diesel fuel (non-taxed version suitable for use off-road); c. Use diesel construction equipment meeting ARB's Tier 2 certified engines or cleaner off-road heavy-duty diesel engines, and comply with the State off-Road Regulation; d. Use on-road heavy-duty trucks that meet the ARB's 2007 or cleaner certification standard for on-road heavy-duty diesel engines, and comply with the State On-Road Regulation; e. Construction or trucking companies with fleets that that do not have engines in their fleet that meet the engine standards identified in the above two measures (e.g. captive or NOx exempt area fleets) may be eligible by proving alternative compliance; f. All on and off-road diesel equipment shall not idle for more than 5 minutes. Signs shall be posted in the designated queuing areas and or job sites to remind drivers and operators of the 5 minute idling limit; g. Electrify equipment when feasible; h. Substitute gasoline-powered in place of diesel-powered	Less than significant

TABLE ES-1 (continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE MORRO BAY-CAYUCOS WASTEWATER TREATMENT PLANT UPGRADE

Impacts	Mitigation Measures	Significance after Mitigation
	equipment, where feasible; and, i. Use alternatively fueled construction equipment on-site where feasible, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane or biodiesel. 3.2-1b: To further reduce the impact of fugitive dust, MBCSD shall require the construction contractor to comply with the SLOCAPCD's Rule 402. The construction contractor shall prepare a CAMP that includes dust control mitigation measures to be implemented during construction, particularly demolition and site grading phases. Mitigation measures may include, but not be limited to, the following recommendations from the CAMP Guidelines: a. Reduce the amount of the disturbed area where possible. b. Use of water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site. Increased watering frequency would be required whenever possible. c. All dirt stock pile areas should be sprayed daily as needed. d. Permanent dust control measures identified in the approved project revegetation and landscape plans should be implemented as soon as possible following completion of any soil disturbing activities. e. Exposed ground areas that are planned to be reworked at dates greater than one month after initial grading should be sown with fast germinating native grass seed and watered until vegetation is established. f. All disturbed soil areas not subject to revegetation should be stabilized using approved chemical soil binders, juite netting, or other methods approved in advance by the APCD. g. All roadways, driveways, sidewalks, etc. to be paved should be completed after grading unless seeding or soil binders are used. h. Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site. i. All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard. j. Install wheel washers where vehicles enter and exit unpaved roads onto streets, or wash off trucks and equipment leaving the site. k. Sweep streets at the end of each day if visible soil material is carried onto adjacent paved roads. Water sweepers with reclaimed water should be used where feasible. 3.2-1c: MBCSD shall evaluate whether naturally-occurring asbestos	

TABLE ES-1 (continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE MORRO BAY-CAYUCOS WASTEWATER TREATMENT PLANT UPGRADE

Impacts	Mitigation Measures	Significance after Mitigation
	(NOA) is present within the area of disturbance based on geotechnical information collected at the site. If NOA is present, then the construction contractor must comply with all requirements of CARB's Air Toxics Control Measure (ATCM). Compliance may include preparation and implementation of an Asbestos Dust Mitigation Plan and an Asbestos Health and Safety Program for approval by APCD. If NOA is not found, then the construction contractor shall file an exemption request with SLOCAPCD.	
3.2-2: The proposed project could result in a cumulatively considerable net increase of any criteria pollutant under an applicable federal or state ambient air quality standard.	Implement Mitigation Measures 3.2-1a through 3.2-1c	Less than significant
3.2-3: The proposed project could expose sensitive receptors to substantial pollutant concentrations.	None required.	Less than significant
3.2-4: Operation of the proposed project could create objectionable odors affecting a substantial number of people.	3.2-2: MBCSD shall revise the Odor Impact Minimization Plan (OIMP) for the WWTP in accordance with Title 14 CCR Section 17863.4, to include the proposed new facilities. MBCSD shall identify new sources of objectionable odors and develop and implement new procedures to minimize odors. MBCSD shall comply with all requirements of the revised OIMP.	Less than significant
3.2-5: The proposed project could conflict with implementation of state goals for reducing greenhouse gas emissions and have a negative effect on Global Climate Change.	None required.	Less than significant
Biological Resources		
3.3-1: Implementation of the proposed project could have a substantial adverse effect on listed, candidate or special-status ground dwelling wildlife species.	None required.	No Impact
3.3-2: Implementation of the proposed project could have a substantial adverse effect on listed, candidate or special-status bat and avian species.	None required.	Less than significant
3.3-3: Implementation of the proposed project could have a substantial adverse effect on listed, candidate or special-status fish species.	Implement Mitigation Measure 3.7-1 and 3.7-3.	Less than significant
3.3-4: Implementation of the proposed project could have a substantial effect on the California sea otter.	None required.	No Impact
3.3-5: Implementation of the proposed project could have a substantial effect on special-status plant species.	Implement Mitigation Measure 3.7-1 and 3.7-3.	Less than significant

TABLE ES-1 (continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE MORRO BAY-CAYUCOS WASTEWATER TREATMENT PLANT UPGRADE

Impacts	Mitigation Measures	Significance after Mitigation
3.3-6: Construction of the proposed project could have a substantial adverse effect on riparian habitats and natural communities of special concern.	Implement Mitigation Measure 3.7-1 and 3.7-3.	Less than significant
3.3-7: Construction of the proposed project could have a substantial adverse effect on wetlands considered waters US or the state.	Implement Mitigation Measure 3.7-1 and 3.7-3.	Less than significant
Cultural Resources		
3.4-1: Implementation of the proposed project could adversely affect previously undocumented archaeological resources.	3.4-1a: Prior to issuance of a grading permit, an archaeologist meeting the Secretary of the Interior's Standards for professional archaeology (Appendix A of 36 CFR Part 61) ("qualified archaeologist") shall be retained by the City to develop and implement an archaeological monitoring plan. The plan shall include, but not be limited to, provisions for the monitoring of all ground-disturbing activities by a qualified archaeologist, including but not limited to trenching, boring, grading, removal of retired facilities, and use of staging areas and access roads. The duration and timing of monitoring shall be determined by the qualified archaeologist in consultation with the lead agency and based on the grading plans. In the event that cultural resources are unearthed during ground-disturbing activities, the archaeological monitor shall be empowered to halt or redirect ground-disturbing activities away from the vicinity of the find so that the find can be evaluated. The monitor shall prepare and submit to the City brief weekly monitoring reports as well as one final monitoring report summarizing the results of the monitoring activity and describing any cultural resources recovered in the duration of monitoring. Due to the sensitivity of the project area for Native American resources, at least one Native American monitor shall also monitor all ground-disturbing activities in the project area. Selection of monitors shall be made by agreement of the City and the Native American groups identified by the Native American Heritage Commission as having affiliation with the project area. 3.4-1b: If cultural resources are encountered, all activity in the vicinity of the find shall cease until it can be evaluated by a qualified archaeologist. If the archaeological monitor determines that the resources may be significant, the qualified archaeologist will notify the lead agency and will develop an appropriate treatment plan for the resources. The archaeologist shall consult with Native American monitors or other appropriate Native American representatives in determining appropriate treatment for unearthed cultural resources if the resources are prehistoric or Native American in nature. In considering any suggested mitigation proposed by the archaeologist	Less than significant

TABLE ES-1 (continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE MORRO BAY-CAYUCOS WASTEWATER TREATMENT PLANT UPGRADE

Impacts	Mitigation Measures	Significance after Mitigation
	in order to mitigate impacts to cultural resources, the Project proponent will determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is infeasible, other appropriate measures (e.g., data recovery) will be instituted. Work may proceed on other parts of the Project site while mitigation for cultural resources is being carried out.	
3.4-2: Implementation of the proposed project could adversely affect known historical resources.	None required.	No impact
3.4-3: Implementation of the proposed project could adversely affect paleontological resources.	3.4-3: During all construction activities that involve substantial soil disturbance at a depth of greater than 5 feet below the current ground surface, the following activities will be conducted: a. A qualified Paleontologist will be retained to supervise monitoring of construction excavations and to produce a monitoring and mitigation plan for the proposed project. Paleontological monitoring will include inspection of exposed rock units and microscopic examination of matrix to determine if fossils are present. b. Artificial fill, active beach and dune sand, and younger Quaternary alluvium have little paleontological sensitivity level, and will be spot-checked on a periodic basis to ensure that older underlying sediments are not being penetrated and fossils are not being exposed. All earth moving in older Quaternary alluvial deposits will be monitored at a schedule developed by the Paleontologist in consultation with the City and based on grading plans. c. The monitor will have authority to temporarily divert grading away from exposed fossils in order to recover the fossil specimens. An emphasis will be placed on thorough fossil locality documentation stratigraphic data collection. d. If microfossils are present, the monitor will collect matrix for processing. In order to expedite removal of fossiliferous matrix, the monitor may request heavy machinery assistance to move large quantities of matrix out of the path of construction to designated stockpile areas. Testing of stockpiles will consist of screen washing small samples (approximately 90 kilograms, or 200 pounds) to determine if significant fossils are present. Productive tests will result in screen washing of additional matrix from the stockpiles to a maximum of 2,700 kg (6,000 lbs) per locality to ensure recovery of a scientifically significant sample. e. Recovered fossils will be prepared to the point of identification, identified by qualified experts, entered in a database to facilitate	Less than significant

TABLE ES-1 (continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE MORRO BAY-CAYUCOS WASTEWATER TREATMENT PLANT UPGRADE

Impacts	Mitigation Measures	Significance after Mitigation
	inventory, analyzed for significance, and deposited in a designated repository. At each fossil locality, field data forms will be used to record the locality, stratigraphic columns will be measured and appropriate scientific samples submitted for analysis. f. The Paleontologist will prepare brief weekly progress reports to be filed with the client and the lead agencies. The Paleontologist will prepare a final mitigation report to be filed with the client, the lead agencies, and the repository.	
3.4-4: Implementation of the proposed project could result in the disturbance of human remains.	Implement Mitigation Measure 3.4-1a. 3.4-4: Halt Work if Human Skeletal Remains are Identified During Construction. If human skeletal remains are uncovered during Project construction, the Project proponent will immediately halt work, contact the San Luis Obispo County coroner to evaluate the remains, and follow the procedures and protocols set forth in Section 15064.5 (e)(1) of the CEQA Guidelines. If the County coroner determines that the remains are Native American, the coroner will contact the NAHC, in accordance with Health and Safety Code Section 7050.5, subdivision (c), and Public Resources Code 5097.98 (as amended by AB 2641). The NAHC will then identify the person(s) thought to be the Most Likely Descendent (MLD) of the deceased Native American, who will then help determine what course of action should be taken in dealing with the remains. The archaeologist, City, and MLD shall make all reasonable efforts to develop an agreement for the treatment, with appropriate dignity, of human remains and associated or unassociated funerary objects (CEQA Guidelines Section 15064.5(d)). The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects. If the MLD and the other parties do not agree on the reburial method, the project will follow Section 5097.98(b) of the California Public Resources Code, which states that “the landowner or his or her authorized representative shall reinter the human remains and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance.” Per Public Resources Code 5097.98, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred, as prescribed in this section (PRC 5097.98), with the most likely descendents regarding their recommendations.	Less than significant

TABLE ES-1 (continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE MORRO BAY-CAYUCOS WASTEWATER TREATMENT PLANT UPGRADE

Impacts	Mitigation Measures	Significance after Mitigation
Geology, Soils, Seismicity, and Mineral Resources		
3.5-1: The proposed project could expose new structures to risk of damage due to strong seismic ground shaking.	3.5-1: MBCSD shall ensure construction of the proposed project facilities adhere to the City's seismic standards and to the California Building Code requirements to reduce risks of damage from potential seismic ground shaking.	Less than significant
3.5-2: The proposed project could expose new structures to risk of damage due to liquefaction.	3.5-2: Prior to the acceptance of construction plans for the project by the JPA Board, a design-level geotechnical investigation, including collection of site-specific subsurface data shall be completed by MBCSD. The geotechnical evaluation shall identify density profiles, approximate maximum shallow groundwater levels, characterize the vertical and lateral extent of the saturated sand/silt layers that could undergo liquefaction during strong ground shaking, and develop site-specific design criteria to mitigate potential risks. Recommendations made as a result of these investigations to protect new structures from seismic hazards shall become part of the proposed project.	Less than significant
3.5-3: The construction of new facilities and demolition of existing facilities could result in substantial soil erosion.	3.5-3: To control water and wind erosion during construction of the project, MBCSD shall ensure that contractors implement Best Management Practices (BMPs) to control wind and water erosion during and shortly after construction of the project and permanent BMPs to control erosion and sedimentation once construction is complete. The BMPs could include, but would not be limited to, sediment barriers and traps, silt basins, silt fences, and soil stockpile protection measures.	Less than significant
3.5-4: The proposed project components would be located on unstable soils that could expose structures to risk of damage due to settlement.	Implement Mitigation Measure 3.5-2. 3.5-4: The design-level geotechnical evaluation described in Mitigation Measure 3.5-2 shall include a review of the surface and near-surface soils in the areas where new project components will be constructed and where excavated spoil materials will be stockpiled. The evaluation shall determine if the underlying soils have adequate strength to support the proposed facilities and stockpiles and, if not, shall provide recommendations to avoid this hazard. Recommendations made as a result of these investigations shall be considered during project design and the evaluation report shall become part of the construction documents for the project.	Less than significant

TABLE ES-1 (continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE MORRO BAY-CAYUCOS WASTEWATER TREATMENT PLANT UPGRADE

Impacts	Mitigation Measures	Significance after Mitigation
3.5-5: The proposed project components could be located on expansive soils that expose structures to risk of damage due to shrink-swell potential.	None required.	Less than significant
Hazards and Hazardous Materials		
3.6-1: The proposed project could create a hazard to the public or environment through the routine use and transport of hazardous materials.	None required.	Less than significant
3.6-2: Accidental upset of hazardous materials used during project construction or operation may increase the risk of exposure to the environment, workers, and the public.	3.6-1a: Construction contractor(s) shall be required to implement best management practices (BMPs) for handling hazardous materials during the project. The use of the construction BMPs shall minimize negative effects on groundwater and soils, workers, and the public, and will include, without limitation, the following: • Follow manufacturers' recommendations and regulatory requirements for use, storage, and disposal of chemical products and hazardous materials used in construction. • Avoid overtopping construction equipment fuel tanks. • During routing maintenance of construction equipment, properly contain and remove grease and oils. • Properly dispose of discarded containers of fuels and other chemicals. 3.6-1b: The implementing agencies shall require the construction contractor(s) to implement safety measures in accordance with General Industry Safety Orders for Spill and Overflow Control (CCR Title 8, Sections 5163-5167) to protect the project area from contamination due to accidental release of hazardous materials. The safety measures shall include, but not be limited to, the following: • Spills and overflows of hazardous materials shall be neutralized and disposed of promptly. • Hazardous materials shall be stored in containers that are chemically inert to and appropriate for the type and quantity of the hazardous substance. • Containers shall not be stored where they are exposed to heat sufficient enough to rupture the containers or cause leakage. • Specific information shall be provided regarding safe procedures and other precautions before cleaning or subsequent use or disposal of hazardous materials containers. Disposal of all hazardous materials shall be in compliance with applicable California hazardous waste disposal laws. The construction	Less than significant

TABLE ES-1 (continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE MORRO BAY-CAYUCOS WASTEWATER TREATMENT PLANT UPGRADE

Impacts	Mitigation Measures	Significance after Mitigation
	contractor(s) shall contact the local fire agency and the Environmental Health Services Division of the San Luis Obispo County Public Health Department County Department of Public Health, Environmental Health Division, for any site-specific requirements regarding hazardous materials or hazardous waste containment or handling. 3.6-1c: In the event of an accidental release of hazardous materials during construction, containment and clean up shall occur in accordance with applicable regulatory requirements. 3.6-1d: Oil and other solvents used during maintenance of construction equipment shall be recycled or disposed of in accordance with applicable regulatory requirements. All hazardous materials shall be transported, handled, and disposed of in accordance with applicable regulatory requirements. 3.6-1e: The implementing agencies shall require the construction contractor(s) to prepare a Site Safety Plan in accordance with applicable regulatory requirements. 3.6-1f: The implementing agencies shall require the construction contractor(s) to prepare and implement a Safety Program to ensure the health and safety of construction workers and the public during project construction. The Safety Program shall include an injury and illness prevention program, as site-specific safety plan, and information on the appropriate personal protective equipment to be used during construction.	
3.6-3: The proposed project would handle hazardous materials within one-quarter mile of the Morro Bay High School.	Implement Mitigation Measures 3.6-1a through 3.6-1f and 3.11-1.	Less than significant
Hydrology and Water Quality		
3.7-1: Construction and operation of the proposed project could violate water quality standards or waste discharge requirements.	3.7-1: MBCSD shall require the construction contractor to prepare and implement a SWPPP in accordance with the requirements of the NPDES General Construction Permit. The SWPPP shall include BMPs to control erosion, sedimentation, and hazardous materials release. The SWPPP shall be approved by the City of Morro Bay prior to the start of construction. The BMPs shall be maintained at the site for the duration of construction. The objectives of the BMPs are to identify pollutant sources that may affect the quality of storm water discharges and to implement measures to reduce pollutants in storm water discharges. The BMPs for the proposed project shall include, but not be limited to, the implementation of the following elements in accordance with the City's Storm Water Management Plan (SWMP): • Identification of all pollutant sources, including sources of sediment	Less than significant

TABLE ES-1 (continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE MORRO BAY-CAYUCOS WASTEWATER TREATMENT PLANT UPGRADE

Impacts	Mitigation Measures	Significance after Mitigation
	that may affect the quality of storm water • Identification of non-storm water discharges; • Estimate of the construction area and impervious surface area; • Preparation of a site map and maintenance schedule for BMPs installed during construction designed to reduce or eliminate pollutants after construction is completed (post-construction BMPs); • Applicable erosion and sedimentation control measures, waste management practices, and spill prevention and control measures; • Maintenance and training practices; and, • A sampling and analysis strategy and sampling schedule for discharge from construction activities.	
	3.7-2: MBCSD shall require the construction contractor to file a Notice of Intent to comply with the SWRCB or CCRWQCB Low-Threat General WDRs prior to initiating excavation and dewatering activities and to comply with all requirements and conditions of the General WDRs, including preparation of a discharge monitoring plan (DMP).	
	3.7-3: MBCSD shall file a Notice of Intent to comply with the NPDES General Industrial Permit requirements upon completion of the proposed project. MBCSD also shall prepare a SWPPP and monitoring plan, as required by the General Industrial Permit, that identify sources of pollutants and the measures to be implemented to manage the sources and reduce storm water pollution. The SWPPP shall include relevant BMPs from the City of Morro Bay's SWMP.	
3.7-2: Construction of the proposed project could result in dewatering of shallow groundwater resources and contamination of surface water.	Implement Mitigation Measure 3.7-2.	Less than significant
3.7-3: The proposed project would alter the drainage pattern of the project site and floodplain and could place structures within a 100-year flood hazard area.	3.7-4: To mitigate impacts associated with 100-year flood hazards, MBCSD or the City of Morro Bay shall implement the following measures: • Construct the new WWTP facilities on higher ground. Construction on elevated fill provides the highest level of protection and least amount of operational inconveniences. • Construct all or part of the new facilities on City owned land to the south of the current site that is already elevated, modeled in the analysis as MB10 through MB12. Construction at this location will have the least adverse flood impact on neighboring properties.	No impact

TABLE ES-1 (continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE MORRO BAY-CAYUCOS WASTEWATER TREATMENT PLANT UPGRADE

Impacts	Mitigation Measures	Significance after Mitigation
	• Apply for a Letter of Map Revision (LOMR), including new hydrology and new hydraulic analyses, to document the potential reduction of flood levels relative to the current FIRM. The City floodplain management ordinance and funding agencies require that WWTP improvements be protected from flooding to the level of one foot above the 100-year flood elevation.	
3.7-4: The project could result in inundation by a seiche, tsunami, or mudflow.	None required.	Less than significant
Noise		
3.9-1: Project construction could expose persons to or generate noise levels in excess of standards.	3.9-1: MBCSD shall require construction contractors to restrict all construction activities to the hours between 7:00 A.M. and 7:00 P.M, Monday through Friday, and between 8:00 A.M. and 7:00 P.M. on Saturday and Sunday. 3.9-2: To further mitigate pile driving and other extreme noise-generating construction impacts, a set of site-specific noise attenuation measures shall be implemented under the supervision of a qualified acoustical consultant. These attenuation measures shall include, but not be limited to, the following control strategies: (1) Erect temporary plywood noise barriers around the construction site; (2) Implement “quiet” pile-driving technology (such as predrilling piles and the use of more than one pile driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions; (3) Use noise control blankets on building structures to reduce noise emissions from the site; and (4) Monitor the effectiveness of noise attenuation measures by collecting noise measurements.	Less than significant
3.9-2: Project construction could result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.	Implement Mitigation Measure 3.9-2. 3.9-3: If a vibratory compactor is used within 25 feet of any structure, the construction contractor shall conduct crack surveys before drilling to prevent potential architectural damage to nearby structures. The surveys shall be done by photographs, video tape, or visual inventory, and shall include inside as well as outside locations. All existing cracks in walls, floors, and driveways shall be documented with sufficient detail for comparison after construction to determine whether actual vibration damage occurred. A post-construction survey shall be conducted to document the condition of the surrounding buildings after the construction is complete.	Less than significant

TABLE ES-1 (continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE MORRO BAY-CAYUCOS WASTEWATER TREATMENT PLANT UPGRADE

Impacts	Mitigation Measures	Significance after Mitigation
3.9-3: Project operations could result in substantial increases in ambient noise levels in the project vicinity above levels existing without the project.	None required.	Less than significant
Public Services and Utilities		
3.10-1: Construction activities associated with the proposed project would generate solid waste that could increase the demand for landfill capacity.	3.10-1: Project facility design and construction methods that produce less waste, or that produce waste that could more readily be recycled or reused shall be encouraged. 3.10-2: MBCSD shall require the construction contractor to describe plans for recovering, reusing, and recycling wastes produced through construction, demolition, and excavation activities. Submittal of these plans shall be required in construction specifications.	Less than significant
3.10-2: Implementation of the proposed project could increase the demand for disposal capacity of biosolids.	None required.	Less than significant
3.10-3: Construction of the proposed project could result in temporarily, planned or accidental disruption to utility services.	3.10-3: MBCSD shall require the construction contractor to contact a regional notification center (e.g., Underground Services Alert or Dig Alert) at least two days prior to initiating any construction activities.	Less than significant
3.10-4: The proposed project could require construction of new storm water drainage facilities, the construction of which would not result in significant environmental effects.	None required.	Less than significant
3.10-5: Implementation of the proposed project could affect local and regional energy supplies such that additional electrical capacity is required.	None required.	Less than significant
Transportation and Traffic		
3.11-1: Construction and demolition activities may result in short-term increases in vehicle trips by construction workers and construction vehicles that could potentially cause an increase in traffic on roads within the project vicinity.	3.11-1: MBCSD shall require the construction contractor to prepare and implement a Traffic Control/Traffic Management Plan to minimize impacts during project construction. The Traffic Control/Traffic Management Plan shall include, but not be limited to, the following measures: • The City of Morro Bay shall maintain access for local land uses including public properties, recreational properties, beachfront access, and commercial properties during construction activities. • Emergency services access to local land uses will be maintained for the duration of construction activities. Local emergency service providers will be informed of lane closures and detours. • The City of Morro Bay shall post advanced warning of construction activities to allow motorists to select alternative routes in advance. • The City of Morro Bay shall arrange for a telephone resource to	Less than significant

TABLE ES-1 (continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE MORRO BAY-CAYUCOS WASTEWATER TREATMENT PLANT UPGRADE

Impacts	Mitigation Measures	Significance after Mitigation
	address public questions and complaints during project construction. • The City of Morro Bay shall comply with roadside safety protocols, so as to reduce the risk of accident. • For roadways requiring lane closures, the City of Morro Bay (and the construction contractor) shall develop circulation plans to minimize impacts to local street circulation. This would include the use of signing to guide vehicles around the construction zone. • Include a plan to coordinate all construction activities with the San Luis Coastal Unified School District at least two months in advance. The San Luis Coastal Unified School District shall be notified of the timing, location, and duration of construction activities. The implementing agencies shall require its contractor to maintain vehicle, pedestrian, and school bus service during construction through inclusion of such provisions in the construction contract. The assignment of temporary crossing guards at designated intersections may be needed to enhance pedestrian safety during project construction. Also, the following provisions shall be met: – A minimum of two months prior to project construction, the implementing agencies shall coordinate with the San Luis Coastal Unified School District to identify peak circulation periods at the Morro Bay High School (i.e., the arrival and departure of students), and require their contractor to avoid lane closures during these periods. – A minimum of two months prior to project construction, the implementing agencies shall coordinate with the San Luis Coastal Unified School District to identify alternatives to their safe routes to school program, alternatives for the school bussing routes and stop locations, and other circulation provisions, as part of the Traffic Control/ Traffic Management Plan.	
Cumulative Impacts		
4-1: Concurrent construction of several projects in the project area could result in cumulative short-term impacts to air quality, hydrology and water quality, noise, and traffic and transportation.	Implement Mitigation Measures 3.7-1, 3.9-1 and 3.11-1. 4-1: MBCSD shall communicate and coordinate project construction activities with other City agencies. Phasing of project construction shall be coordinated to minimize cumulative impacts to traffic and circulation.	Less than significant
4-2: The proposed project and related projects could result in long-term cumulative impacts to biological resources, storm water, and traffic and transportation.	None required.	Less than significant

CHAPTER 1
Introduction and Project Background

1.1 Project Summary

The City of Morro Bay as the Lead Agency has prepared this Draft Environmental Impact Report (Draft EIR) to provide the public and trustee agencies with information about the potential effects on the local and regional environment associated with the Morro Bay-Cayucos Wastewater Treatment Plant Upgrade (WWTP Upgrade Project or proposed project). The proposed project would provide full secondary treatment for all effluent discharged through its ocean outfall and to provide tertiary filtration capacity equivalent to the peak season dry weather flow (PSDWF) of 1.5 million gallons per day (mgd). The tertiary filtered effluent would meet Title 22 standards for disinfected secondary-23 recycled water and as such could be used for limited beneficial uses. The proposed project would accommodate future improvements to produce disinfected tertiary recycled water for unrestricted use in accordance with Title 22 standards. The Morro Bay and Cayucos Sanitary District anticipates reclaimed water end uses would include, but not be limited to, treatment process applications onsite at the WWTP, landscape irrigation around the perimeter of the WWTP, and offsite municipal and industrial (M&I) applications such as dust control, soil compaction, street cleaning, municipal landscape irrigation, and agricultural irrigation.

1.2 Purpose of the EIR

This Draft EIR has been prepared in compliance with the California Environmental Quality Act (CEQA) of 1970 (as amended), codified at California Public Resources Code Sections 21000 et. seq., the *Guidelines for California Environmental Quality Act* (*CEQA Guidelines)* in the Code of Regulations, Title 14, Chapter 3, Sections 15000 et. seq., and CEQA-Plus requirements of the State Water Resources Control Board (SWRCB). The proposed project would be implemented in conjunction with the Cayucos Sanitary District (CSD), which shall serve as a Responsible Agency under CEQA.

As described in Section 15121(a) of the *CEQA Guidelines*, this Draft EIR is intended to serve as an informational document for public agency decision makers. Accordingly, this Draft EIR has been prepared to identify the significant environmental effects of the proposed project, identify mitigation measures to minimize significant effects, and consider reasonable project alternatives. The environmental impact analyses in this Draft EIR are based on a variety of sources, including agency consultation, technical studies, and field surveys.

1.3 Intended Use of the EIR

The proposed project would be implemented collectively by the City of Morro Bay and the Cayucos Sanitary District ("MBCSD" collectively) as co-owners of the Morro Bay-Cayucos Wastewater Treatment Plant (WWTP). According to CEQA, when a project is to be carried out by more than one public agency, one agency is selected to be the lead agency and the other agency is designated as a responsible agency (*CEQA Guidelines* §15050(a)). The decision-making bodies of the lead agency and responsible agency are required to consider the EIR prior to acting upon or approving the project (*CEQA Guidelines* §15050(b)). For purposes of this EIR, the City of Morro Bay is the Lead Agency, and the Cayucos Sanitary District is the Responsible Agency. Both agencies intend to use this EIR to consider implementation of the proposed project.

1.4 CEQA-Plus Requirements

The U.S. Environmental Protection Agency (USEPA) sponsors the State Revolving Fund (SRF) Loan Program to provide funding for construction of publicly-owned treatment facilities and water reclamation projects. This funding for capital improvements to wastewater treatment and water recycling facilities is authorized under the federal Clean Water Act. The proposed project is eligible for SRF funding. In order to comply with requirements of the SRF Loan Program, which is administered by State Water Resources Control Board (SWRCB) in California, an EIR must fulfill additional requirements known as CEQA-Plus. The CEQA-Plus requirements have been established by the USEPA and are intended to supplement the *CEQA Guidelines* with specific requirements for environmental documents acceptable to the SWRCB when reviewing applications for wastewater treatment facility loans. They are not intended to supersede or replace *CEQA Guidelines*. (See Section 1.5 below for an explanation of the CEQA process.)

The USEPA's CEQA-Plus requirements have been incorporated into the SWRCB's *Environmental Review Process Guidelines for SRF Loan Applicants* (*SRF Guidelines*) (September, 2004). The SWRCB's *SRF Guideline*s include the following requirements for compliance with CEQA-Plus. Eight copies of the CEQA document must be sent to the SWRCB, which then forwards the copies directly to federally designated agencies. Federal consultation must be completed before an SRF funding agreement can be approved by the SWRCB. The proposed project must be in compliance with Section 7 of the federal Endangered Species Act (FESA); must undergo a Clean Air Act conformity analysis (if in a nonattainment area or an attainment area subject to a maintenance plan); and must be in compliance with Section 106 of the National Historic Preservation Act. The CEQA document must also disclose all project-specific information listed in the outline provided by the SWRCB and demonstrate compliance with federal laws and regulations including the Clean Water Act, Farmland Protection Policy Act, Migratory Bird Treaty Act, Flood Plain Management Act, Wild and Scenic Rivers Act, and Coastal Zone Management Act. This EIR has been prepared to comply with CEQA-Plus requirements and can be used to support the required federal consultations as described below.

Federal Endangered Species Act

The SWRCB Division of Financial Assistance (Division) is the designated non-federal representative under the FESA for water reclamation projects that involve a SRF loan. To ensure compliance with Section 7 of the FESA, the Division reviews all SRF projects to determine the potential effects to federally listed species. This EIR includes the documentation required by the Division to disclose the proposed project's effects on sensitive species (see Chapter 3.3). The Division staff will use this information to confer informally (and formally if necessary) with the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service, as appropriate.

Federal Clean Air Act

The federal Clean Air Act (FCAA) requires the USEPA to identify National Ambient Air Quality Standards (NAAQS) to protect public health and welfare. NAAQS have been established for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, PM_{10}, $PM_{2.5}$, and lead. Pursuant to the 1990 FCAA Amendments, the USEPA classifies air basins (or portions thereof) as "attainment" or "nonattainment" for these criteria air pollutants, based on whether or not the NAAQS have been achieved. The FCAA requires each state to prepare a State Implementation Plan (SIP), which is an air quality control plan that includes pollution control measures for states that violate the NAAQS. For SRF-funded projects, CEQA-Plus requirements include a FCAA general conformity analysis for projects in a federal nonattainment area or an attainment area subject to a SIP. The proposed project is not in a federal nonattainment area as explained in Chapter 3.2. If a FCAA general conformity analysis is required, the information provided in this EIR would be used to support the analysis.

National Historic Preservation Act

CEQA-Plus requires SRF-funded projects to comply with Section 106 of the National Historic Preservation Act. Consultation with the State Historic Preservation Officer (SHPO) is required to demonstrate/confirm that Section 106 compliance has been achieved. The SWRCB Division's Cultural Resources Officer (CRO) is responsible for the consultation with the SHPO. This EIR and the administrative record includes the information and documentation that the Division CRO is required to provide to the SHPO to initiate the Section 106 consultation, including, (1) identification of the proposed project's Area of Potential Effects (APE), (2) cultural records searches for the APE at the appropriate Information Centers, (3) documentation of Native American consultation, (4) cultural resources field surveys of the APE, (4) evaluations of elements of the built environment in and around the APE that are eligible for the National Register of Historic Places, and (5) Determination of Eligibility for any cultural resources that cannot be avoided during project construction.

1.5 Organization of the Draft EIR

The chapters of this Draft EIR are as follows:

ES. Executive Summary. This chapter summarizes the contents of the Draft EIR.

1. Introduction and Project Background. This chapter discusses the CEQA process and the purpose of the EIR and provides background information for the proposed project.

2. Project Description. This chapter provides an overview of the proposed project, describes the need for and objectives of the proposed project, and provides detail on the characteristics of the proposed project.

3. Environmental Setting, Impacts and Mitigation Measures. This chapter describes the environmental setting and identifies impacts of the proposed project for each of the following environmental resource areas: Aesthetics; Air Quality; Biological Resources; Cultural Resources; Geology, Soils, Seismicity and Mineral Resources; Hazards and Hazardous Materials; Hydrology and Water Quality; Land Use, Agricultural Resources and Recreation; Noise; Public Services and Utilities; Transportation and Traffic; and Environmental Justice. Measures to mitigate the impacts of the proposed project are presented for each resource area where significant potential impacts have been identified.

4. Cumulative Impacts. This chapter describes the potential impacts of the proposed project when considered together with other related projects in the project area.

5. Growth Inducement. This chapter summarizes population projections and water/wastewater demands within the City of Morro Bay and the unincorporated community of Cayucos and describes the potential for the proposed project to induce development.

6. Alternatives Analysis. This chapter presents an overview of the alternatives development process and describes the alternatives to the proposed project that were considered.

7. Report Preparers. This chapter identifies those involved in preparing this Draft EIR, including persons and organizations consulted.

8. Acronyms.

1.6 CEQA Process

1.6.1 Notice of Preparation

In accordance with Sections 15063 and 15082 of the *CEQA Guidelines*, MBCSD prepared a Notice of Preparation (NOP) of an EIR in October 2008 (see Appendix A-1) and a Revised NOP in October 2009 (see Appendix A-2). The City decided to prepare a Revised NOP to inform the public that the project description had been modified from that described in the first NOP. Both NOPs were circulated to local, state, and federal agencies, and to other interested parties. As

indicated in both NOPs, this Draft EIR addresses a full range of resource analyses. The NOPs described the proposed project objectives, the proposed facilities, and the project location.

Written comments were received during the 30-day public review period for each NOP. Comments were received from the Native American Heritage Commission, San Luis Coastal Unified School District, Morro Dunes Trailer Park, San Luis Obispo County Department of Planning and Building, Surfrider Foundation, County of San Luis Obispo Air Pollution Control District, State Water Resources Control Board, California Coastal Commission, San Luis Obispo Science and Ecosystem Alliance, and private citizens. The comment letters are included in Appendix A-1 and Appendix A-2.

1.6.2 Public Scoping Meeting

CEQA recommends conducting early coordination with the general public, appropriate public agencies, and local jurisdictions to assist in developing the scope of the environmental document. Pursuant to *CEQA Guidelines* Section 15083, one public scoping meeting was held on November 18, 2008, at Veterans Memorial Hall in Morro Bay to allow agency consultation and public involvement for the Draft EIR. Public notices were placed in local newspapers informing the general public of the scoping meeting and the availability of the NOP. The purpose of the meeting was to present to the public the proposed project and its potential environmental impacts. Attendees were provided an opportunity to voice comments or concerns regarding potential effects of the proposed project. Verbal comments and written comment received during the scoping meeting are included in the scoping report in Appendix A-1.

1.6.3 Draft EIR

This Draft EIR describes the proposed project and the existing environmental setting, identifies short-term, long-term, and cumulative environmental impacts, identifies mitigation measures for impacts found to be significant, and provides an analysis of project alternatives. The environmental baseline for determining potential impacts is the date the NOP for the proposed project is published (*CEQA Guidelines*, Section 15125(a), in this case October 13, 2009.

Significance criteria have been developed for each environmental resource analyzed in this Draft EIR. The significance criteria are defined at the beginning of each impact analysis section. Impacts are categorized as follows:

Significant and Unavoidable: mitigation might be recommended but impacts are still significant;

Less than Significant with Mitigation: potentially significant impact but mitigated to a less-than-significant level;

Less than Significant: mitigation is not required under CEQA but may be recommended; or

No Impact.

1.6.4 Public Review

This document is being circulated to local, state and federal agencies, and to interested organizations and individuals that may wish to review and comment on the Draft EIR. Publication of this Draft EIR marks the beginning of a 45-day public review period, during which written comments may be directed to the address below. During the 45-day review period, MBCSD will hold two public meetings to receive comments on the Draft EIR, as follows:

Date:	October 4, 2010	October 14, 2010
Time:	6:00 p.m.	6:00 p.m.
Location:	Morro Bay Planning Commission Meeting Morro Bay Veteran's Memorial Building 209 Surf Street Morro Bay, CA	WWTP Joint Powers Agreement Meeting Veterans Hall 10 Cayucos Drive Cayucos, CA

Written comments on the Draft EIR must be received at the following address prior to the end of the 45-day review period.

Rob Livick, PE/PLS
Public Services Director/City Engineer
City of Morro Bay
955 Shasta Avenue
Morro Bay, CA 93442
rlivick@morro-bay.ca.us
Fax: (805) 772-6268

1.6.5 Final Environmental Impact Report Publication

Following the 45-day public review period of this Draft EIR, written and oral comments received in response to the Draft EIR will be addressed in a Response to Comments document, which, together with the Draft EIR, will constitute the Final EIR. When considering the proposed project for approval, the Morro Bay City Council, as the decision-making body for the Lead Agency, will review and consider the information presented in the Final EIR and will certify that the Final EIR has been adequately prepared in accordance with CEQA (*CEQA Guidelines* §15090). The City Council shall make Findings regarding any significant, unavoidable environmental effects identified in the Final EIR, and if necessary, adopt Statements of Overriding Considerations regarding these impacts (*CEQA Guidelines* §15091, §15092, §15093). Once the Final EIR has been certified and the project approved, the City of Morro Bay will file a Notice of Determination (NOD) with the County of San Luis Obispo and the State Clearinghouse (*CEQA Guidelines* §15094).

The Cayucos Sanitary District (CSD) as the Responsible Agency also will adopt the certified Final EIR and file a separate NOD prior to implementing the proposed project. CSD also shall make Findings and adopt Statements of Overriding Considerations for any significant, unavoidable environmental effects identified in the Final EIR (*CEQA Guidelines* §15096(h)).

1.5.6 Mitigation Monitoring and Reporting Program

CEQA requires lead agencies to adopt a reporting and mitigation monitoring program for the changes to the project that it has adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment (CEQA §21081.6, *CEQA Guidelines* §15097). A Mitigation Monitoring and Reporting Plan (MMRP) for the proposed project will be prepared based on the mitigation measures included in the Final EIR and will be included in the Findings made by the City of Morro Bay and CSD.

1.7 Project Background

1.7.1 MBCSD WWTP Existing Facilities

The WWTP is owned and operated by the City of Morro Bay and CSD. Currently, the WWTP is rated for an average dry weather flow (ADWF) of 2.06 million gallons per day (mgd), a peak seasonal dry weather flow (PSDWF) of 2.36 mgd, and a peak hour flow (PHF) of 6.6 mgd. The secondary treatment facilities have a design capacity of 0.97 mgd. Generally speaking, flows in excess of 0.97 mgd receive primary treatment only and the primary effluent is blended with the secondary effluent (Carollo, 2007). More specifically, when instantaneous flow at the WWTP exceeds approximately 2,100 gallons per minute (gpm) for 30 minutes, then primary and secondary treated effluent is blended. The blending valve is typically open only during rain events or holiday weekends. The effluent blend is disinfected by chlorination and then dechlorinated before it is discharged through a 27-inch diameter pipeline that extends 2,900 feet offshore into the Pacific Ocean (RWQCB, 2008). The outfall terminates in approximately 50 feet of water where a diffuser system is used to achieve a minimum dilution of 133 parts seawater for every part effluent (RWQCB, 2008). Between 1995 and 2009, WWTP treated an annual average measured daily flow of 1.25 mgd. In 2009, the WWTP treated an average measured daily flow of 1.092 mgd. Thus, most of the effluent receives secondary treatment during most of the year.

The WWTP currently treats and stabilizes biosolids using anaerobic digestion. After digestion, the biosolids are applied to sludge drying beds, where they are dried to an average solids concentration of 80 percent. The biosolids produced at the WWTP are certified as USEPA Class B biosolids. These dried solids are either hauled away by San Joaquin Composting or composted onsite at the WWTP. The biosolids that are hauled away by San Joaquin Composting are later composted and then land applied at McCarthy Farms in Kings County. The biosolids that are further processed onsite at the WWTP are composted to exceptional quality (EQ) USEPA Class A biosolids and then provided free of charge to the local community for application as a soil amendment.

1.7.2 WWTP Facility Master Plan Report

The WWTP is owned and operated through a Joint Powers Agreement (JPA) Board, which is comprised of members from the City of Morro Bay City Council and the CSD Board. The JPA Board commissioned Carollo Engineers to develop and evaluate various project alternatives for the proposed WWTP upgrade through the 20-year planning period ending in 2026. The results of

the alternatives screening analysis are summarized in the *WWTP Facility Master Plan Report* (Carollo, 2006) and the *Facility Master Plan, Amendment No. 1* (Carollo, 2009). Together these documents evaluate the wastewater treatment facilities needed to upgrade the WWTP to provide either full secondary or tertiary treatment capacity of up to 1.5 mgd.

Subsequently, MBCSD commissioned MWH to prepare *Amendment No. 2* to the *WWTP Facility Master Plan Report* as the first task in the scope of work for the design phase of the project. *Amendment No. 2* reflects similar design criteria and treatment technology presented in *Amendment No. 1*. Adjustments include updates to design flows and loadings to reflect longer periods of record, conceptual plant configuration adjustments to consolidate facilities and improve plant hydraulics, and supplements and supersedes certain details presented in *Amendment No. 1*. Based on the alternatives presented in the *Facility Master Plan* and *Amendments No. 1* and *2*, the JPA Board voted to upgrade the treatment plant to provide full secondary treatment using an oxidation ditch plus tertiary filtration, to discontinue partial on-site composting, and to plan for future facility improvements that would produce 0.4 mgd (first phase) of disinfected tertiary recycled water in accordance with Title 22 standards (see details below).

1.7.3 Regulatory Background

CWA 301(h) Modified NPDES Permit

The WWTP currently discharges to the Pacific Ocean and is therefore regulated by a National Pollutant Discharge Elimination System (NPDES) Permit in accordance with Section 402 of the federal Clean Water Act. USEPA or the California Regional Water Quality Control Board issues (or reissues) NPDES permits to wastewater dischargers every five years. The WWTP currently discharges under Waste Discharge Requirements (WDR) Order No. R3-2008-0065 and NPDES Permit No. CA0047881. This permit is a modified NPDES permit with a Clean Water Act (CWA) Section 301(h) waiver, which waives full secondary treatment requirements for biochemical oxygen demand (BOD_5) and total suspended solids (TSS). The permit requires MBCSD to remove, “as a 30-day average, at least 75 percent of TSS and 30 percent of BOD_5 from the influent stream before discharging wastewater to the ocean” (RWQCB, 2008). In addition, the permit requires a 30-day average TSS effluent limit of 70 mg/L and 30-day average BOD_5 effluent limit of 120 mg/L.

The permit also implements the California Ocean Plan. In order to protect designated beneficial uses of the Pacific Ocean, the California Ocean Plan establishes water quality objectives for California’s ocean waters and provides the basis for regulation of wastes discharged in the state’s coastal waters (SWRCB, 2005). The effluent limitations contained in the permit are protective of marine beneficial uses in the vicinity of the WWTP discharge point assuming the minimum dilution ratio of 133:1 at the WWTP outfall diffuser (RWQCB, 2008; SWRCB, 2005).

History of NPDES Permit

The MBCSD WWTP was constructed in 1954, with upgrades performed in 1964 to increase the plant’s capacity to 1.0 mgd, in 1982 to extend the outfall structure further offshore, and in 1983 through 1985 to increase the capacity to its current PSDWF of 2.36 mgd (SWRCB, 2006). In

1981, prior to the second capacity upgrade, the City of Morro Bay created a new design for the plant in order to meet federal secondary treatment standards, but State and federal financial aid were unavailable for the improvements and the design was modified to provide secondary treatment only to the majority of the effluent (up to 0.97 mgd). In 1985, the Central Coast RWQCB issued the plant's first CWA Section 301 (h) Modified NPDES permit, which established acceptable modified secondary treatment requirements.

The permit has been re-issued three times, in 1993, 1999, and 2008. Prior to the expiration of the second reissued permit, RWQCB staff requested MBCSD consider upgrading the entire facility to full secondary treatment, instead of requesting a new permit. MBCSD reviewed their options and determined that a quick upgrade was not feasible and in July of 2003 requested the third reissuance of the permit. The permit expired on March 1, 2004 and was administratively extended until a decision was reached regarding MBCSD's waiver application.

USEPA agreed to re-issue MBCSD's 301 (h) permit in November of 2005. An upgrade plan was devised by MBCSD and presented to RWQCB staff, requiring an eight year timeline to complete the full upgrade by March 31, 2014. A Settlement Agreement was written and approved in December 2005 by both entities and allows RWQCB to enforce the timeline of the conversion schedule. The RWQCB approved re-issuance of the permit in December 2008. During the upgrade the permit needs to be re-issued one more time due to the permit's five-year life span.

Future NPDES Permit Requirements

After implementation of the proposed project, the WWTP effluent would be able to meet full secondary standards as required by the California Code of Regulations Title 40, Part 133, Secondary Treatment Regulation (40CFR Part 133). The upgraded WWTP facilities would be subject to these treatment standards as a condition of the NPDES permit, requiring MBCSD to remove, as a 30-day average, at least 85 percent of both TSS and BOD_5 from the influent stream before discharging wastewater to the ocean. In addition, the 30-day average effluent limit would be 30 mg/L for both TSS and BOD_5 (40CFR Part 133).

Title 22 Regulations for Recycled Water

The California Department of Public Health (CDPH), formerly the California Department of Health Services (CDHS), is responsible for regulating the use of recycled water in California. Title 22 of the California Code of Regulations (CCR) includes Water Recycling Criteria (CCR Title 22, Division 4, Chapter 3) that regulate the use of recycled water through health-based water quality standards and treatment reliability criteria for recycled water. Title 22 identifies the allowable end uses for recycled water and the associated minimum treatment requirements for each end use (CCR Title 22, Division 4, Chapter 3, Article 3, Uses of Recycled Water). **Table 1-1,** beginning on page 1-11, summarizes the suitable uses of recycled water as defined by the January 2009 revision of Title 22.

Title 22 sets bacteriological water quality standards based on the expected degree of public contact with recycled water. Title 22 establishes four categories of recycled water: disinfected tertiary, disinfected secondary-2.2, disinfected secondary-23, and undisinfected secondary

recycled water. Disinfected tertiary treatment of recycled water is required for use involving direct public contact. Disinfected tertiary recycled water is defined as a filtered and subsequently disinfected wastewater. Secondary treatment of recycled water is required for applications with a lower potential for public contact. There are three levels of secondary treatment based on the amount of disinfection: disinfected secondary-2.2; disinfected secondary-23; and undisinfected secondary. Disinfected secondary-2.2 recycled water is defined as recycled water that has been oxidized and disinfected so that the median concentration of total coliform bacteria in the disinfected effluent does not exceed a most probable number (mpn) of 2.2 per 100 milliliters of sample. Disinfected secondary-23 recycled water has been oxidized and disinfected so that the median concentration of total coliform bacteria in the disinfected effluent does not exceed a mpn of 23 per 100 milliliters of sample. Undisinfected secondary recycled water is oxidized wastewater.

The proposed project would provide full secondary treatment for all effluent discharged through its ocean outfall and provide tertiary filtration capacity equivalent to the PSDWF of 1.5 mgd. The tertiary filtered effluent would meet Title 22 standards for disinfected secondary-23 recycled water and as such could be used for certain beneficial uses as listed in Table 1-1. MBCSD is planning for future improvements to the proposed project that would produce 0.4 mgd (first phase) of disinfected tertiary recycled water that meets Title 22 standards for unrestricted use as listed in Table 1-1.

Title 22 Exceptions to Uses of Recycled Water

Title 22 regulates the use of recycled water and also includes exceptions to these regulations under certain conditions (CCR Title 22, Division 4, Chapter 3, Article 3, Uses of Recycled Water, Section 60303, Exceptions). The latest adopted version of Title 22 states that the requirements for use of recycled water for various purposes shall not apply to the use of recycled water onsite at a water recycling plant, or wastewater treatment plant, provided access by the public to the area of on-site recycled water use is restricted. The proposed project would meet this exception; tertiary filtered water, or water meeting Title 22 standards for disinfected secondary-23 recycled water, could be used onsite in areas that are restricted to the public.

TABLE 1-1
REGULATORY REQUIREMENTS FOR RECYCLED WATER USES IN CALIFORNIA[a]

		Treatment Level		
Use of Recycled Water	**Disinfected Tertiary Recycled Water**	**Disinfected Secondary-2.2 Recycled Water**	**Disinfected Secondary-23 Recycled Water**	**Undisinfected Secondary Recycled Water**
Irrigation				
Food crops where recycled water contacts the edible portion of the crop, including all root crops	Allowed	Not allowed	Not allowed	Not allowed
Parks and playgrounds	Allowed	Not allowed	Not allowed	Not allowed
School yards	Allowed	Not allowed	Not allowed	Not allowed
Residential landscaping	Allowed	Not allowed	Not allowed	Not allowed
Unrestricted-access golf courses	Allowed	Not allowed	Not allowed	Not allowed
Any other irrigation uses not prohibited by other provisions of the California Code of Regulations	Allowed	Not allowed	Not allowed	Not allowed
Food crops, surface-irrigated, above-ground edible portion, and not contacted by recycled water	Allowed	Allowed	Not allowed	Not allowed
Cemeteries	Allowed	Allowed	Allowed	Not allowed
Freeway landscaping	Allowed	Allowed	Allowed	Not allowed
Restricted-access golf courses	Allowed	Allowed	Allowed	Not allowed
Ornamental nursery stock and sod farms with unrestricted public access	Allowed	Allowed	Allowed	Not allowed
Pasture for milk animals for human consumption	Allowed	Allowed	Allowed	Not allowed
Nonedible vegetation with access control to prevent use as a park, playground or schoolyard	Allowed	Allowed	Allowed	Not allowed
Orchards with no contact between edible portion and recycled water	Allowed	Allowed	Allowed	Allowed
Vineyards with no contact between edible portion and recycled water	Allowed	Allowed	Allowed	Allowed
Non food-bearing trees, including Christmas trees not irrigated less than 14 days before harvest	Allowed	Allowed	Allowed	Allowed
Fodder and fiber crops and pasture for animals not producing milk for human consumption	Allowed	Allowed	Allowed	Allowed
Seed crops not eaten by humans	Allowed	Allowed	Allowed	Allowed
Food crops undergoing commercial pathogen-destroying processing before consumption by humans	Allowed	Allowed	Allowed	Allowed
Supply for Impoundment				
Nonrestricted recreational impoundments, with supplemental monitoring for pathogenic organisms	Allowed[b]	Not allowed	Not allowed	Not allowed
Restricted recreational impoundments and publicly accessible fish hatcheries	Allowed	Allowed	Not allowed	Not allowed
Landscape impoundments without decorative fountains	Allowed	Allowed	Allowed	Not allowed

TABLE 1-1
REGULATORY REQUIREMENTS FOR RECYCLED WATER USES IN CALIFORNIA[a]

		Treatment Level		
Use of Recycled Water	**Disinfected Tertiary Recycled Water**	**Disinfected Secondary-2.2 Recycled Water**	**Disinfected Secondary-23 Recycled Water**	**Undisinfected Secondary Recycled Water**
Supply for Cooling or Air Conditioning				
Industrial or commercial cooling or air conditioning involving cooling tower, evaporative condenser, or spraying that creates a mist	Allowed[c]	Not allowed	Not allowed	Not allowed
Industrial or commercial cooling or air conditioning not involving cooling tower, evaporative condenser, or spraying that creates a mist	Allowed	Allowed	Allowed	Not allowed
Other Uses				
Groundwater Recharge	Allowed under special case-by-case permits by RWQCBs[d]			
Flushing toilets and urinals	Allowed	Not allowed	Not allowed	Not allowed
Priming drain traps	Allowed	Not allowed	Not allowed	Not allowed
Industrial process water that may contact workers	Allowed	Not allowed	Not allowed	Not allowed
Structural fire fighting	Allowed	Not allowed	Not allowed	Not allowed
Decorative fountains	Allowed	Not allowed	Not allowed	Not allowed
Commercial laundries	Allowed	Not allowed	Not allowed	Not allowed
Consolidation of backfill material around potable water pipelines	Allowed	Not allowed	Not allowed	Not allowed
Artificial snow making for commercial outdoor uses	Allowed	Not allowed	Not allowed	Not allowed
Commercial car washes, not heating the water, excluding the general public from washing process	Allowed	Not allowed	Not allowed	Not allowed
Industrial process water that will not come into contact with workers	Allowed	Allowed	Allowed	Not allowed
Industrial boiler feed	Allowed	Allowed	Allowed	Not allowed
Nonstructural fire fighting	Allowed	Allowed	Allowed	Not allowed
Backfill consolidation around non-potable piping	Allowed	Allowed	Allowed	Not allowed
Soil compaction	Allowed	Allowed	Allowed	Not allowed
Mixing concrete	Allowed	Allowed	Allowed	Not allowed
Dust control on roads and streets	Allowed	Allowed	Allowed	Not allowed
Cleaning roads, sidewalks and outdoor work areas	Allowed	Allowed	Allowed	Not allowed
Flushing sanitary sewers	Allowed	Allowed	Allowed	Allowed

(a) Refer to the full text of the December 2, 2000 version of Title 22: California Code of Regulations, Chapter 3 Water Recycling Criteria. This chart is only an informal summary of the uses allowed in this version. The complete and final 12/02/2000 version of the adopted criteria can be downloaded from: http://www.cdph.ca.gov/healthinfo/environhealth/water/Pages/Waterrecycling.aspx.
(b) Allowed with "conventional tertiary treatment." Additional monitoring for two years or more is necessary with direct filtration.
(c) Drift eliminators and/or biocides are required if public or employees can be exposed to mist.
(d) Refer to Groundwater Recharge Guidelines, available from the CDPH.

SOURCE: CCR Title 22, Division 4, Chapter 3, Article 3, Uses of Recycled Water; California Department of Public Health, Regulations Related to Recycled Water, Updated January 2009.

References – Introduction

California Department of Public Health (CDPH), *Recycled Water Regulations, Titles 22 and 17 California Code of Regulations*, updated January 2009.

Carollo Engineers. Wastewater Treatment Plan Facility Master Plan, September 2007.

Central Coast Regional Water Quality Control Board (RWQCB), 2008. Order No. R3-2008-0065, NPDES Permit No. CA0047881, Waste Discharges Requirements For The Morro Bay And Cayucos Wastewater Treatment Plant Discharges To The Pacific Ocean, Morro Bay, San Luis Obispo County, adopted December 4, 2008.

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CHAPTER 2
Project Description

2.1 Introduction

MBCSD proposes the Morro Bay-Cayucos Wastewater Treatment Plant (WWTP) Upgrade Project to provide full secondary treatment for all effluent discharged through its ocean outfall and to provide tertiary filtration capacity equivalent to a PSDWF of 1.5 mgd. The tertiary filtered effluent would meet Title 22 standards for disinfected secondary-23 recycled water and as such could be used for limited beneficial uses. The WWTP Upgrade Project (proposed project) would accommodate future improvements to produce disinfected tertiary recycled water for unrestricted use in accordance with Title 22 standards (see Chapter 1). MBCSD anticipates reclaimed water end uses would include, but not be limited to, treatment process applications onsite at the WWTP, landscape irrigation around the perimeter of the WWTP, and offsite municipal and industrial (M&I) applications such as dust control, municipal landscape irrigation, street cleaning, and agricultural irrigation.

MBCSD approved the Final WWTP Facility Master Plan (including Amendments 1 and 2) in July 2010 (Carollo Engineers, 2007, 2009; MWH, 2010). In accordance with the Final FMP, the proposed project would construct replacement treatment and support facilities on a 3.3-acre site that includes portions of the existing plant, a portion of the City's Corporation Yard, and a portion of the Hanson Heidelberg Cement Group lease site. Once the new treatment facilities are operational, the existing facilities would be demolished. The proposed project is intended to improve water quality of the treated effluent and would not increase the flow capacity of the WWTP.

2.2 Project Need and Objectives

The WWTP is operated under a National Pollutant Discharge Elimination System (NPDES) Permit (No. CA0047881) issued by the USEPA and the Central Coast RWQCB. The current NPDES permit allows for the discharge of a blend of primary and secondary treated effluent to the ocean through the existing 27-inch diameter outfall pipeline. This discharge is in accordance with Section 301(h) of the federal Clean Water Act that modifies the requirement for full secondary treatment in certain cases. MBCSD has made a commitment to the Central Coast RWQCB to phase out the need for the 301(h) modified discharge permit by upgrading the WWTP to at least full secondary treatment. The proposed project would construct facilities to provide full secondary treatment for all effluent discharged through its ocean outfall and to

provide enhanced treatment with tertiary filtration capacity equivalent to the peak season dry weather flow (PSDWF) of 1.5 mgd.

The existing WWTP is located in a 100-year flood zone as designated by the Federal Emergency Management Agency (FEMA). The existing WWTP site is subject to inundation from a 100-year storm event to depths ranging from 3.0 to 4.5 feet (Wallace Group, 2009). The results of a Flood Hazard Analysis prepared for the WWTP Upgrade Project indicate that the flood elevation on neighboring properties would increase if new facilities are built within the existing WWTP footprint (Wallace Group, 2009). The Final WWTP Facility Master Plan recommends a replacement WWTP be built immediately south of the existing facilities on engineered fill to raise the finished grade above the 100-year flood elevation. This would mitigate potential flooding both onsite and offsite.

The objectives of the proposed project are as follows:

- Comply with the secondary treatment standards contained in 40 CFR Part 133;[1]
- Phase out the need for a 301(h) modified discharge permit;
- Minimize flooding impacts onsite at the WWTP and adjoining properties; and
- Accommodate future installation of reclamation capability to meet Title 22 requirements for disinfected tertiary recycled water for unrestricted use.

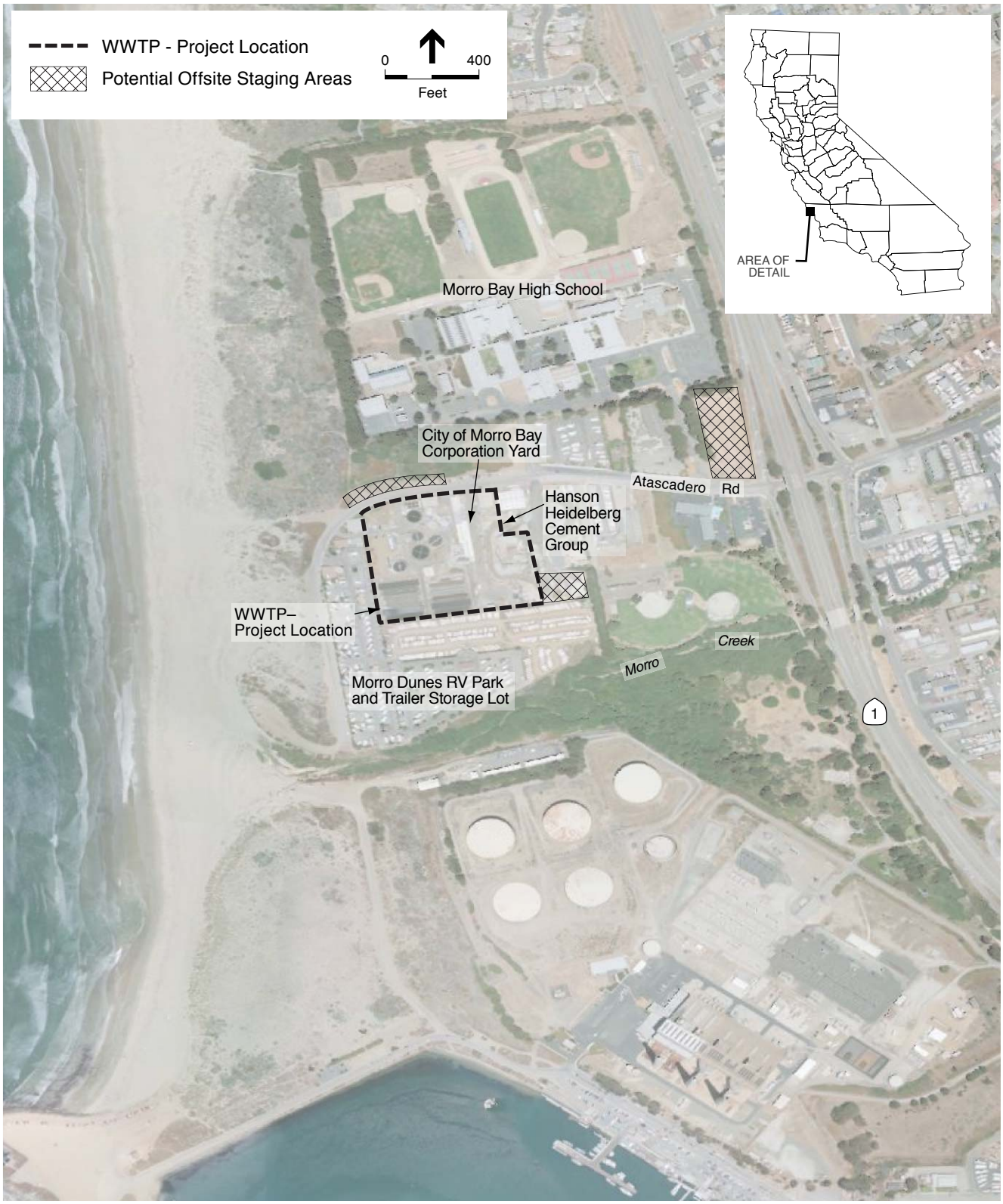
2.3 Project Location

The Morro Bay-Cayucos WWTP is located at 160 Atascadero Road in the City of Morro Bay in San Luis Obispo County (**Figure 2-1**). The City of Morro Bay and the unincorporated community of Cayucos are located on the coast of California along State Route 1 approximately 14 miles northwest of the City of San Luis Obispo. The WWTP is located in the coastal zone and is adjacent to Morro Dunes R.V. Park and Trailer Storage, Morro Bay High School, Morro Creek, the City of Morro Bay Corporation Yard, and Hanson Heidelberg Cement Group (cement plant) (Figure 2-1).

2.4 Description of Proposed Project

Similar to the existing WWTP, the new WWTP would be owned and operated by JPA. The new WWTP would be constructed within the project boundary as shown in **Figure 2-2**. The new treatment facilities would be built largely in the footprint of the existing sludge drying beds. As a result, temporary solids handling facilities would be required during construction of the new WWTP. Once the new treatment facilities are complete and brought online, the existing treatment facilities, electrical equipment, and yard piping (as shown in Figure 2-2) would be decommissioned and demolished. After demolition of the existing facilities, the vacant area would be graded and finished with a surface treatment of either pavement or rock to create a flood flow pathway. The existing ocean outfall would continue to be used to discharge the treated effluent to Estero Bay.

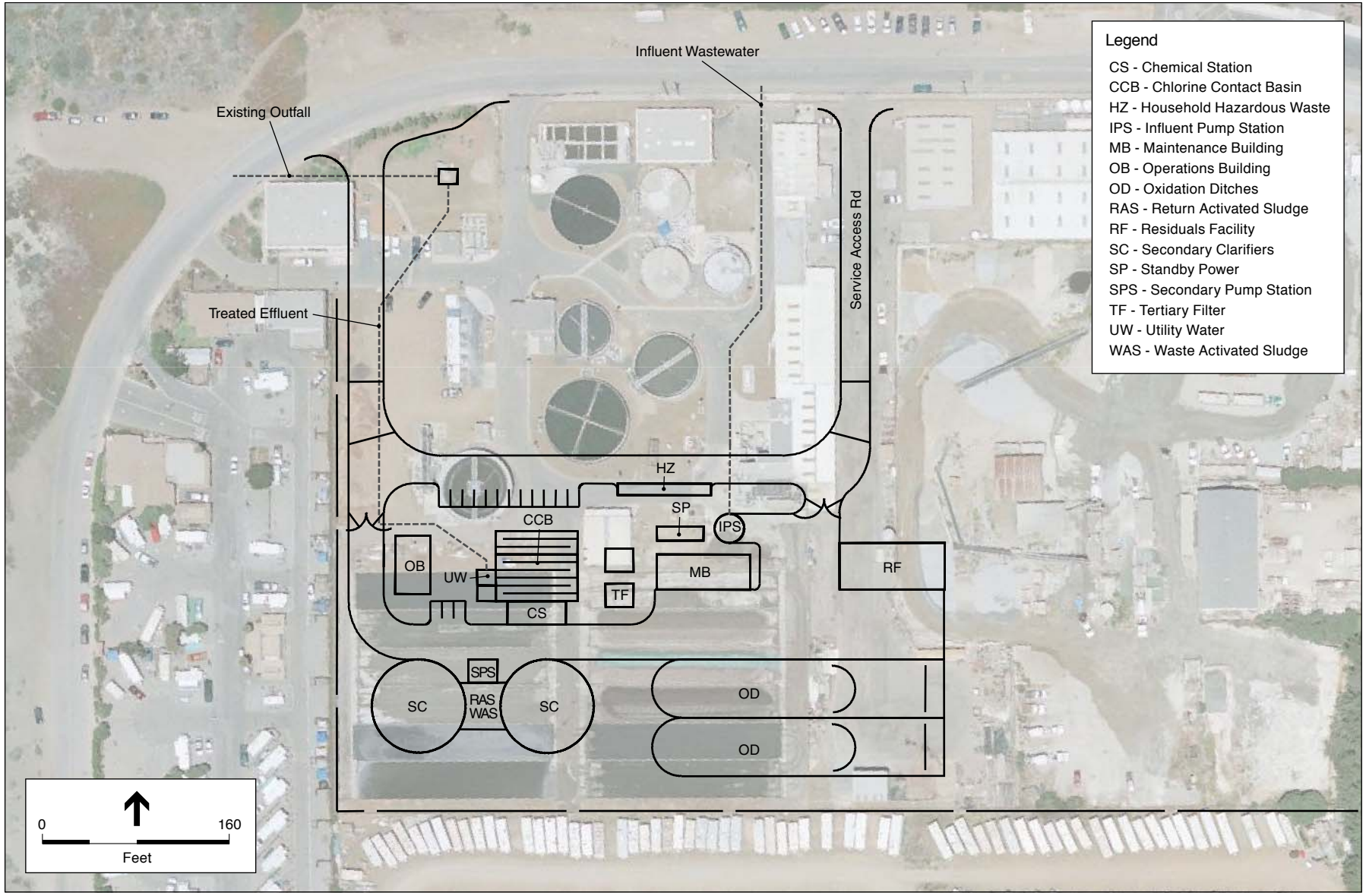
[1] 2002 Code of Federal Regulations (CFR) Title 40, Protection of the Environment, Chapter 1, Environmental Protection Agency, Part 133, Secondary Treatment Regulation.



SOURCE: GlobeXplorer; ESA, 2010

Morro Bay Cayucos Wastewater Treatment Plant EIR . 208013

Figure 2-1
Project Vicinity



SOURCE: MWH, 2010.

Morro Bay Cayucos Wastewater Treatment Plant EIR . 208013

Figure 2-2
Site Layout

The existing onsite composting program would be discontinued. Dewatered sludge produced at the new treatment facilities would be hauled offsite for composting or otherwise processed and disposed in accordance with federal and state regulations. MBCSD expects to continue using San Joaquin Composting to haul dewatered sludge offsite for composting at their facility in western Kern County. The compost then would be land applied at McCarthy Farms in Kings County. However, other potential haulers exist in the central coast region, including Santa Barbara County.

The physical improvements associated with the new treatment facilities include construction of the following components, as shown in Figure 2-2. A visual simulation of these proposed facilities is included as **Figure 2-3**:

- Influent Pump Station,
- Residuals Facility,
- Oxidation Ditches,
- Secondary Clarifiers,
- RAS/WAS Pump Station,
- Secondary Pump Station,
- Tertiary Filter,
- Chlorine Contact Basin/Chemical Station,
- Utility Water Station,
- Standby Power Generator,
- IWMA Household Hazardous Waste Drop-Off Facility,
- Maintenance Building, and
- Operations Building

In addition, two new paved access roads would be installed from Atascadero Road, one to provide access to the WWTP for staff, maintenance vehicles, and deliveries, and one to provide separate public access to the Operations Building. New security fencing and landscaping would be installed around the perimeter of the project area. The configuration of facilities shown in Figure 2-2 is preliminary and subject to change during the design engineering process for the proposed project.

2.4.1 Treatment Facilities

The proposed project would include installation of an extended aeration activated sludge process (EAAS) to treat the entire effluent stream at a PSDWF of approximately 1.5 mgd. The general treatment concept includes pretreatment of influent wastewater, extended aeration with oxidation ditches and secondary clarifiers, tertiary filtration, effluent disinfection, and solids handling.

Influent Pump Station

Wastewater is delivered to the WWTP via gravity sewers. Influent would be lifted at a new Influent Pump Station and subsequently flow to the Residuals Facility. The Influent Pump Station would consist of submersible pumps located in a below-grade wet well. Multiple pumps with

variable speed drives would be provided to meet the expected range of influent flow with overlapping capacities.

Residuals Facility

The Residuals Facility would include screening and grit removal units for pretreatment of the influent wastewater to screen out large objects, such as inert debris, rags, and plastics, and to remove grit (gravel, sand, and silts) for protection of the downstream treatment processes. The Residuals Facility also would house the sludge dewatering facilities. The Residual Facility would be a partially-enclosed two-story building with three full-height exterior walls (west, north, and east) to provide protection from prevailing winds and to provide architectural treatment of building facades that would be visible to the public. The south side would face the interior of the plant. **Figure 2-4** illustrates the conceptual design for the Residuals Facility.

The Residuals Facility would include the following pretreatment facilities: mechanical fine screens, screenings conveyance, screening washer/compactors, grit removal unit, grit slurry pumps and grit washer. The washed and compacted screenings and washed grit would be discharged into residuals bin(s) for offsite disposal. One to two truck trips per week would be anticipated for hauling screenings and grit residuals from the WWTP site.

The Residuals Facility would include the following sludge handling facilities: sludge dewatering units, such as belt presses, centrifuges or rotary screw presses, and a polymer handling and feed system. The polymer system would condition the sludge prior to dewatering. Dewatered sludge would be discharged to a roll-off bin for offsite processing and disposal. Up to ten truck trips per week would be anticipated for hauling sludge from the WWTP under average conditions and up to 16 truck trips per week would be anticipated for hauling sludge from the WWTP during PSDW conditions (July – August).

Oxidation Ditches

Oxidation ditch treatment technology utilizes an EAAS process with secondary clarifiers to achieve removal of biological oxygen demand (BOD), total suspended solids (TSS), and ammonia (NH3) and to produce high quality effluent suitable for tertiary filtration. The oxidation ditch technology provides reliable, robust biological treatment and is easy to operate and maintain. The oxidation ditches would be partially-covered, oval-shaped channels equipped with mechanical aeration devices where the pre-screened wastewater would be aerated as it circulates around the ditch. Having two ditches would allow one unit to be taken offline for maintenance by temporarily increasing the flow to the other ditch. Each oxidation ditch basin would be approximately 50 feet in width and 215 to 250 feet in length with a side-water depth ranging from 12 to 15 feet. The top of the oxidation ditches are anticipated to range from 10 to 15 feet above grade.

SOURCE: RRM Design Group, 2010

Figure 2-3
Site Layout, Visual Simulation
Looking East

Residuals Facility

Residuals Facility Rear

SOURCE: MWH, 2010

Figure 2-4
Conceptual Design
Residuals Facility

Secondary Clarifiers and Pump Station

Wastewater would flow from the oxidation ditches to the secondary clarifiers. Secondary clarifiers are open-air circular tanks that provide gravity separation of the suspended biological solids produced by the oxidation ditch. The biological solids settle and form a sludge blanket in the lower zone of the clarifier. The clarified effluent forms a clear water zone above the sludge blanket that would be lifted to the tertiary filters by the secondary pump station. The sludge in the lower zone settles and would be withdrawn by pumps and returned to the oxidation ditches as return activated sludge (RAS). The RAS supplies biological solids for treatment of influent wastewater. Periodically, a portion of the settled sludge is removed as waste activated sludge (WAS). The WAS is pumped to the sludge dewatering system at the Residuals Facility. The RAS and WAS pumps would be located in a recessed area between the secondary clarifiers and shielded by the secondary pump station. The secondary pump station would be partially below grade and extend to the height of the secondary clarifiers. Each secondary clarifier will be approximately 80 feet in diameter with a side-water depth ranging from 15 to 16 feet. The top of the secondary clarifiers is anticipated to range from 5 to 7 feet above grade.

Tertiary Filter and Disinfection

Secondary treated effluent is pumped from the secondary clarifiers to the tertiary filter to further improve effluent quality. The tertiary filter would be a cloth filter or equivalent unit that provides a high degree of suspended solids removal and is suitable to produce reclaimed water in the future. The tertiary effluent would be disinfected at the chlorine contact basin (CCB) utilizing sodium hypochlorite (bleach) for disinfection and sodium bisulfite to remove any chlorine residual prior to discharge through the ocean outfall. This process is similar to the disinfection process currently in use at the existing WWTP.

The CCB would be an open-air two-chamber basin to facilitate operation and maintenance functions and to accommodate future reclaimed water production. Disinfection requires continued use of sodium hypochlorite (NaOCl) and sodium bisulfite ($NaHSO_3$). Chemical storage and feed equipment would be housed in the new chemical station adjacent to the CCB. The CCB would be approximately 40 feet in width and 70 feet in length with a side-water depth of 8 feet. The top of the CCB is anticipated to be approximately 10 feet above grade. The chemical station would be located at grade and sheltered by the CCB to the north and partially roofed.

A utility water station would be installed to provide tertiary filtered water for ancillary water demands onsite including industrial plant processes that are not subject to human contact, such as enclosed spray water and seal water. The use of tertiary filtered water onsite at the WWTP is exempted under Title 22 (See Chapter 1). Nonetheless, the tertiary effluent would meet Title 22 standards for disinfected secondary-23 recycled water and could be used for such industrial processes that do not come into contact with workers (see Table 1-1 in Chapter 1). In addition, the utility water station would include a truck filling station for disinfected secondary-23 recycled water for potential offsite uses such as soil compaction, concrete mixing, dust control, roadway cleaning, and flushing sewers. If future improvements described below are implemented, the truck filling station would be used for disinfected tertiary recycled water suitable for unrestricted use as well.

Future Reclaimed Water Facilities

As described in the Final WWTP Facility Master Plan (Amendment 2; MWH, 2010), the new treatment facilities would be designed to accommodate future improvements to meet Title 22 requirements for disinfected tertiary-treated effluent for unrestricted use. Future upgrades would include an additional tertiary filter, reclaimed water pump station, ancillary onsite components to allow for beneficial reuse of reclaimed water at the WWTP, and improvements to the truck filling station to facilitate offsite municipal and industrial (M&I) beneficial uses using water trucks for distribution. No offsite distribution infrastructure for reclaimed water is anticipated at this time.

2.4.2 Ancillary Facilities

Standby Power

A diesel engine-generator would provide standby power to operate the new WWTP in the event of an electrical power outage. The engine-generator set would be in a self-contained outdoor enclosure with a fuel tank. The fuel tank would also be used for fueling WWTP vehicles. Preliminary assessments indicate an approximate engine-generator capacity of 800 kilowatts (kW) would be required.

Operations and Maintenance Buildings

The new operations building would be a two-story structure with a total floor area of approximately 3,200 square feet (sf) and would house new administrative offices, laboratory, the control room, locker rooms, a break room, and a conference room. The new maintenance building would be approximately 2,600 sf and would house the workshop, tools, spare parts, bridge crane, and electrical room. The electrical room (approximately 1,000 sf) would house switchgear, motor control centers, and variable frequency drives for the treatment plant equipment. **Figure 2-5** illustrates conceptual designs for the operations building and maintenance building, respectively.

Household Hazardous Waste Station

The Household Hazardous Waste Drop-Off Facility, operated by the IWMA and currently located onsite at the existing WWTP, provides residents with a location to drop off household hazardous waste on Saturdays between 11 AM and 3 PM. Household materials that are considered hazardous by USEPA regulations include paint products, automotive products, and electronic waste. This facility may be relocated as part of the proposed project.

Due to space constraints, the placement of engineered fill and the relocation of the Household Hazardous Waste Drop-off Facility would be deferred until the end of the WWTP Upgrade Project construction after the existing WWTP facilities are demolished. If relocated to the new WWTP site, the Household Hazardous Waste Drop-off Facility would be similarly sized and placed on engineered fill to raise the facility above the 100-year flood elevation or the facility would be designed to be removed in the event of flooding. The relocated facility would be positioned to provide accessibility for the public. (Refer to Figure 2-2 for potential location.)

Operations Building

Maintenance Building

SOURCE: MWH, 2010

Figure 2-5
Conceptual Design
Operations and
Maintenance Buildings

2.4.3 Biosolids Management

The proposed project would change the process for sludge management at the WWTP. Currently, primary and secondary sludges produced at the WWTP are processed with anaerobic digesters and sludge drying beds. Dried solids are either hauled offsite for further treatment or composted onsite in windrows. The sludges currently stabilized at the WWTP are certified as USEPA Class B biosolids as defined by 40 CFR Part 503, Standards for the Use or Disposal of Sewage Sludge. The existing onsite composting program would be discontinued, and the anaerobic digesters and sludge drying beds would be demolished. The new WWTP would be located in the portion of the site that contains the existing sludge drying beds. The sludge drying beds would be demolished for placement of engineered fill to raise the site above the 100-year flood elevation and to support the new treatment facilities. The proposed project would involve construction of new sludge dewatering facilities that would be consolidated within a common Residuals Facility, along with screenings and grit removal, to centralize truck traffic and better accommodate the potential for future odor control. The sludge produced at the new treatment facility would be considered unclassified.

Temporary Solids Handling Facility

A temporary solids handling facility would be required to provide sludge dewatering during construction of the new WWTP. During construction, the existing WWTP will continue to operate and generate digested sludge. In lieu of routing the digested sludge to the existing sludge drying beds, the digested sludge would be dewatered with temporary equipment and hauled off-site for disposal. MBCSD would furnish and operate the temporary solids handling facilities. Two approaches would be evaluated during preliminary design of the proposed project:

- Leasing of temporary sludge dewatering equipment; or
- Pre-purchase of sludge dewatering equipment that would subsequently be relocated at the Residuals Facility for permanent installation as part of the WWTP Upgrade Project.

2.4.4 Reclaimed Water End Uses

The new treatment facilities would produce tertiary filtered effluent that meets Title 22 standards for disinfected secondary-23 recycled water. This disinfected secondary-23 effluent would be used onsite at the WWTP for industrial processes and potentially offsite for applications such as soil compaction, mixing concrete, dust control, cleaning roadways, and flushing sewers, in accordance with Title 22 (see Table 1-1). The new treatment facilities would be designed to accommodate future improvements to include reclaimed water facilities that would produce disinfected tertiary-treated recycled water for unrestricted use as defined by Title 22. MBCSD anticipates additional future reclaimed water end uses would include, but not be limited to, the following: landscape irrigation around the perimeter of the WWTP, municipal landscape irrigation, and agricultural irrigation. The City of Morro Bay would act as the recycled water purveyor, providing retail service for recycled water within the service area boundaries of the City and, with authorization of the City Council, outside the City limits such as to the community of Cayucos (Morro Bay Municipal Code 13.08.010).

2.4.5 Architecture and Landscaping

The residuals facility, operations building, and maintenance building would be designed with a consistent architectural theme that would be compatible with the project site and its surroundings. Potential exterior treatments include reinforced concrete, concrete masonry block, or some combination of the two. Exterior ferrous metals would be avoided due to the marine salt air environment. Concept designs for the new WWTP facilities are illustrated in Figures 2-4 and 2-5. These designs and materials are preliminary and subject to change.

Security fencing would be installed around the perimeter of the new WWTP. Perimeter landscaping would include trees, bushes, or vines to provide partial screening of the WWTP from public view. Landscaping within the fence line of the new WWTP would be minimal to reduce maintenance. The interior of the new WWTP would be paved or rocked to accommodate routine truck traffic. After demolition of the existing treatment facilities, the vacant area would be graded and finished with a surface treatment of either pavement or rock to create a flood flow pathway.

2.5 Project Construction

2.5.1 Construction Schedule

Construction of new replacement facilities would be completed prior to the demolition of existing structures. This ensures that the wastewater treatment process is established and that service is not interrupted while the WWTP is being upgraded. Construction, startup, and commissioning of the proposed WWTP would take approximately 24 months. Site clearing, placement of engineered fill, and subsoil stabilization would need to be completed before facility construction could begin. This site preparation of the entire construction area would take anywhere from 3 to 12 months depending upon the type of subsoil mitigation that is needed. Subsoil mitigation could consist of preloading and/or ground improvement such as vibro-compaction as used in the previous WWTP construction.

2.5.2 Construction Equipment and Crews

A variety of construction equipment would be expected to be present on-site for the duration of construction depending upon the means and methods of construction undertaken by the contractor and its subcontractors. Potential construction equipment could include, but not be limited to, the following: cranes, loaders, front end loaders, backhoes, boom trucks, scrapers, whackers, rollers (sheeps foot and smooth drum vibrator), blade excavators, small excavators, sand blast equipment, water trucks, fork lifts, haulers, and trucks. The size of the construction crew would vary from 10 to 45 workers per day depending upon work activities during the various construction phases.

Approximately 1.5 acres of staging areas would be required for construction equipment storage and construction worker parking. Approximately 0.5 to 1.0 acre is available for equipment set-down and parking onsite at the WWTP. An additional 0.5 to 1.0 acre would be established offsite

in areas near the construction zone that are open and accessible. Areas available for construction staging and parking include the City's neighboring Corporation Yard, a small lease site behind the cement plant, and properties along Atascadero Road that are both publically and privately owned. The potential staging areas are shown in Figure 2-1.

2.5.3 Construction Phases and Methods

The construction of new project facilities would involve the following sequential phases.

Temporary Solids Handling Facility

The new treatment facilities would be built largely in the location of the existing sludge drying beds. As a result, temporary solids handling facilities would be required during construction of the new WWTP. MBCSD would either lease or purchase sludge dewatering equipment for temporary installation at the existing WWTP to process sludge during construction of the new WWTP.

Site Clearing

Site clearing would require 5 to 15 workers per day. Potential equipment needed for site clearing activities could include backhoes, loaders, or excavators. Material cleared could include asphalt, concrete, sand, soils, and piping. Some offsite disposal of material likely would be required.

Site Preparation

The existing sludge drying beds would be demolished, and the area would be raised above the 100-year flood level using imported engineered fill. Based on the Flood Hazard Analysis conducted for the project (Wallace Group 2009), the existing grade would be raised by approximately five feet to a nominal elevation of 20 feet. The new WWTP site would be approximately one foot above the predicted 100-year flood elevation. Up to 35,000 cubic yards of engineered fill would be needed for site preparation.

Subsoil Stabilization

The new WWTP site is subject to settlement from unconsolidated material that will compress when the structural and hydraulic loading from the new facilities is placed on the site. The new WWTP site is also subject to settlement from liquefiable soils during a seismic event. Further soil investigation will be conducted during the early stages of design to evaluate the magnitude of potential settlements and possible subsoil mitigation methods. One possible method of subsoil mitigation is vibro-compaction. This method was utilized in selected areas for the previous plant expansion.

Vibro-compaction is a specialized subsoil stabilization method that uses the action of a vibrator to reduce the inter-granular forces between soil particles and allow them to move into a denser configuration, typically a relative density of 75 to 80 percent. Vibro-compaction increases the bearing capacity of soils, reduces the potential for foundation settlement, and mitigates the

potential for liquefaction and lateral spreading (Hayward Baker, Inc., 2004). Subsoil stabilization would require 10 to 15 workers per day for two months.

Excavation and Dewatering

Project construction would require grading of the WWTP site, approximately 7.6 acres. After placement of engineered fill to raise the grade for the new WWTP above the 100-year flood elevation and to benefit from the preloading afforded by the engineered fill to reduce settlement of unconsolidated soils, excavation for new facilities would be conducted. The estimated quantities of excavated material for the influent pump station, oxidations ditches, secondary clarifiers (including the RAS/WAS and secondary pump stations), and the chlorine contact basin are 530 cubic yards (cy); 9,400 cy; 21,000 cy; and 360 cy; respectively. Much of the excavated material would be restored as backfill after the subject structures are constructed. Some of the excavated material would be used for site grading, and the remaining material would be hauled offsite for disposal.

For demolition, existing facilities will be removed in the range of three to five feet below existing grade. Excavation activities would require 10 to 20 construction workers per day. Underground conduits to be filled with sand or grout will be likely be in the range of 8-inch to 12-inch in diameter and larger.

Dewatering of groundwater is anticipated to be required for the initial stages (6 to 8 months) of construction of the influent pump station and the secondary clarifiers (including the RAS/WAS and secondary pump station). The construction contractor will have the option to utilize caisson construction for the influent pump station, which would eliminate dewatering for that structure. The construction of the secondary clarifier complex may require shoring with sheet piles along the west side for protection of the adjacent property. The dewatering discharges could be used for dust suppression during construction, discharged to land in accordance with the SWRCB General Waste Discharge Requirements for Discharges to Land with a Low Threat to Water Quality (Water Quality Order No. 2003-003-DWQ) or discharged to surface waters in accordance with the Central Coast Regional Water Quality Control Board's General Waste Discharge Requirements for Discharges with Low Threat to Water Quality (Water Quality Order No. R3-2006-0063).

Facility Construction

A total of approximately 8,500 cy of concrete material would be imported for facility construction. Importation of concrete would require approximately 800 to 1,000 truck trips throughout the 24-month construction period, varying from zero on many days, up to 40 trips per day for major concrete pours.

The proposed project would result in construction of approximately 57,000 square feet (sf) of new facilities. This footprint for new facilities includes approximately 6,000 sf for the Residuals Facility; 25,000 sf for the Oxidation Ditches; 12,000 sf for the Secondary Clarifiers; Secondary Pump Station and RAS/WAS Pump Station; 500 sf for the Tertiary Filter; 4,000 sf for the CCB, Chemical Station; and Utility Water Station; 3,200 sf for the Operations Building; 3,000 sf for the

Maintenance Building; 1,200 sf for the Household Hazardous Waste Drop-Off Facility; and 2,000 sf for ancillary facilities.

2.5.4 Connection of New Facilities

After construction and successful clean water testing of the new treatment facility is complete, connection of the new facilities to accept influent wastewater would occur. During the initial startup period, effluent from the new WWTP would be returned to the existing WWTP to provide full treatment prior to discharge to the outfall. Once the new WWTP achieves compliance with discharge requirements and NPDES permit requirements, the treated effluent would be routed directly to the outfall from the new WWTP and bypass the existing WWTP. After a commissioning period of several weeks to insure that the new WWTP would sustain successful treatment, demolition of the existing WWTP would proceed. This connection and startup process would take one to two months. No service interruptions are anticipated.

2.5.5 Demolition

The existing WWTP would be demolished as part of the proposed project to maximize the available space for the floodway. Demolition would occur after construction, startup, and commissioning of the new treatment facilities as described above, to minimize the potential for disruption to wastewater treatment service. Due to space constraints and the placement of engineered fill, the relocation of the Household Hazardous Waste Drop-Off Facility would occur after the existing WWTP facilities are demolished.

The demolition debris would be hauled offsite to an appropriate landfill that accepts construction waste. For example, broken concrete could be brought to Cold Canyon Landfill for recycling. MBCSD would conduct a hazardous material survey of the existing WWTP to determine if any materials such as asbestos, lead, or mercury are present and would require special handling and removal. Demolition of the proposed retired facilities would result in an estimated volume of 1500 cubic yards of concrete debris and 500 cubic yards of asphalt paving, which would be hauled offsite to be recycled. The total square footage of retired facilities proposed for demolition is approximately 80,000 sf.

2.6 Project Operation and Maintenance

The upgraded WWTP would produce tertiary effluent that would continue to be discharged into the Pacific Ocean via Estero Bay through the existing ocean outfall. The outfall terminates in a multiport diffuser situated approximately 2,900 feet from shore. The proposed project would decrease the rated treatment capacity of the WWTP from an average PSDWF of 2.36 mgd to approximately 1.5 mgd. PSDWF is defined as the greatest average monthly flow that occurs during the months of July and August.

Implementation of the proposed project would result in an increase in the production of biosolids at the WWTP. The existing practice of partial onsite composting of sludge would be

discontinued, and all sludge produced at the WWTP would be mechanically dewatered to approximately 15 to 18 percent dry solids rather than solar dried to 80 percent solids. The proposed project would generate between 2,800 and 3,500 wet tons (18 percent solids) per year at build-out. Dewatered sludge would be hauled offsite for composting or otherwise processed and disposed in accordance with federal and state regulations. MBCSD expects dewatered sludge would continue to be hauled offsite by San Joaquin Composting and composted at their facility in Kern County. The compost then would be land applied at McCarthy Farms in Kings County.

Currently, all dried biosolids are hauled offsite once a year during a one-to two-day period. The proposed project would require additional periodic truck trips to haul away dewatered sludge, screenings, and grit resulting in more operational truck trips. Between 2004 and 2007, annual truck trips required to haul biosolids offsite ranged from three to eight. Assuming truck capacity is 10 metric tons, under the proposed project at build-out, up to 10 truck trips per week would be anticipated for hauling sludge from the WWTP under average conditions and up to 16 truck trips per week would be anticipated for hauling sludge from the WWTP during PSDW conditions (July – August). One to two truck trips per week would be anticipated for hauling screenings and grit residuals from the WWTP site. Overall, annual operational truck trips for hauling sludge would increase to approximately 574 per year, and annual operational truck trips for hauling screenings and grit residuals would increase to approximately 104 per year.

2.6.1 Hazardous Materials

Operation of the proposed project involves the continued use of sodium hypochlorite (NaOCl) and sodium bisulfite ($NaHSO_3$), which are considered hazardous substances by the State of California. The rate and quantity of use of these materials is not expected to change as a result of the proposed project. Approximately 800 gallons of sodium bisulfite are, and will continue to be stored onsite at the WWTP. Approximately 5,000 gallons of sodium hypochlorite are, and will continue to be stored onsite at the WWTP. The proposed project would introduce onsite storage of a new substance, approximately 800 gallons of polymer used for thickening of WAS prior to dewatering. Polymer is not a hazardous or regulated material. Approximately one truck trip per month would be required to deliver the polymer to the WWTP.

The Household Hazardous Waste Drop-Off Facility may be relocated onsite at the WWTP and would continue to be operated by the IWMA. The Drop-Off Facility stores household materials that are considered hazardous by USEPA regulations, such as paint products, glues, polishes, disinfectants, drain and oven cleaners, automotive products, pesticides, pool chemicals, batteries, and electronic waste (cell phones and computers). The IWMA is responsible for removing such waste products from the Drop-Off Facility and transporting them offsite for proper disposal in accordance with state and federal regulations. Similar to the existing facility, the design of the new Drop-Off Facility would include secondary containment to prevent accidental spills of waste products.

2.6.2 Treatment Plant Energy Consumption

Operation of the proposed project would result in an increase in energy consumption at the WWTP. Energy consumption at the existing WWTP is approximately 0.9 million kilowatt hours (kWH) per year for the current annual average measured daily flow of 1.25 mgd. At the same annual average measured daily flow of 1.25 mgd, the proposed project would require approximately 1.6 million kWH per year. At build-out, when operation of the upgraded WWTP would reach rated capacity of 1.5 mgd, the proposed project would require approximately 1.9 million kWH per year.

2.7 Alternatives

The following alternatives to the proposed project are discussed further in Chapter 6.0, Alternatives Analysis.

2.7.1 No-Project Alternative

According to Section §15126.6(e) of the *CEQA Guidelines*, discussion of the No-Project Alternative must include a description of existing conditions and reasonably-foreseeable future conditions that would exist if the project were not approved. Under the No-Project Alternative, no new facilities would be constructed at the WWTP. Operation of the existing WWTP would continue under a 301(h) modified NPDES permit and the secondary treatment facilities would continue to be constrained to the current secondary treatment capacity.

2.7.2 Alternative 1: Full Secondary Treatment

Alternative 1 is similar to the proposed project, except the tertiary filter modules would not be installed. Under Alternative 1, all wastewater entering the WWTP would receive full secondary treatment and all discharges through the ocean outfall would meet full secondary treatment requirements. Effluent discharged from the WWTP would comply with future NPDES permit requirements.

2.7.3 Alternative 2: Membrane Bioreactor (MBR)

Alternative 2 includes the construction of a new MBR facility at the WWTP and facilities for direct hauling of sludge and demolition of the existing WWTP, similar to the proposed project. Following the upgrade, the WWTP would have the ability to treat the full design PSDWF of 1.5 mgd. The total effluent flow would receive secondary treatment, membrane filtration, and disinfection before being discharged into the ocean. The effluent quality produced by the MBR is higher than the proposed project and would comply with future NPDES permit requirements.

2.7.4 Alternative 3: Chorro Valley Location

Under Alternative 3, the City of Morro Bay would construct additional wastewater treatment facilities in a new location separate from the existing WWTP. Two potential locations were

identified for a new stand-alone treatment plant at the eastern end of the City (Cannon Associates, 2007). The new treatment plant would divert 49 to 92 percent of raw wastewater from the existing WWTP, depending on the potential diversion point. The new treatment plant would provide tertiary treatment followed by reverse osmosis (RO) processes. Effluent would be discharged into Chorro Creek or its tributary, San Bernardo Creek. Under Alternative 3, a composting program would not be implemented at the new treatment plant.

Under Alternative 3, depending on the diversion point to the new upstream treatment plant and the associated flow volume diversion, the City of Morro Bay's ADWF into the existing WWTP would be reduced from approximately 0.84 mgd to between 0.43 and 0.08 mgd. As a result, the combined ADWF from both the City and CSD into the existing WWTP would be between 0.72 mgd and 0.37 mgd depending on the upstream diversion point. The current CSD ADWF into the existing WWTP is 0.29 mgd (Cannon Associates, 2007). Under Alternative 3, all wastewater entering the existing WWTP would receive full secondary treatment and all discharges through the ocean outfall would meet full secondary requirements. In addition, most of the facilities at the existing WWTP also would require rehabilitation or replacement under Alternative 3 for continued operation.

2.8 Project Approvals

MBCSD intends to use this EIR to consider implementation of the proposed project. As Lead Agency, the City of Morro Bay may use this EIR to approve the proposed project, make Findings regarding identified impacts, and if necessary, adopt a Statement of Overriding Considerations regarding these impacts. As a Responsible Agency, the CSD also may use this EIR for budgetary purposes and/or obtaining grants or financing for CSD operations.

MBCSD would use the analysis contained within this EIR to support the acquisition of the following regulatory permits or approvals:

- City of Morro Bay: Conditional Use Permit (CUP); Coastal Development Permit (CDP)
- U.S. Environmental Protection Agency: NPDES Permit
- State Water Resources Control Board: Notice of Intent to comply with General Waste Discharge Requirements (WDRs) for Discharges to Land with a Low Threat to Water Quality
- Regional Water Quality Control Board: Waste Discharge Requirements
- Regional Water Quality Control Board: Notice of Intent to comply with NPDES General Permit for Discharges of Storm Water Runoff Associated with Construction Activity (General Construction Permit); Storm Water Pollution Prevention Plan (SWPPP)
- San Luis Obispo County Air Pollution Control District: Authority to Construct and Permit to Operate

References – Project Description

Carollo Engineers, *Morro Bay Cayucos Sanitary District, Wastewater Treatment Plant Facility Master Plan Report*, September 2007.

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Hayward Baker, Inc., 2004. *Vibro Systems*. Hayward Baker Geotechnical Construction, 16 pages. Available online at http://www.haywardbaker.com/services/vibro_compaction.htm. Accessed January 13, 2009.

MWH, *Wastewater Treatment Plant Upgrade Project, Facility Master Plan Draft Amendment No. 2*, July 2010.

CHAPTER 3

Environmental Setting, Impacts, and Mitigation Measures

In compliance with Section 15126 of the *CEQA Guidelines*, **Chapter 3** provides an analysis of the environmental effects of the proposed project with respect to existing conditions at the time the NOP was published (Appendix A). The following environmental resources are assessed in this chapter in accordance with Appendix G of the *CEQA Guidelines*:

- Aesthetics;
- Air Quality and Greenhouse Gases;
- Biological Resources;
- Cultural Resources;
- Geology, Soils, Seismicity, and Mineral Resources;
- Hazards and Hazardous Materials;
- Hydrology and Water Quality;
- Land Use, Agriculture, Forestry and Recreation;
- Noise and Vibration;
- Public Services and Utilities;
- Transportation and Traffic; and
- Environmental Justice

Each environmental resource section includes the following subsections:

- Environmental Setting;
- Regulatory Framework; and
- Impact Assessment.

The proposed project would have no impact on the following environmental resources and therefore further evaluation was determined to be unnecessary:

- Population and Housing.

An assessment of project impacts on Population and Housing is not included in Chapter 3. The proposed project would not displace substantial numbers of existing houses or people and would not necessitate construction of replacement housing, nor would it increase the overall treatment capacity of the WWTP. Therefore, there is no potential for the proposed project to induce population growth, which is discussed in more detail in **Chapter 5**, **Growth Inducement**.

3.1 Aesthetics

This chapter addresses the potential impacts of the proposed project to aesthetics and visual quality in the project vicinity. It includes a description of the environmental setting to establish baseline conditions for aesthetic resources, a summary of the regulations related to aesthetic resources, and an evaluation of the project's potential effects on scenic vistas, visual character, and light and glare.

3.1.1 Environmental Setting

Regional Setting

The City of Morro Bay is characterized as being a small coastal town within a larger rural setting. Located in the western region of the 3,326 square mile San Luis Obispo County, Morro Bay is bounded by the Santa Lucia Mountains to the east, the Pacific Ocean to the west, Morro Bay Harbor to the southwest, and the unincorporated community of Cayucos to the north. These surrounding geographic features, together with neighboring agricultural land use, surround Morro Bay and limit growth and urban development. More than half of Morro Bay's physical edge is coastline, and it is this land-sea interface which creates the City's water-oriented character, both natural and urban.

Major roadway corridors in the project vicinity include the Cabrillo Highway (State Route 41) and State Route 1. The two state routes overlap in northern Morro Bay at the intersection of Atascadero Road. State Route 41 connects Morro Bay to U.S Route 101 and continues on to Fresno via the San Joaquin Valley.

Project Area

The proposed project would be located at 160 Atascadero Road in the City of Morro Bay. This location is within the coastal zone and adjacent to Morro Dunes R.V. Park and Trailer Storage lot, Morro Bay High School, Morro Creek, the City of Morro Bay Corporation Yard, and Hansen Heidelberg Cement Group (cement plant). Neighboring vegetation is typical to that of both riparian and sand dune habitats. Surrounding land uses primarily consist of general industrial, public recreation, open space, agriculture, and low to medium density residential communities.

Prominent natural features in the project vicinity include Morro Rock, the Morro Bay Sand Spit, the Morro Bay Estuary, the Pacific Ocean, Morro Bay State Park, and various undeveloped hillsides and ridgelines. Built features in the project vicinity include the Morro Bay Power Plant, the waterfront, and the Embarcadero.

The existing WWTP is characterized by outdoor industrial facilities on flat, sandy terrain, and is adjacent to similar industrial facilities. The proposed new facilities and upgrades to the existing WWTP would be partially shielded from public view by security fencing, similar to existing conditions. The new proposed treatment facilities would be built in the southern portion of the existing WWTP where the existing sludge drying beds are located, and portions of the City's

Corporation Yard and the cement plant. The existing WWTP, Corporation Yard and cement plant have a General (Light) Industrial land use designation in the certified City of Morro Bay General Plan (City of Morro Bay, 1988).

3.1.2 Regulatory Framework

State

State Scenic Highway Program

The California Department of Transportation (Caltrans) administers the State Scenic Highway Program to preserve and protect scenic highway corridors from projects that would diminish the aesthetic value of lands adjacent to highways (Sections 260 *et seq*. of the California Streets and Highways Code). Scenic highway corridors are defined as the land generally adjacent to and visible by motorists from a scenic highway. The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been so designated. These highways are identified in Section 263 of the Streets and Highways Code. State Route 1 is officially designated as a State Scenic Highway; State Route 41 is an Eligible State Scenic Highway (Caltrans, 2008).

The City of Morro Bay 1988 General Plan identifies ways to protect and enhance eligible portions of the State Scenic Highway System within its jurisdiction. At the time the City of Morro Bay General Plan was certified in 1988, State Route 1 had not yet been designated a State Scenic Highway, though State Route 1 and State Route 41 were eligible for designation at the time. In addition, the 1988 General Plan identifies the Embarcadero, Coleman Drive, and the Morro Bay State Park road system as deserving recognition and protective measures due to their scenic features (City of Morro Bay, 1988).

Local

The City of Morro Bay General Plan and Local Coastal Plan

The City of Morro Bay General Plan was updated in 1988 and was amended to include policies contained in the existing Morro Bay Coastal Land Use Plan, certified by the California Coastal Commission in October, 1982. Subsequently, the General Plan and Local Coastal Plan were updated and streamlined into one document, the City of Morro Bay 2004 General Plan/Local Coastal Plan (LCP). Although the text for this document was approved on February 23, 2004, the document has not yet been certified by the California Coastal Commission, as is required by the California Coastal Act. The discussion below includes regulatory guidelines from the certified 1988 General Plan. Although there are some significant updates and changes in the 2004 General Plan, there are no changes that would affect the proposed project. The proposed project would comply with both the 1988 and, if certified, the 2004 General Plan.

The City of Morro Bay General Plan (1988)

The 1988 General Plan establishes criteria for the City of Morro Bay to protect, preserve, and enhance scenic resources, including State Scenic Highways. The Visual Resources and Scenic Highway Element of the General Plan addresses concerns regarding the following 11 specific areas, some of which are shown on **Figure 3.1-1**: Morro Rock, Morro Bay State Park, Morro Rock City Beach/Atascadero State Beach, Morro Creek and the adjacent flatlands, State Route One, the Embarcadero area, Central Morro Bay, the PG&E Power Plant, Coleman Park, residential neighborhoods, and undeveloped land within the City. These areas are discussed using terms defined as follows in the General Plan:

- Scenic Views: Something looked at which has significantly appealing visual qualities, whether man-made or natural and which contributes to the identity of a community or area.
- Scenic Corridors: The visible land area adjacent to the highway (or roadway) right-of-way and generally described as "the view from the road."
- Scenic Backdrop: The element of a view which provides background, e.g., hillside, bluffs, or ridges.
- Scenic Vistas: Sweeping views of large visually attractive areas.
- Official State Scenic Highway and Official County Scenic Highway: Scenic highways officially designated by the California Department of Transportation (CalTrans) after application from local jurisdictions and only if listed with eligible highways in the California Streets and Highways Code.

In addition, the following objectives, policies, and programs identified in the Visual Resources and Scenic Highway Element are relevant to the proposed project:

Objective: To enhance, protect and preserve the existing and potential visual resources of Morro Bay and its surroundings.

Policy VR-2: The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic and coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated on Figure VR-1, shall be subordinate to the character of its setting.

Program VR-2.1: Permitted development shall be sited and designed to protect views to and along the coast and designated scenic areas and shall be visually compatible with the surrounding areas.

SOURCE: Crawford, Multari & Clark, 2004; GlobeXplorer; ESA, 2010

Figure 3.1-1
Scenic Resources

Program VR-3.4: Industrial development shall be sited and designed in areas specifically designated in the Land Use Plan to protect views to and along the ocean and scenic coastal areas, to minimize land alteration, to be visually compatible with the character of the surrounding areas, and where feasible, shall include measures to restore and enhance visually degraded areas. In addition, industrial development shall be subordinate to the character of its setting.

The City of Morro Bay Zoning Ordinance

The Zoning Ordinances for the City of Morro Bay detail specific regulations and requirements imposed by the City in order to implement the City of Morro Bay General Plan. The project site is located in an area zoned as Light Industrial (M-1) and is included in the Planned Development (PD) and Interim Use (I) overlays (zoning requirements associated with these designations are discussed in more detail in Section 3.8, *Land Use, Agriculture, Forestry , and Recreation* of this Draft EIR). Existing zoning that implements the 1988 General Plan includes lighting standards, but beyond that does not include specific requirements for the protection of aesthetic resources.

3.1.3 Impact Assessment

Thresholds of Significance

The criteria used to determine the significance of impacts related to aesthetic resources are based on Appendix G of the *CEQA Guidelines*. The proposed project would result in a significant impact if it would:

- Create a substantial adverse effect on a scenic vista;
- Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- Substantially degrade the existing visual character or quality of the site and its surroundings; or
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

The significance determination is based on several evaluation criteria, including the extent of project visibility from sensitive public viewing areas such as designated state routes, public open space, or residential areas; the degree to which the various project elements would contrast with or be integrated into the existing landscape; the extent of change in the landscape's composition and character; and the number and sensitivity of viewers.

Impacts Discussion

The following sections discuss the potential effects of the proposed project to aesthetic resources according to the key issue areas identified in Appendix G of the *CEQA Guidelines* and corresponding to the significance criteria identified above.

Scenic Roadways

State Route 1, which is an officially designated State Scenic Highway, is located approximately 0.25 miles east of the existing WWTP. The project site does not contain significant scenic resources such as rock outcroppings or historic buildings that would be adversely impacted by project implementation. The proposed project would have no impact to scenic resources within a state scenic highway corridor. No mitigation measures are required.

The WWTP site is located on Atascadero Road, which is a City-designated Scenic Route. The proposed project would alter the perimeter of the WWTP along Atascadero Road and would raise the ground surface elevation of the new WWTP to mitigate for potential flooding impacts. The new facilities would have a taller profile than existing facilities due to the elevated ground surface. However, the new facilities would be set back further than existing facilities from Atascadero Road, as shown in the visual simulation of proposed facilities in Figure 3.1-2. As part of the proposed project, similar to existing conditions, new security fencing and landscaping would be installed along Atascadero Road to provide partial screening of the new WWTP from public view. The scenic corridor that is visible from a vehicle traveling along Atascadero Road would not be impacted as a result of the proposed project because the existing, visible, industrial treatment facilities would be replaced with new industrial treatment facilities. No mitigation measures are required.

Scenic Vistas

Impact 3.1-1: Implementation of the proposed project could impact scenic vistas and views from scenic viewpoints. (Less than Significant with Mitigation)

Construction of the proposed project may result in temporary short-term impacts to aesthetic resources. Construction activities would require the use of heavy equipment and storage of materials at construction sites and staging areas. Construction equipment, materials, and stockpiles are contrasting elements in the landscape that could affect scenic vistas as viewed from Morro Strand State Beach, where there are City-designated Scenic View Points. However, because these construction impacts are temporary and would be resolved within a 24-month period, the impacts would be less than significant.

Once built, the proposed project could introduce new contrasting elements into local scenic vistas in the form of new WWTP facilities. New treatment facilities would be designed in accordance with building and zoning code restrictions associated with industrial land use designations. Facilities would be designed with a consistent architectural theme that would be compatible with the project site and its surroundings. **Figures 3.1-2, 3.1-3** and **3.1-4** present visual simulations of the proposed facilities in three scenic vistas from three different public view points: the ocean, the sand dunes, and SR-1. As the visual simulations demonstrate, the proposed project would not have a substantial effect on the scenic vistas. Implementation of Mitigation Measure 3.1-1 would ensure new buildings are painted with non-contrasting colors to blend in with the visual character of the site and surroundings. Once the replacement treatment facilities are built and operational, the existing WWTP facilities would be demolished. The new treatment facilities

Existing

Proposed

SOURCE: MWH, 2010

Morro Bay Cayucos Wastewater Treatment Plant EIR . 208013

Figure 3.1-2
Visual Simulation,
Looking East from the Ocean

Existing

Proposed

SOURCE: MWH, 2010

Morro Bay Cayucos Wastewater Treatment Plant EIR . 208013

Figure 3.1-3
Visual Simulation,
Looking East from the Sand Dunes

Existing

Proposed

SOURCE: MWH, 2010

Figure 3.1-4
Visual Simulation,
Looking West from State Route 1

would be visible from surrounding scenic view points instead of the existing facilities. Therefore, there would be no additional obstructions to scenic vistas from publically-accessible locations due to operation of the upgraded WWTP facility. With implementation of Mitigation Measure 3.1-1 to protect scenic views along the coastline, impacts would be less than significant.

Mitigation Measures

> **Mitigation Measure 3.1-1:** MBCSD shall ensure that new facility designs include non-glare exterior coatings (including walls) that are colored to blend in with the surrounding structures and landscape.

Significance after Mitigation: Less than significant.

Visual Character

Impact 3.1-2: Implementation of the proposed project could impact the visual character of the project site and its surroundings. (Less than Significant)

The proposed project would not substantially degrade the existing visual character or quality of the site and its surroundings. As stated in the Project Description, the proposed project would be designed with a consistent architectural theme that would be compatible with the project site and its surroundings. The City of Morro Bay zoning code (17.48.200) requires projects in any industrial district to apply architectural treatments that are in keeping with the character of the surrounding area. All new facilities would be industrial buildings designed in accordance with building and zoning code restrictions associated with industrial land use designations, including building height limitations. Concept designs for the Residuals Facility, Operations Building, and Maintenance Building are illustrated in Figures 2-4 and 2-5 in the Project Description. Potential exterior treatments include reinforced concrete, concrete masonry block, or some combination of the two.

Similar to existing site conditions, the WWTP would continue to be partially screened from public view points on Atascadero Road by security fencing and perimeter landscaping. The proposed project would raise the ground surface elevation of the new WWTP to mitigate for potential flooding impacts and expand the footprint of the WWTP into the City's Corporation Yard and the cement plant. The replacement facilities would have a taller profile relative to existing site conditions due to the elevated ground surface. However, the neighboring properties also are characterized by existing visible industrial facilities. The proposed project would construct replacement treatment plant facilities on a parcel that currently is used for industrial purposes and zoned for industrial land uses. The proposed project would not substantially alter the visual character of the project site or surrounding industrial sites. Impacts would be less than significant. No mitigation measures are required.

Mitigation Measures

None required.

Light and Glare

Impact 3.1-3: Implementation of the proposed project could create a new source of light or glare that could adversely affect day or nighttime views in the area. (Less than Significant with Mitigation)

During construction of the proposed project, no new sources of light or glare would be introduced that could potentially impact nighttime views in the area. Construction of the proposed project would be limited to daytime hours in accordance with the City of Morro Bay construction noise ordinance (Morro Bay Zoning Ordinance, 2005). (See Chapter 3.9, Noise, for additional information.)

Operation of the WWTP upgrade may result in additional local light sources that could potentially contribute to an increase in local ambient light. Specifically, new lighting for security purposes would need to be installed on all new facilities. Implementation of Mitigation Measure 3.1-2 would ensure new sources of light are shielded, resulting in a less-than-significant impact.

Mitigation Measures

Mitigation Measure 3.1-2: MBCSD shall ensure that all exterior lighting is shielded and directed downward to minimize impacts to nighttime views. In addition, highly reflective finishes shall not be used in the design for proposed structures.

Significance after Mitigation: Less than significant.

Mitigation Measure Summary Table

Table 3.1-1 presents the impacts and mitigation summary for Aesthetics.

TABLE 3.1-1
AESTHETICS IMPACTS AND MITIGATION SUMMARY

Proposed Project Impact	Mitigation Measure	Significance after Mitigation
Scenic Vistas: The proposed project could impact scenic vistas and views from scenic view points.	Mitigation Measure 3.1-1	Less than significant
Visual Character: The proposed project could impact visual character of the project site and its surroundings.	None required.	Less than significant

Proposed Project Impact	Mitigation Measure	Significance after Mitigation
Light and Glare: Implementation of the proposed project could create a new source of light or glare that could adversely affect day or nighttime views in the area.	Mitigation Measure 3.1-2	Less than significant

References – Aesthetics

Caltrans. California State Scenic Highways, San Luis Obispo County, http://www.dot.ca.gov/hq/LandArch/scenic_highways/index.htm, 2008, accessed July, 2010

City of Morro Bay, *Zoning Ordinance: Local Coastal Program and Coastal Implementation Plan*, July 2005.

City of Morro Bay, *General Plan / Local Coastal Plan*, text approved February, 2004.

City of Morro Bay, *City of Morro Bay General Plan*, 1988.

3.2. Air Quality and Greenhouse Gas Emissions

This section provides an overview of the existing air quality at the project site and surrounding region, the regulatory framework, an analysis of potential impacts to air quality and greenhouse gas emissions that would result from implementation of the project, and identification of mitigation measures.

3.2.1 Environmental Setting

Regional Setting

Climate and Meteorology

Atmospheric conditions such as wind speed, wind direction, and air temperature gradients interact with the physical features of the landscape to determine the movement and dispersal of air pollutants. The project site is located in the City of Morro Bay in San Luis Obispo County and is within the boundaries of the South Central Coast Air Basin (SCCAB), which consists of San Luis Obispo, Santa Barbara, and Ventura Counties. The climate of the Basin is determined largely by a high-pressure system that is almost always present over the eastern Pacific Ocean off the West Coast of North America. During winter, the Pacific high-pressure system shifts southward, allowing storms to pass through the region. About 75 percent of the county population and a corresponding portion of the commercial and industrial facilities are located within the coastal plateau. With higher population density and closer spacing of urban areas, emissions of air pollutants per unit area are generally higher here than in other regions of the county.

The coastal plateau is five to ten miles wide and varies in elevation from sea level to about 500 feet. It is bounded on the northeast by the Santa Lucia Mountain Range, which extends almost the entire length of the county. Rising sharply to about 3,000 feet at its northern boundary, the Santa Lucia Range gradually winds southward away from the coast, finally merging into a mass of rugged features on the north side of Cuyama Canyon.

The proposed project includes hauling of dewatered sludge potentially out of the SSCAB. Dewatered sludge may be hauled to Santa Barbara County, or to western Kern County for composting. Western Kern County is within the boundaries of the San Joaquin Valley Air Pollution Control District.

Local Setting

Existing Air Quality

SLOCAPCD and CARB operate a regional monitoring network that measures the ambient concentrations of the six criteria air pollutants. The Morro Bay Monitoring Station, located at Morro Bay Boulevard and Kern Avenue is nearest to the project site (approximately 1.3 miles to the southeast) and can be considered to be representative of the air quality in the vicinity of the project site. This station monitors for ozone and PM_{10}, the two criteria pollutants for which San Luis Obispo County is in non-attainment (Table 3.2-3). The 3220 South Higuera station in

San Luis Obispo monitors particulate matter less than 2.5 microns ($PM_{2.5}$). **Table 3.2-1** shows a three-year summary of monitoring data for these stations. In addition, air pollutants of interest to the regulatory agencies for their potential adverse impacts on sensitive receptors are described below.

TABLE 3.2-1
AIR QUALITY DATA SUMMARY (2005 - 2007)

		Monitoring Data by Year		
Pollutant	**Standard[a]**	**2005**	**2006**	**2007**
Ozone – Morro Bay				
Highest 1 Hour Average (ppm)[b]		0.073	0.063	0.071
Days over State Standard	0.09	0	0	0
Highest 8 Hour Average (ppm)[b]		0.070	0.057	0.062
Days over State Standard	0.07	0	0	0
Days over National Standard	0.075	0	0	0
Particulate Matter (PM10) – Morro Bay				
Highest 24 Hour Average ($\mu g/m^3$)[b]		45	**62**	42
Estimated Days over State Standard[c]	50	0	1	0
Highest 24 Hour Average ($\mu g/m^3$)[b] – National Measurement		44	60	41
Estimated Days over National Standard[c]	150	0	0	0
State Annual Average ($\mu g/m^3$)[b]	20	16.9	16.7	18.3
Particulate Matter (PM2.5) – San Luis Obispo 3220 Higuera St.				
Highest 24 Hour Average ($\mu g/m^3$)[b]		11.4	24.2	19.2
Days over National Standard[d]	35	0	0	0
State Annual Average ($\mu g/m^3$)[b]	12	NA	NA	6.8

[a] Generally, state standards and national standards are not to be exceeded more than once per year.
[b] ppm = parts per million; μg/m3 = micrograms per cubic meter.
[c] PM10 is not measured every day of the year. Number of estimated days over the standard is based on 365 days per year.
[d] Days over National Standard for PM2.5 are based on the previous standard of 65 μg/m3 rather than the current standard of 35 μg/m3.

NOTES: Values in **bold** are in excess of at least one applicable standard. NA = Not Available.

SOURCE: California Air Resources Board, *Summaries of Air Quality Data*, 2005, 2006, 2007; http://www.arb.ca.gov/adam/cgi-bin/db2www/polltrendsb.d2w/start, accessed January 9, 2009

Criteria Air Pollutants

Criteria pollutants of concern in the SCCAB are described below:

Ozone

Short-term exposure to ozone can irritate the eyes and cause constriction of the airways. Besides causing shortness of breath, ozone can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema.

Ozone, the main component of photochemical smog, is primarily a summer and fall pollution problem. Ozone is not emitted directly into the air but is formed through a complex series of chemical reactions involving other compounds that are directly emitted. These directly emitted pollutants (also known as ozone precursors) include reactive organic gases (ROG) and nitrogen oxides (NOx). The time period required for ozone formation allows the reacting compounds to spread over a large area, producing regional pollution problems. Ozone problems are the cumulative result of regional development patterns rather than the result of a few significant emission sources.

Once formed, ozone remains in the atmosphere for one or two days. Ozone is then eliminated through reaction with chemicals on the leaves of plants, attachment to water droplets as they fall to earth ("rainout"), or absorption by water molecules in clouds that later fall to earth with rain ("washout").

Carbon Monoxide

Carbon monoxide (CO), a colorless and odorless gas, is a non-reactive pollutant that is a product of incomplete combustion and is mostly associated with motor vehicles. When inhaled at high concentrations, carbon monoxide combines with hemoglobin in the blood and reduces the oxygen-carrying capacity of the blood. This results in reduced oxygen reaching the brain, heart and other body tissues. This condition is especially critical for people with cardiovascular diseases, chronic lung disease, or anemia.

CO measurements and modeling were important in the early 1980s when CO levels were regularly exceeded throughout California. In more recent years, CO measurements and modeling have not been a priority in most California air districts due to the retirement of older polluting vehicles, fewer emissions from new vehicles, and improvements in fuels.

Respirable Particulate Matter (PM10 and PM2.5)

PM_{10} and $PM_{2.5}$ consist of particulate matter that is 10 microns or less in diameter and 2.5 microns or less in diameter, respectively. (A micron is one-millionth of a meter). PM_{10} and $PM_{2.5}$ represent fractions of particulate matter that can be inhaled into the air passages and the lungs and can cause adverse health effects. Acute and chronic health effects associated with high particulate levels include the aggravation of chronic respiratory diseases, heart and lung disease, and coughing, bronchitis and respiratory illnesses in children. Recent mortality studies have shown an association between morbidity and mortality and daily concentrations of particulate matter in the air. The CARB has estimated that achieving the ambient air quality standards for

PM_{10} could reduce premature mortality rates by 6,500 cases per year (CARB, 2002). Particulates can also damage materials and reduce visibility. One common source of $PM_{2.5}$ is diesel particulate emissions.

Traffic generates particulate matter emissions through entrainment of dust and dirt particles that settle onto roadways and parking lots. PM_{10} also is emitted by burning wood in residential wood stoves and fireplaces and open agricultural burning. PM_{10} can remain in the atmosphere for up to seven days before gravitational settling, rainout and washout remove it.

Nitrogen Dioxide

(NO_2) is a reddish-brown gas that is a by-product of combustion processes. Automobiles and industrial operations are the main sources of NO_2. Aside from its contribution to ozone formation, nitrogen dioxide can increase the risk of acute and chronic respiratory disease and reduce visibility. NO_2 may be visible as a coloring component of a brown cloud on high pollution days, especially in conjunction with high ozone levels.

Odorous Emissions

Though offensive odors from stationary sources rarely cause any physical harm, they still remain unpleasant and can lead to public distress generating citizen complaints to local governments. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source, wind speed, direction, and the sensitivity of receptors.

Naturally-Occurring Asbestos

Asbestos is a known carcinogen and inhalation of asbestos may result in the development of lung cancer or mesothelioma. Asbestos is naturally occurring in the environment and is associated with the presence of ultramafic rocks, including serpentine rock (Department of Conservation, 2000). Serpentine is the state rock of California, and outcroppings exist in 42 out of 58 counties. The California Department of Conservation, Division of Mines and Geology has determined that there are known occurrences of ultramafic rocks in western San Luis Obispo County in the vicinity of Morro Bay (Department of Conservation, 2000). The CARB also has determined that serpentine rock is common throughout San Luis Obispo County (Fugro West, 2010). The Preliminary Geotechnical Report prepared for the proposed project has determined that the sand and alluvium that underlie the project site do not contain minerals classified as significant sources of naturally-occurring asbestos (Fugro West, 2010).

Greenhouse Gases

Gases that trap heat in the atmosphere are called greenhouse gases. The major concern is that increases in GHGs are causing Global Climate Change. Global Climate Change is a change in the average weather on earth that can be measured by wind patterns, storms, precipitation and temperature. Although there is tremendous disagreement as to the speed of global warming and the extent of the impacts attributable to human activities, most agree that there is a direct link between increased emission of so-called GHG and long term global temperature. What GHG have in common is that they allow sunlight to enter the atmosphere, but trap a portion of the

outward-bound infrared radiation and warm up the air. The process is similar to the effect greenhouses have in raising the internal temperature, hence the name greenhouse gases.

Both natural processes and human activities emit greenhouse gases. The accumulation of GHGs in the atmosphere regulates the earth's temperature; however, emissions from human activities such as electricity production and motor vehicles have elevated the concentration of GHGs in the atmosphere. This accumulation of GHGs has contributed to an increase in the temperature of the earth's atmosphere and contributed to Global Climate Change. The principal GHGs are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), sulfur hexafluoride (SF6), perfluorocarbons (PFCs), hydrofluorocarbons (HFCs), and water vapor (H_2O). Carbon dioxide is the reference gas for climate change because it gets the most attention and is considered the most important GHG. To account for the warming potential of GHGs, GHG emissions are often quantified and reported as CO_2 equivalents (CO_2e). Large emission sources are reported in million metric tons of CO_2e. HFCs are used in refrigeration systems as substitutes for CFCs, which were banned for destroying the ozone layer.

Potential global warming impacts in California may include, but are not limited to, loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years (CARB, 2006). Secondary effects are likely to include a global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity.

Sensitive Land Uses

Land uses such as schools, children's daycare centers, hospitals, and convalescent homes are considered to be more sensitive than the general public to poor air quality because the population groups associated with these uses have increased susceptibility to respiratory distress. Persons engaged in strenuous work or exercise also have increased sensitivity to poor air quality. Residential areas are considered more sensitive to air quality conditions than commercial and industrial areas, because people generally spend longer periods of time at their residences, resulting in greater exposure to ambient air quality conditions.

The nearest sensitive receptor to the proposed project site is the Morro Dunes RV Park. An RV could potentially park approximately as close as 15 feet from the proposed new facilities. Morro Bay High School is located north of Atascadero Road, approximately 500 feet from the proposed facilities. The Morro Strand RV Park is located to the east approximately 600 feet from the proposed facilities, on the other side of the Hanson-Heidelberg Cement Plant

3.2.2 Regulatory Framework and Air Quality Standards

Federal

The federal Clean Air Act (FCAA) requires the U.S. Environmental Protection Agency (USEPA) to identify National Ambient Air Quality Standards (NAAQS or national standards) to protect public health and welfare. National standards have been established for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, PM_{10}, $PM_{2.5}$, and lead. **Table 3.2-2** shows current national and

state ambient air quality standards and provides a brief discussion of the related health effects and principal sources for each pollutant.

Pursuant to the 1990 Federal Clean Air Act Amendments (FCAAA), the USEPA classifies air basins (or portions thereof) as “attainment” or “nonattainment” for each criteria air pollutants, based on whether or not the NAAQS had been achieved.

The FCAA requires each state to prepare an air quality control plan referred to as the State Implementation Plan (SIP). The FCAAA added requirements for states containing areas that violate the NAAQS to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is a living document that is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of air basins as reported by the agencies with jurisdiction over them. The USEPA has responsibility to review all state SIPs to determine if they conform to the mandates of the FCAAA and will achieve air quality goals when implemented. If the USEPA determines a SIP to be inadequate, it may prepare a Federal Implementation Plan (FIP) for the nonattainment area and may impose additional control measures. Failure to submit an approvable SIP or to implement the plan within mandated timeframes can result in sanctions being applied to transportation funding and stationary air pollution sources in the air basin.

Regulation of Toxic Air Contaminants (TACs), termed Hazardous Air Pollutants (HAPs) under federal regulations, is achieved through federal, State and local controls on individual sources. The 1977 Clean Air Act Amendments required the USEPA to identify National Emission Standards for Hazardous Air Pollutants (NESHAPs) to protect public health and welfare. These substances include certain VOCs, pesticides, herbicides, and radionuclides that present a tangible hazard, based on scientific studies of exposure to humans and other mammals. There is uncertainty in the precise degree of hazard.

State

The California Air Resources Board (CARB) manages air quality, regulates mobile emissions sources, and oversees the activities of county Air Pollution Control Districts (APCDs) and regional Air Quality Management Districts (AQMDs). CARB establishes state ambient air quality standards and vehicle emissions standards.

California has adopted ambient standards that are more stringent than the federal standards for the criteria air pollutants. These are shown in Table 3.2-2. Under the California Clean Air Act (CCAA) patterned after the FCAA, areas have been designated as attainment or nonattainment with respect to the state standards. **Table 3.2-3** summarizes the attainment status with California standards in the project vicinity.

Although all motor vehicles must be certified by the USEPA for compliance with federal emissions standards, under the FCAA the CARB is allowed to adopt and enforce its own emission standards for mobile source emissions, such as passenger vehicles and heavy-duty trucks. CARB’s goal is to reduce the emission of smog-forming pollutants and toxics by mobile

TABLE 3.2-2
STATE AND NATIONAL CRITERIA AIR POLLUTANT STANDARDS, EFFECTS, AND SOURCES

Pollutant	Averaging Time	State Standard	National Standard	Pollutant Health and Atmospheric Effects	Major Pollutant Sources
Ozone	1 hour 8 hours	0.09 ppm 0.07 ppm	--- 0.075 ppm	High concentrations can directly affect lungs, causing irritation. Long-term exposure may cause damage to lung tissue.	Formed when reactive organic gases (ROG) and nitrogen oxides (NOx) react in the presence of sunlight. Major sources include on-road motor vehicles, solvent evaporation, and commercial / industrial mobile equipment.
Carbon Monoxide	1 hour 8 hours	20 ppm 9.0 ppm	35 ppm 9 ppm	Classified as a chemical asphyxiant, carbon monoxide interferes with the transfer of fresh oxygen to the blood and deprives sensitive tissues of oxygen.	Internal combustion engines, primarily gasoline-powered motor vehicles.
Nitrogen Dioxide	1 hour Annual Avg.	0.18 ppm 0.030	--- 0.053 ppm	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown.	Motor vehicles, petroleum refining operations, industrial sources, aircraft, ships, and railroads.
Sulfur Dioxide	1 hour 3 hours 24 hours Annual Avg.	0.25 ppm --- 0.04 ppm ---	--- 0.5 ppm 0.14 ppm 0.03 ppm	Irritates upper respiratory tract; injurious to lung tissue. Can yellow the leaves of plants, destructive to marble, iron, and steel. Limits visibility and reduces sunlight.	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
Respirable Particulate Matter (PM10)	24 hours Annual Avg.	50 □g/m^3 20 □g/m^3	150 □g/m^3 ---	May irritate eyes and respiratory tract, decreases in lung capacity, cancer and increased mortality. Produces haze and limits visibility.	Dust and fume-producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
Fine Particulate Matter (PM-2.5)	24 hours Annual Avg.	--- 12 □g/m^3	35 □g/m^3 15 □g/m^3	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and results in surface soiling.	Fuel combustion in motor vehicles, equipment, and industrial sources; residential and agricultural burning; Also, formed from photochemical reactions of other pollutants, including NOx, sulfur oxides, and organics.
Lead	Monthly Ave. Quarterly	1.5 □g/m^3 ---	--- 1.5 □g/m^3	Disturbs gastrointestinal system, and causes anemia, kidney disease, and neuromuscular and neurological dysfunction.	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
Hydrogen Sulfide	1 hour	0.03 ppm	No National Standard	Geothermal Power Plants, Petroleum Production and refining	Nuisance odor (rotten egg smell), headache and breathing difficulties (higher concentrations)
Sulfates	24 hour	25 □g/m^3	No National Standard	Produced by the reaction in the air of SO2.	Breathing difficulties, aggravates asthma, reduced visibility
Visibility Reducing Particles	8 hour	Extinction of 0.23/km; visibility of 10 miles or more	No National Standard	Reduces visibility, reduced airport safety, lower real estate value, discourages tourism.	See PM2.5.

NOTE: ppm = parts per million; g/m^3 = micrograms per cubic meter.

SOURCE: California Air Resources Board. *Ambient Air Quality Standards,* available at http://www.arb.ca.gov/research/aaqs/aaqs2.pdf, standards last updated November 17, 2008. California Air Resources Board, *ARB Fact Sheet: Air Pollution Sources, Effects and Control,* http://www.arb.ca.gov/research/health/fs/fs2/fs2.htm, page last updated December 2005.

TABLE 3.2-3
COUNTY ATTAINMENT STATUS

	Designation/Classification		
Pollutant	**Federal Standards San Luis Obispo County**	**State Standards San Luis Obispo County**	**State Standards Kern County**
Ozone – one hour	No Federal Standard[a]	Moderate	Severe
Ozone – eight hour	Unclassified/Attainment	Nonattainment[b]	Nonattainment[b]
PM10	Unclassified	Nonattainment	Nonattainment
PM2.5	Unclassified/Attainment	Attainment	Nonattainment
CO	Unclassified/Attainment	Attainment	Attainment
Nitrogen Dioxide	Unclassified/Attainment	Attainment	Attainment
Sulfur Dioxide	Unclassified	Attainment	Attainment
Lead	No Designation	Attainment	Attainment
Hydrogen Sulfide	No Federal Standard	Attainment	Unclassified
Sulfates	No Federal Standard	Attainment	Attainment
Visibility Reducing Particles	No Federal Standard	Unclassified	Unclassified

[a] Federal One-Hour Ozone National Ambient Air Quality Standard was revoked on June 15, 2005
[b] The State 8-hour ozone standard was approved by the CARB on April 28, 2005, and became effective May 17, 2006.

SOURCE: California Air Resources Board, 2010 *Area Designation Maps,* http://www.arb.ca.gov/desig/adm/adm.htm, page updated July 26, 2010.

sources, both on-road and off-road. CARB has established emission standards and regulations for on-road heavy-duty diesel vehicles operating in California, including the Heavy-Duty Diesel Vehicle Inspection Program and Idling Reduction Program.

Toxic Air Contaminants

California law defines TACs as air pollutants having carcinogenic effects. The State Air Toxics Program was established in 1983 under Assembly Bill (AB) 1807 (Tanner). A total of 243 substances have been designated TACs under California law; they include the 189 (federal) hazardous air pollutants (HAPs) adopted in accordance with AB 2728. The Air Toxics "Hot Spots" Information and Assessment Act of 1987 (AB 2588) seeks to identify and evaluate risk from air toxics sources; however, AB 2588 does not regulate air toxics emissions. TAC emissions from individual facilities are quantified and prioritized. "High-priority" facilities are required to perform a health risk assessment and, if specific thresholds are violated, are required to communicate the results to the public in the form of notices and public meetings.

In August of 1998, CARB identified particulate emissions from diesel-fueled engines (diesel particulate matter, or DPM) as TACs. CARB subsequently developed the *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles* (CARB, 2000). The document represents proposals to reduce diesel particulate emissions, with the goal of reducing emissions and associated health risks by 75 percent in 2010 and by 85 percent in 2020. The program aims to require the use of state-of-the-art catalyzed diesel particulate filters and ultra low sulfur diesel fuel on diesel-fueled engines.

CARB recently published the *Air Quality and Land Use Handbook: A Community Health Perspective* (CARB, 2005). The primary goal in developing the handbook was to provide information that will help keep California's children and other vulnerable populations out of harm's way with respect to nearby sources of air pollution. The handbook highlights recent studies that have shown that public exposure to air pollution can be substantially elevated near freeways and certain other facilities (i.e., distribution centers, rail yards, chrome platers, etc.). However, the health risk is greatly reduced with distance. For that reason, CARB provided some general recommendations aimed at keeping appropriate distances between sources of air pollution and sensitive land uses, such as residences.

CARB also has identified naturally-occurring asbestos (NOA) as a TAC. Asbestos is a known carcinogen and inhalation of asbestos may result in the development of lung cancer or mesothelioma. According to the SLOCAPCD, the project area is in a candidate area for NOA. CARB's Air Toxics Control Measure (ATCM) for Construction, Grading, Quarrying, and Surface Mining requires that prior to any grading activities at the site, a geologic evaluation shall be conducted to determine if NOA is present within the area to be disturbed. The Preliminary Geotechnical Report prepared for the proposed project has determined that the sand and alluvium underlying the project site do not contain minerals classified as significant sources of NOA (Fugro West, 2010). If NOA is not present, then an exemption request must be filed with the APCD. If NOA is present onsite, then compliance with all requirements in the ATCM is required. This may include preparation and implementation of an Asbestos Dust Mitigation Plan and an Asbestos Health and Safety Program for approval by APCD.

Climate Change and Greenhouse Gases

Executive Order S-3-05

In 2005, in recognition of California's vulnerability to the effects of climate change, Governor Schwarzenegger established Executive Order S-3-05, which sets forth a series of target dates by which statewide emissions of greenhouse gases (GHG) would be progressively reduced, as follows:

- By 2010, reduce greenhouse gas emissions to 2000 levels;
- By 2020, reduce greenhouse gas emissions to 1990 levels; and
- By 2050, reduce greenhouse gas emissions to 80 percent below 1990 levels.

Assembly Bill 32 (AB 32)

In 2006, California passed the California Global Warming Solutions Act of 2006 (Assembly Bill No. 32; California Health and Safety Code Division 25.5, Sections 38500, et seq., or AB 32), which requires the CARB to design and implement emission limits, regulations, and other measures, such that statewide GHG emissions will be reduced to 1990 levels by 2020.

In December 2007, CARB approved the 2020 emissions limit of 427 million metric tons of CO_2 equivalents (CO_2e) of greenhouse gases. The 2020 target of 427 million metric tons of CO_2e requires the reduction of 169 million metric tons of CO_2e, or approximately 30 percent, from the state's projected 2020 emissions of 596 million metric tons of CO_2e (business-as-usual).

AB 32 required development of a mandatory reporting rule for major sources of GHGs. The CARB's reporting rule (California Code of Regulations Title 17, Subchapter 10, Article 2, §95100 to 95133) became effective in January 2009. The rule requires reporting of GHG emissions for:

- Cement plants;
- Petroleum refineries (> 25,000 metric tons of CO2e in any calendar year);
- Hydrogen plants (> 25,000 metric tons of CO2e in any calendar year);
- Electric generating facilities and cogeneration facilities (> 1 MW capacity and > 2,500 metric tons of CO2e in any year);
- Electricity retail providers and marketers; and
- Other facilities that emit >25,000 metric tons of CO2e, for stationary combustion sources in any calendar year.

Cement plants, oil refineries, fossil-fueled electric-generating facilities/providers, cogeneration facilities, and hydrogen plants and other stationary combustion sources that emit more than 25,000 metric tons/year CO_2e, make up 94 percent of the point source CO_2e emissions in California. In June, 2008, CARB published its *Climate Change Draft Scoping Plan* (CARB, 2008) that was approved and adopted by the CARB Board on December 11, 2008 as the *Climate Change Scoping Plan* (CARB, 2008). The *Climate Change Draft Scoping Plan* reported that CARB met the first milestones set by AB 32 in 2007: developing a list of early actions to begin sharply reducing GHG emissions; assembling an inventory of historic emissions; and establishing the 2020 emissions limit. Key elements of the *Climate Change Scoping Plan (CARB, 2008)* include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewables energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation-related greenhouse gas emissions for regions throughout California, and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing state laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the state's long-term commitment to AB 32 implementation.

CARB has not yet determined what amount of GHG emissions reductions it recommends from local government land use decisions; however, the *Scoping Plan* does state that successful implementation of the plan relies on local governments' land use planning and urban growth decisions because local governments have primary authority to plan, zone, approve, and permit land development to accommodate population growth and the changing needs of their

jurisdictions. CARB further acknowledges that decisions on how land is used will have large effects on the GHG emissions that will result from the transportation, housing, industry, forestry, water, agriculture, electricity, and natural gas emission sectors. The *Scoping Plan* states that the ultimate assignment to local government operations is to be determined (CARB, 2008b).

The *Climate Change Scoping Plan* also includes recommended measures that were developed to reduce GHG emissions from key sources and activities while improving public health, promoting a cleaner environment, preserving our natural resources, and ensuring that the impacts of the reductions are equitable and do not disproportionately impact low-income and minority communities. These measures, shown below in **Table 3.2-4** by sector, also put the state on a path to meet the long-term 2050 goal of reducing California's GHG emissions to 80 percent below 1990 levels.

TABLE 3.2-4
LIST OF RECOMMENDED ACTIONS BY SECTOR

Measure No.	Measure Description	GHG Reductions (Annual Million Metric Tons CO2E)
Transportation		
T-1	Pavley I and II – Light Duty Vehicle Greenhouse Gas Standards	31.7
T-2	Low Carbon Fuel Standard (Discrete Early Action)	15
T-3[1]	Regional Transportation-Related Greenhouse Gas Targets	5
T-4	Vehicle Efficiency Measures	4.5
T-5	Ship Electrification at Ports (Discrete Early Action)	0.2
T-6	Goods Movement Efficiency Measures: • Ship Electrification at Ports • System-Wide Efficiency Improvements	3.5
T-7	Heavy-Duty Vehicle Greenhouse Gas Emission Reduction Measure – Aerodynamic Efficiency (Discrete Early Action)	0.93
T-8	Medium- and Heavy-Duty Vehicle Hybridization	0.5
T-9	High Speed Rail	1
Electricity and Natural Gas		
E-1	Energy Efficiency (32,000 GWh of Reduced Demand): • Increased Utility Energy Efficiency Programs • More Stringent Building & Appliance Standards Additional Efficiency and Conservation Programs	15.2
E-2	Increase Combined Heat and Power Use by 30,000 GWh (net reductions include avoided transmission line loss)	6.7
E-3	Renewables Portfolio Standard (33% by 2020)	21.3
E-4	Million Solar Roofs (including California Solar Initiative, New Solar Homes Partnership and solar programs of publicly owned utilities) • Target of 3000 MW Total Installation by 2020	2.1
CR-1	Energy Efficiency (800 Million Therms Reduced Consumptions): • Utility Energy Efficiency Programs • Building and Appliance Standards • Additional Efficiency and Conservation Programs	4.3
CR-2	Solar Water Heating (AB 1470 goal)	0.1
Green Buildings		
GB-1	Green Buildings	26

TABLE 3.2-4
LIST OF RECOMMENDED ACTIONS BY SECTOR

Measure No.	Measure Description	GHG Reductions (Annual Million Metric Tons CO2E)
Water		
W-1	Water Use Efficiency	1.4†
W-2	Water Recycling	0.3†
W-3	Water System Energy Efficiency	2.0†
W-4	Reuse Urban Runoff	0.2†
W-5	Increase Renewable Energy Production	0.9†
W-6	Public Goods Charge (Water)	TBD†
Industry		
I-1	Energy Efficiency and Co-Benefits Audits for Large Industrial Sources	TBD
I-2	Oil and Gas Extraction GHG Emission Reduction	0.2
I-3	GHG Leak Reduction from Oil and Gas Transmission	0.9
I-4	Refinery Flare Recovery Process Improvements	0.3
I-5	Removal of Methane Exemption from Existing Refinery Regulations	0.01
Recycling and Water Management		
RW-1	Landfill Methane Control (Discrete Early Action)	1
RW-2	Additional Reductions in Landfill Methane: • Increase the Efficiency of Landfill Methane Capture	TBD†
RW-3	High Recycling/Zero Waste: • Commercial Recycling • Increase Production and Markets for Compost • Anaerobic Digestion • Extended Producer Responsibility • Environmentally Preferable Purchasing	9†
Forests		
F-1	Sustainable Forest Target	5
High Global Warming Potential (GWP) Gases		
H-1	Motor Vehicle Air Conditioning Systems: Reduction of Refrigerant Emissions from Non-Professional Services (Discrete Early Action)	0.26
H-2	SF_6 Limits in Non-Utility and Non-Semiconductor Applications (Discrete Early Action)	0.3
H-3	Reduction of Perfluorocarbons in Semiconductor Manufacturing (Discrete Early Action)	0.15
H-4	Limit High GWP Use in Consumer Products Discrete Early Action (Adopted June 2008)	0.25
H-5	High GWP Reductions from Mobile Sources: • Low GWP Refrigerants for New Motor Vehicle Air Conditioning Systems • Air Conditioner Refrigerant Leak Test During Vehicle Smog Check • Refrigerant Recovery from Decommissioned Refrigerated Shipping Containers • Enforcement of Federal Ban on Refrigerant Release during Servicing or Dismantling of Motor Vehicle Air Conditioning Systems	3.3

H-6	High GWP Reductions from Stationary Sources:
	• High GWP Stationary Equipment Refrigerant Management Program:
	  o Refrigerant Tracking/Reporting/Repair Deposit Program
	  o Specifications for Commercial and Industrial Refrigeration Systems
	• Foam Recovery and Destruction Program
	• SF Leak Reduction and Recycling in Electrical Applications
	• Alternative Suppressants in Fire Protection Systems
	• Residential Refrigeration Early Retirement Program
		10.9

H-7	Mitigation Fee on High GWP Gases	5

TABLE 3.2-4
LIST OF RECOMMENDED ACTIONS BY SECTOR

Measure No.	Measure Description	GHG Reductions (Annual Million Metric Tons CO2E)
Agriculture		
A-1	Methane Capture at Large Dairies	1.0†

[1] This is not the SB 375 regional target. CARB will establish regional targets for each MPO region following the input of the regional targets advisory committee and a consultation process with MPO's and other stakeholders per SB 375.
† GHG emission reduction estimates are not included in calculating the total reductions needed to meet the 2020 target.

The total reduction for the recommended measures is 174 million metric tons/year of CO_2e, slightly exceeding the 169 million metric tons/year of CO_2e of reductions estimated to be needed in the *Draft Scoping Plan*. The measures in the Scoping Plan approved by the Board will be developed over the next two years and will be in place by 2012.

Senate Bill 97

SB 97, signed August 2007 (Chapter 185, Statutes of 2007; Public Resources Code Sections 21083.05 and 21097), acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA. This bill directed the Governor's Office of Planning and Research (OPR), which is part of the state Resources Agency, to prepare, develop, and transmit to CARB guidelines for the feasible mitigation of GHG emissions (or the effects of GHG emissions), as required by CEQA, by July 1, 2009. The Resources Agency was required to certify and adopt those guidelines by January 1, 2010. On December 31, 2009, the Natural Resources Agency delivered its rulemaking package to the Office of Administrative Law for their review pursuant to the Administrative Procedure Act. The adopted guidelines became effective on March 18, 2010 (for more information on the adopted guidelines, see the *OPR Proposed Amendments to the CEQA Guidelines* discussion below).

Governor's Office of Planning and Research (OPR)

On June 19, 2008, OPR published a technical advisory on CEQA and Climate Change. The advisory provides OPR's perspective on the emerging role of CEQA in addressing climate change and GHG emissions, while recognizing that approaches and methodologies for calculating GHG emissions and addressing environmental impacts through CEQA review are rapidly evolving. The advisory recognizes that OPR will develop, and the Resources Agency will adopt amendments to the CEQA Guidelines pursuant to SB 97. In the interim, the technical advisory "offers informal guidance regarding the steps lead agencies should take to address climate change in their CEQA documents" (OPR, 2008).

The technical advisory points out that neither CEQA nor the CEQA Guidelines prescribe thresholds of significance or particular methodologies for performing an impact analysis. "This is left to lead agency judgment and discretion, based upon factual data and guidance from regulatory agencies and other sources where available and applicable" (OPR, 2008). OPR recommends that "the global

nature of climate change warrants investigation of a statewide threshold of significance for GHG emissions" (OPR, 2008). Until such a standard is established, OPR advises that each lead agency should develop its own approach to performing an analysis for projects that generate GHG emissions (OPR, 2008).

Agencies should then assess whether the emissions are "cumulatively considerable" even though a project's GHG emissions may be individually limited. OPR states: "Although climate change is ultimately a cumulative impact, not every individual project that emits GHGs must necessarily be found to contribute to a significant cumulative impact on the environment" (OPR, 2008). Individual lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice (OPR, 2008).

Finally, if the lead agency determines emissions are a cumulatively considerable contribution to a significant cumulative impact, the lead agency must investigate and implement ways to mitigate the emissions (OPR, 2008). OPR states: "Mitigation measures will vary with the type of project being contemplated, but may include alternative project designs or locations that conserve energy and water, measures that reduce vehicle miles traveled (VMT) by fossil-fueled vehicles, measures that contribute to established regional or programmatic mitigation strategies, and measures that sequester carbon to offset the emissions from the project" (OPR, 2008). OPR concludes that "A lead agency is not responsible for wholly eliminating all GHG emissions from a project; the CEQA standard is to mitigate to a level that is 'less than significant'" (OPR, 2008). The technical advisory includes a list of mitigation measures that can be applied on a project-by-project basis.

OPR Proposed Amendments to the CEQA Guidelines

On April 13, 2009, OPR submitted to the Secretary for Natural Resources its proposed amendments to the CEQA Guidelines for GHG emissions, as required by Public Resources Code section 21083.05 (Senate Bill 97) (OPR, 2009) to provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in draft CEQA documents. The Natural Resources Agency adopted the CEQA Guidelines Amendments with minor, non-substantial changes on December 31, 2009 and transmitted the Adopted Amendments and the entire rulemaking file to the Office of Administrative Law (OAL). The adopted guidelines became effective on March 18, 2010.

The proposed amendments suggest relatively modest changes to various portions of the existing CEQA Guidelines. Modifications address those issues where analysis of GHG emissions may differ in some respects from more traditional CEQA analysis.

Proposed amendments include a new CEQA section (15064.4) to assist lead agencies in determining the significance of the GHG impacts. This section urges lead agencies to quantify, where possible, the GHG emissions of projects. In addition to quantification, this section recommends consideration of several other qualitative factors that may be used in determination of significance including:

1. The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting;
2. Whether the GHG emissions exceed a threshold of significance that the lead agency determines applies to the project; and

3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

The proposed amendments include a new subdivision 15064.7(c) to clarify that in developing thresholds of significance, a lead agency may appropriately review thresholds developed by other public agencies, such as CARB or the California Air Pollution Control Officers Association (CAPCOA), so long as any threshold chosen is supported by substantial evidence.

The proposed amendments also include a new subdivision 15130(f) to emphasize that the effects of GHG emissions are cumulative, and should be analyzed when the incremental contribution of those emissions may be cumulatively considerable.

In addition, the proposed amendments add a new set of environmental checklist questions (VII. Greenhouse Gas Emissions) to the CEQA Guidelines Appendix G. The new set includes the following two questions:

a. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

b. Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHG?

California Air Pollution Control Officers Association

In January 2008, the CAPCOA issued a “white paper” on evaluating and addressing GHGs under CEQA (CAPCOA, 2008). This resource guide was prepared to support local governments as they develop their programs and policies around climate change issues. The paper is not a guidance document. It is not intended to dictate or direct how any agency chooses to address GHG emissions. Rather, it is intended to provide a common platform of information about key elements of CEQA as they pertain to GHG, including an analysis of different approaches to setting significance thresholds.

The paper notes that for a variety of reasons local agencies may decide not to have a CEQA threshold. Local agencies may also decide to assess projects on a case-by-case basis when the projects come forward. The paper also discusses a range of GHG emission thresholds that could be used. The range of thresholds discussed includes a GHG threshold of zero and several non-zero thresholds. Non-zero thresholds include percentage reductions for new projects that would allow the state to meet its goals for GHG emissions reductions by 2020 and perhaps 2050. These would be determined by a comparison of new emissions versus business as usual emissions and the reductions required would be approximately 30 percent to achieve 2020 goals and 90 percent (effectively immediately) to achieve the more aggressive 2050 goals. These goals could be varied to apply differently to new project, by economic sector, or by region in the state.

Other non-zero thresholds are discussed in the paper include:

- 900 metric tons/year CO_2e (a market capture approach);

- 10,000 metric tons/year CO_2e (potential CARB mandatory reporting level with Cap and Trade);
- 25,000 metric tons/year CO_2e (the CARB mandatory reporting level for the statewide emissions inventory);
- 40,000 to 50,000 metric tons/year CO_2e (regulated emissions inventory capture – using percentages equivalent to those used in air districts for criteria air pollutants),
- Projects of statewide importance (9,000 metric tons/year CO_2e for residential, 13,000 metric tons/year CO_2e for office project, and 41,000 metric tons/year CO_2e for retail projects), and
- Unit-based thresholds and efficiency-based thresholds that were not quantified in the report.

Local Standards

The San Luis Obispo County Air Pollution Control District (SLOCAPCD) is the regional agency with regulatory authority over emission sources in the SCCAB, which is comprised of San Luis Obispo, Santa Barbara, and Ventura counties. The majority of the proposed project would affect the SCCAB, with the exception of potential hauling of dewatered sludge out of the area to Kern County. The San Joaquin Valley Air Pollution Control District (SJVAPCD) is the regional agency with regulatory authority over western Kern County.

San Luis Obispo County Air Pollution Control District

The SLOCAPCD is the regional agency responsible for rulemaking, permitting, and enforcement activities affecting stationary sources in the SCCAB. Specific rules and regulations adopted by the SLOCAPCD limit the emissions that can be generated by various uses and/or activities, and identify specific pollution reduction measures that must be implemented in association with various uses and activities. These rules regulate not only emissions of the six criteria air pollutants, but also toxic emissions and acutely hazardous non-radioactive materials emissions.

Emissions sources subject to these rules are regulated through the SLOCAPCD's permitting process and standards of operation. Through this permitting process, including an annual permit review, the SLOCAPCD monitors generation of stationary emissions and uses this information in developing its air quality plans. Any sources of stationary emissions constructed as part of the proposed project would be subject to the SLOCAPCD Rules and Regulations.

With respect to the construction phase of the project, applicable SLOCAPCD regulations would relate to equipment used during project construction, which would be subject to the requirements of SLOCAPCD rules.

SLOCAPCD CEQA Air Quality Handbook

SLOCAPCD has published the *CEQA Air Quality Handbook* (SLOCAPCD, December 2009), which establishes significance criteria for emissions from project-related construction and operation. The recommended emissions thresholds for criteria air pollutants established by

SLOCAPCD are provided in **Table 3.2-5**. In addition, the SLOCAPCD *CEQA Air Quality Handbook* contains screening distances to potential odor sources, as provided in **Table 3.2-6**.

TABLE 3.2-5
THRESHOLDS OF SIGNIFICANCE FOR CONSTRUCTION EMISSIONS IMPACTS

Pollutant	Daily	Quarterly Tier 1	Quarterly Tier 2
ROG + NOx (combined)	137 lbs	2.5 tons	6.3 tons
PM10, Dust Emissions	NA	2.5 tons	NA

SOURCE: SLOCAPCD, 2009.

TABLE 3.2-6
PROJECT SCREENING DISTANCES FOR POTENTIAL ODOR SOURCES

Type of Operation	Project Screening Distance
Wastewater Treatment Plant	1 mile
Composting Facility	1 mile

SOURCE: SLOCAPCD, 2009.

Daily: For construction projects expected to be completed in less than one quarter (90 days), exceedance of the 137 lb/day threshold for ROG and NOx combined requires Standard Mitigation Measures.

Quarterly – Tier 1: For construction projects lasting more than one quarter (qtr), exceedance of the 2.5 ton/qtr threshold for ROG and NOx combined requires Standard Mitigation Measures and Best Available Control Technology (BACT) for construction equipment. If implementation of the Standard Mitigation and BACT measures cannot bring the project below the threshold, offsite mitigation may be necessary. Exceedance of the 2.5 ton/qtr threshold for PM_{10} requires Fugitive PM_{10} Mitigation Measures and may require the implementation of a Construction Activity Management Plan (CAMP).

Quarterly – Tier 2: For construction projects lasting more than one quarter, exceedance of the 6.3 ton/qtr threshold for ROG and NOx combined requires Standard Mitigation Measures, BACT, implementation of a CAMP, and off-site mitigation.

SLOCAPCD Construction Activity Management Plan (CAMP)

SLOCAPCD may require the preparation of a Construction Activity Management Plan (CAMP) for construction projects that result in significant particulate matter (PM) and/or nitrogen oxide (NOx) emission impacts, such as potentially high emissions of fugitive dust or NOx, or emissions in areas where potential nuisance concerns are present. The CAMP serves as a way to specifically define mitigation measures that will be implemented as the project moves forward and ensures that all requirements are accounted for by outlining a comprehensive mitigation plan. A set of

guidelines are available from the SLOCAPCD that provides information for developing a CAMP, specific implementation methods for reducing impacts, and other APCD-required approvals.

Prior to initiating construction activities, the applicant notifies the appropriate planning agency and the APCD, by letter, of the status of the air quality measures outlined in the CAMP, including Standard Mitigation Measures and BACT. The letter describes the controls that will be implemented prior to and during construction activities, the reasons for measures considered infeasible to implement and the substitutions for these measures, and when scheduled construction activities will be initiated to allow for the APCD inspection of the mitigation measures. The CAMP must be submitted and approved by the APCD prior to commencing construction.

Greenhouse Gas Construction Emissions Calculations

The SLOCAPCD CAMP Guidelines state that a project's overall GHG impact evaluation should include the following:

a. The short term GHG impacts from the construction phase amortized over the life of the project (50 years for residential or residential support facilities and 25 years for commercial or industrial facilities) to provide a mechanism for the project to mitigate these impacts by adding these amortized impacts to the operational phase impacts; and

b. The project's operational phase GHG impacts.

3.2.3 Impact Assessment

Thresholds of Significance

CEQA Guidelines

According to *CEQA Guidelines* Appendix G, the project would have a significant effect on air quality if it would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result in a cumulatively considerable net increase of any nonattainment pollutant (including releasing emissions that exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations;
- Create objectionable odors affecting a substantial number of people;
- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Greenhouse Gases Significance Criteria

At this time, few, if any, local governments statewide have adopted anything beyond a case-by-case significance criterion for evaluating a project's contribution to climate change. The OPR has asked the CARB to "recommend a method for setting thresholds of significance to encourage consistency and uniformity in the CEQA analysis of GHG emissions" throughout the state because OPR has recognized that "the global nature of climate change warrants investigation of a statewide threshold for GHG emissions" (OPR, 2008). CARB began the public process of addressing significance thresholds in October 2008, but many decisions need to be made to have final criteria (CARB, 2008b).

The informal guidelines in OPR's technical advisory and CARB's proposed thresholds provide a general basis for determining a proposed project's contribution of GHG emissions and the project's contribution to global climate change. In the absence of adopted statewide thresholds, OPR recommends the following approach for analyzing GHG emissions:

1) Identify and quantify the project's GHG emissions;
2) Assess the significance of the impact on climate change; and
3) If the impact is found to be significant, identify alternatives and/ or mitigation measures that would reduce the impact to less than significant levels.

OPR's technical advisory states that "the most common GHG that results from human activity is carbon dioxide, followed by methane and nitrous oxide." State law defines GHGs to also include HFCs, PFCs and SFG. These latter GHG compounds are usually emitted in industrial processes, and therefore not applicable to the proposed project; however, the GHG calculation should include emissions from CO_2, N_2O, and CH_4, as recommended by OPR. The informal guidelines also advise that lead agencies should calculate, or estimate, emissions from vehicular traffic, energy consumption, water usage and construction activities.

As discussed above, at this time there are no statewide guidelines for greenhouse gas emission impacts, but this will be addressed through the provisions of Senate Bill 97 (SB 97). OPR has until July 1, 2009 to draft the new GHG guidelines, and the State Resources Agency will thereafter have until January 1, 2010 to certify and adopt the regulations. In the interim, local agencies must analyze the impact of GHGs. For this analysis, the project would be considered to have a significant impact if the project would be in conflict with the AB 32 State goals for reducing greenhouse gas emissions. The assumption is that AB 32 will be successful in reducing GHG emissions and reducing the cumulative GHG emissions statewide by 2020. It is important that the state has taken these measures, because no project individually could have a major impact (either positively or negatively) on the global concentration of GHGs.

Methodology

Construction Impacts

Daily construction emissions were forecast by using default values from the air quality emissions model URBEMIS 2007 version 9.2.4. URBEMIS 2007 output sheets are provided in Appendix B of this document.

Operational Impacts

Operational emissions were determined by estimating GHGs through indirect electricity usage provided by the Lead Agency and formulas and emission factors from the California Climate Action Registry Report Protocol 2006.

Impacts Discussion

Air Quality Management Plans and Air Quality Standards

Impact 3.2-1: Construction and operation of the proposed project could violate air quality standards or contribute substantially to an existing or projected air quality violation. (Less than Significant)

The SLOCAPCD *CEQA Air Quality Handbook* (SLOCAPCD, 2009) establishes significance criteria for emissions from project-related construction and operation. The recommended emissions thresholds for criteria air pollutants established by SLOCAPCD are provided in Table 3.2-5.

The proposed project would result in a significant air quality impact if either of the following occurs during project construction or operation:

- Emissions exceed the significance thresholds set forth in Table 3.2-5; and/or
- The proposed project would not be compatible with SLOCAPCD air quality goals and policies.

Project Construction

Construction-related emissions would be short-term, but would still cause adverse effects on air quality. Project construction activities would include site preparation, earthmoving, and general construction. Site preparation includes activities such as general land clearing and grubbing. Earthmoving activities include cut-and-fill operations, trenching, soil compaction, and grading. General construction includes adding improvements such as surfaces, structures, and facilities. The emissions generated from these construction activities include:

- Dust (including PM_{10} and $PM_{2.5}$) primarily from “fugitive” sources (i.e., emissions released through means other than through a stack or tailpipe) such as soil disturbance;
- Combustion emissions of criteria air pollutants (ROG, NOx, carbon monoxide, carbon dioxide, PM_{10}, and $PM_{2.5}$) primarily from operation of heavy off-road construction

equipment (primarily diesel-operated), portable auxiliary equipment, and construction worker automobile trips (primarily gasoline-operated); and

- Evaporative emissions (ROG) from asphalt paving and architectural coatings.

Construction-related fugitive dust emissions would vary from day to day, depending on the level and type of activity, silt content of the soil, and the weather. In the absence of mitigation, construction activities may result in significant quantities of dust, and as a result, local visibility by increases of PM_{10} concentrations may be adversely affected on a temporary and intermittent basis during construction. In addition, the fugitive dust generated by construction would include not only PM_{10}, but also larger particles, which would fall out of the atmosphere within several hundred feet of the site and could result in nuisance-type impacts.

NOx, ROG, PM10, PM2.5, CO, and CO_2 construction emissions were estimated based on default maximum crew, truck trip, and equipment. Emissions are based on criteria pollutant emission factors from URBEMIS 2007. The results of this analysis are summarized in **Table 3.2-7**.

TABLE 3.2-7
EMISSIONS FROM PROJECT CONSTRUCTION
(tons per quarter)[a]

Project Data	ROG + NOx	CO	PM10	PM2.5	CO2
2010					
2011	2.6	1.2	0.5	0.2	245
2012	0.6	0.4	0.0	0.0	66
2013	0.7	0.4	0.0	0.0	66
2014	0.0	0.0	0.0	0.0	4
SLOCAPCD Quarterly Tier 1 Thresholds	2.5	NA	2.5	NA	NA
Significant Unmitigated (Yes or No)?	Yes	No	No	No	No
Significant with CAMP Measures?	No	No	No	No	No

[a] Project construction emissions estimates for off-road equipment were made using URBEMIS2007, version 9.2.4 Tons per year were divided into quarters. See Appendix B for more details.
NA = Not Available

SOURCE: ESA, 2010.

As shown in Table 3.2-7, combined emissions of ROG and NOx would be greater than the Quarterly Tier 1 significance thresholds. The SLOCAPCD CAMP Guidelines requires that Standard Mitigation Measures and BACT be implemented for construction activities that result in Quarterly Tier 1 emissions for NOx and ROG greater than the 2.5 tons/qtr threshold. Mitigation Measure 3.2-1a requires the preparation of a CAMP that identifies the Standard Mitigation Measures and BACT to be implemented to lower air emissions below Tier 1 thresholds. Mitigation Measure 3.2-1b would ensure the CAMP also includes requirements for compliance with SLOCAPCD's Rule 402 for reducing the impact of fugitive dust. Implementation of Mitigation Measure 3.2-1b would ensure dust control mitigation measures are included in the

CAMP and implemented during construction to reduce dust emissions to less than significant levels.

In addition, the project site would be located in a candidate area for naturally-occurring asbestos (NOA). Both construction workers and sensitive receptors on surrounding properties could be exposed to NOA. The Preliminary Geotechnical Report prepared for the proposed project has determined that the sand and alluvium underlying the project site do not contain minerals classified as significant sources of NOA (Fugro West, 2010). If NOA is not present, then an exemption request must be filed with the APCD. Implementation of Mitigation Measure 3.2-1c would require MBCSD to confirm that NOA is not present at the project site and that the exemption request is filed with the APCD. Impacts would be less than significant with mitigation.

Project Operation

Operation of the proposed treatment equipment would not result in an increase in localized, onsite air emissions. Currently, the SLOCAPCD has issued air emissions permits to the WWTP for the existing emergency diesel generator and digester boilers located onsite. The permits limit hydrogen sulfide emission to less than 600 ppm. As a result of the proposed project, these facilities would be taken offline and/or demolished. MBCSD would be required to secure a new Permit to Operate from SLOCAPCD for the proposed emergency diesel generator to be located at the new WWTP. No additional new facilities would require air emissions permits. The overall emissions inventory associated with operation of the proposed new treatment equipment would not increase as a result of the project. Impacts would be less than significant.

Operational emissions for the proposed project would be generated primarily from on-road vehicular traffic. Minimal employee trips would be required for daily routine operations and inspection/maintenance; these trips are not anticipated to change from current operations. There would be an increase of up to 19 truck trips per week to and from the project site to dispose of additional sludge, screenings and grit, and to deliver the polymer. In addition, if future improvements are made to produce disinfected tertiary recycled water, then two to ten water trucks per week would fill up with recycled water at the utility water station. Overall, depending on the day and time of year, the proposed project would add no more than 30 truck trips per week, or no more than six trucks per day on average (assuming weekdays only) to local and regional roadways.

Given the number of operational vehicle trips and the existing low concentrations of CO in the area, the proposed project operations would not result in or contribute to CO concentrations that exceed the California 1-hour or 8-hour ambient air quality standards. Thus, mobile-source emissions of CO would not be anticipated to result in or contribute substantially to an air quality violation.

San Luis Obispo County is currently in attainment for $PM_{2.5}$, and data from the closest monitoring station in the City of San Luis Obispo suggest that concentrations of $PM_{2.5}$ have not exceeded national or state standards in recent years (Table 3.2-1). An additional six truck trips per day due to operation of the proposed WWTP would not be expected to contribute to an air quality violation for $PM_{2.5}$. San Luis Obispo County is currently in nonattainment for PM_{10}; however data

from the closest monitoring station in the City of Morro Bay suggest that concentrations of PM_{10} only exceeded state standards once between 2005 and 2007 (Table 3.2-1). An additional six truck trips per day would not be expected to contribute to an air quality violation for PM_{10}. The proposed project would be compatible with SLOCAPCD air quality goals and policies.

Similarly, the project would result in no more than 18 additional truck trips per week to the San Joaquin Composting facility located in Kern County. This number of weekly trips would not contribute a significant amount of pollutants to the Southern San Joaquin Valley Air Basin.

Mitigation Measures

Mitigation Measure 3.2-1a: MBCSD shall require the construction contractor to prepare a Construction Activity Management Plan (CAMP) for submission to SLOCAPCD. Prior to initiation of construction, the CAMP shall be approved by SLOCAPCD. The CAMP shall include mitigation measures to minimize ROG and NOx, including but not limited to the following Standard Mitigation Measures recommended by the CAMP Guidelines:

a. Maintain all construction equipment in proper tune according to manufacturer's specifications;

b. Fuel all off-road and portable diesel powered equipment with ARB certified motor vehicle diesel fuel (non-taxed version suitable for use off-road);

c. Use diesel construction equipment meeting ARB's Tier 2 certified engines or cleaner off-road heavy-duty diesel engines, and comply with the State off-Road Regulation;

d. Use on-road heavy-duty trucks that meet the ARB's 2007 or cleaner certification standard for on-road heavy-duty diesel engines, and comply with the State On-Road Regulation;

e. Construction or trucking companies with fleets that that do not have engines in their fleet that meet the engine standards identified in the above two measures (e.g. captive or NOx exempt area fleets) may be eligible by proving alternative compliance;

f. All on-and off-road diesel equipment shall not idle for more than five minutes. Signs shall be posted in the designated queuing areas and or job sites to remind drivers and operators of the 5 minute idling limit;

g. Electrify equipment when feasible;

h. Substitute gasoline-powered in place of diesel-powered equipment, where feasible; and,

i. Use alternatively fueled construction equipment on-site where feasible, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane or biodiesel.

Mitigation Measure 3.2-1b: To further reduce the impact of fugitive dust, MBCSD shall require the construction contractor to comply with the SLOCAPCD's Rule 402. The construction contractor shall prepare a CAMP that includes dust control mitigation measures to be implemented during construction, particularly demolition and site grading phases. Mitigation measures may include, but not be limited to, the following recommendations from the CAMP Guidelines:

a. Reduce the amount of the disturbed area where possible.

b. Use of water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site. Increased watering frequency would be required whenever possible.

c. All dirt stock pile areas should be sprayed daily as needed.

d. Permanent dust control measures identified in the approved project revegetation and landscape plans should be implemented as soon as possible following completion of any soil disturbing activities.

e. Exposed ground areas that are planned to be reworked at dates greater than one month after initial grading should be sown with fast germinating native grass seed and watered until vegetation is established.

f. All disturbed soil areas not subject to revegetation should be stabilized using approved chemical soil binders, juite netting, or other methods approved in advance by the APCD.

g. All roadways, driveways, sidewalks, etc. to be paved should be completed after grading unless seeding or soil binders are used.

h. Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site.

i. All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard.

j. Install wheel washers where vehicles enter and exit unpaved roads onto streets, or wash off trucks and equipment leaving the site.

k. Sweep streets at the end of each day if visible soil material is carried onto adjacent paved roads. Water sweepers with reclaimed water should be used where feasible.

Mitigation Measure 3.2-1c: MBCSD shall evaluate whether naturally-occurring asbestos (NOA) is present within the area of disturbance based on geotechnical information collected at the site. If NOA is present, then the construction contractor must comply with all requirements of CARB's Air Toxics Control Measure (ATCM). Compliance may include preparation and implementation of an Asbestos Dust Mitigation Plan and an Asbestos Health and Safety Program for approval by APCD. If NOA is not found, then the construction contractor shall file an exemption request with SLOCAPCD.

Significance after Mitigation: Less than significant

Cumulative Air Emissions

Impact 3.2-2: The proposed project could result in a cumulatively considerable net increase of any criteria pollutant under an applicable federal or state ambient air quality standard. (Less than Significant with Mitigation)

With implementation of Mitigation Measures 3.2-1a through 3.2-1c, the construction and operational impacts of the proposed project would not exceed the SLOCAPCD's thresholds, and therefore are not expected to be cumulatively considerable. There might be emission increases for certain air pollutants for nearby past, present and/or foreseeable projects (either overlapping

construction periods or on-going operation) that are expected to exceed the SLOCAPCD's emission thresholds. Per *CEQA Guidelines* Section 15064(h)(4), the mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulatively considerable. With implementation of mitigation, development of the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant and would be less than significant.

Mitigation Measures

Implement Mitigation Measures 3.2-1a through 3.2-1c.

Significance after Mitigation: Less than significant

Effects on Sensitive Receptors

Impact 3.2-3: The proposed project could expose sensitive receptors to substantial pollutant concentrations. (Less than Significant)

Sensitive receptors are considered highly sensitive to air pollution and include children, the elderly, acutely and chronically ill persons, residential development, hospitals, and schools.

Carbon Monoxide

CO is a localized pollutant of concern. CO emissions would result due to operational vehicle trips from the project site that would be required to dispose of additional sludge, screenings, and grit, deliver polymer, and distribute recycled water. CO emissions in California have been substantially reduced since the early 1980s due to more stringent regulations of emissions from new vehicles and improvements in fuels. Existing CO emissions in the project area are low. CO emissions associated with operation of the proposed project would occur along Atascadero Road at least 350 to 700 feet from Morro Bay High School buildings. Due to this distance from sensitive receptors, the small number of vehicle trips (up to six per day), and the existing low concentrations of CO in the area, project operation would have a less-than-significant effect on sensitive receptors.

Construction of the proposed project would generate CO emissions under SLOCAPCD thresholds as shown in Table 3.2-7. Due to the short-term nature of construction activities and the project's compliance with SLOCAPCD thresholds, impacts to sensitive receptors due to construction-related emissions of CO would be less-than-significant.

Toxic Air Contaminants

The greatest potential for TAC emissions would be related to diesel particulate emissions associated with heavy equipment operations during grading, excavation, and transportation activities. Health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. "Individual Cancer Risk" is the likelihood that a person exposed to concentrations of TACs over a 70-year lifetime would contract cancer, based on the use of standard risk-assessment

methodology. The proposed project would not result in a long-term (i.e., 70 years) substantial source of TAC emissions. The short-term increase in diesel exhaust emissions associated with construction of the proposed project would be insignificant over the 70-year health risk assessment period and therefore would be less-than-significant to individual cancer risk.

Operation of the proposed project would result in an increase in truck trips associated with hauling of dewatered sludge, screenings and grit, delivery of polymer, and delivery of recycled water. Up to 30 additional truck trips per week (or six per day) would result due to WWTP operation. TAC emissions, including diesel particulate matter such as PM_{10} or $PM_{2.5}$ would be emitted by diesel-powered haul and delivery trucks traveling along Atascadero Road in the vicinity of Morro Bay High School. CARB's *Air Quality and Land Use Handbook* (2005) recommends locating sensitive receptors such as schools at least 500 feet from urban roadways with 100,000 vehicles per day and rural roadways with 50,000 vehicles per day. The average daily trips (ADT) on Atascadero Road is approximately 8,800 (see Table 3.11-1 in Chapter 3.11). Morro Bay High School is set back approximately 350 to 700 feet from Atascadero Raod, depending on the building. The addition of six vehicles per day on Atascadero Road would not result in a substantial increase in volume on the roadway such that sensitive receptors at the school would be affected. The proposed project would not expose sensitive receptors to substantial concentrations of TAC. Impacts would be less than significant.

Mitigation Measures

None required.

Odor Impacts

Impact 3.2-4: Operation of the proposed project could create objectionable odors affecting a substantial number of people. (Less than Significant with Mitigation)

The existing sludge drying beds located onsite at the WWTP would be demolished and not replaced, eliminating an existing odor source. The proposed project would retire and demolish trickling filters and primary clarifiers, which are existing facilities also associated with odor problems. The proposed project would construct new oxidation ditches and a Residuals Facility building that would contain the solids handling facilities. The Residual Facility would be a partially-enclosed two-story building with three full-height exterior walls (west, north, and east) to provide protection from prevailing winds and to mitigate odors on neighboring parcels. The proposed project would retire and demolish facilities associated with odor and replace them with facilities that inherently produce less odor and are designed to contain odor.

Furthermore an Odor Impact Minimization Plan (OIMP) has been put in place at the WWTP in accordance with Title 14, California Code of Regulations (CCR) Section 17863.4. The OIMP provides guidance on the storage, removal, and handling of materials at the site in accordance with the state requirements dealing with meteorological conditions, complaint response protocol, operating procedures, etc. Included in the OIMP is a daily on-site odor evaluation to find, assess,

and resolve questionable or objectionable odors on site and to determine if the odor travels off-site. A complaint response protocol is also in place to receive complaints, investigate the source, and implement changes to minimize the odors. Implementation of Mitigation Measure 3.2-2 would ensure that MBCSD revises the OIMP to reflect the new proposed facilities at the WWTP in accordance with CCR requirements. Mitigation Measure 3.2-2 would ensure MBCSD implements necessary changes in accordance with new identified sources of objectionable odors. Therefore, odor related emissions would be reduced to a less than significant level.

Mitigation Measures

> **Mitigation Measure 3.2-2**: MBCSD shall revise the Odor Impact Minimization Plan (OIMP) for the WWTP in accordance with Title 14 CCR Section 17863.4, to include the proposed new facilities. MBCSD shall identify new sources of objectionable odors and develop and implement new procedures to minimize odors. MBCSD shall comply with all requirements of the revised OIMP.

Significance after Mitigation: Less than significant

Greenhouse Gas Emissions

Impact 3.2-5: The proposed project could conflict with implementation of state goals for reducing greenhouse gas emissions and have a negative effect on Global Climate Change. (Less than Significant)

As with other individual and relatively small projects (i.e., projects that are not cement plants, oil refineries, electric generating facilities/providers, co-generation facilities, or hydrogen plants or other stationary combustion sources that emit more than 25,000 metric tons/year of CO_2e), the specific emissions from this project would not be expected to individually have an impact on Global Climate Change (AEP, 2007). Furthermore, GHG impacts are considered to be exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective (CAPCOA, 2008).

Four types of analyses are used to determine whether the project could be in conflict with the state goals for reducing greenhouse gas emissions. The analyses are as follows:

A. Any potential conflicts with the CARB's thirty-nine (39) recommended actions in California's AB 32 Climate Change Scoping Plan.

B. The relative size of the project. The project's GHG emissions will be compared to the size of major facilities that are required to report greenhouse gas emissions (25,000 metric tons/year of CO2e) to the state. As noted above, the 25,000 metric ton annual limit identifies the large stationary point sources in California that make up approximately 94 percent of the stationary emissions. If the project's total emissions are below this limit, its total emissions are equivalent in size to the smaller projects in California that as a group only make up 6 percent of all stationary emissions. It is assumed that the activities of these smaller projects generally would not conflict with the State's ability to reach AB 32

overall goals. The project size will also be compared to the estimated greenhouse reduction state goal of 169 million metric tons per year of CO2e emissions by 2020. In reaching its goals the CARB will focus upon the largest emitters of greenhouse gas emissions.

C. The basic energy efficiency parameters of a project to determine whether its design is inherently energy efficient.

D. Any potential conflicts with applicable City of Morro Bay plans, policies, or regulations adopted for the purpose of reducing the emissions of greenhouse gases.

With regard to Item A, the project would not pose any apparent conflict with the CARB discrete early action strategies (see Table 3.2-4). None of the early action strategies are applicable to wastewater treatment plants.

With regard to Item B, project construction GHG emissions would be approximately 888 metric tons/year of CO_2e. Construction emissions amortized over 25 years according to the SLOCAPCD would be approximately 36 metric tons/year of CO_2e. The proposed project would require an incremental increase in electricity use of 1.0 million kWH per year. Energy consumption at the existing WWTP is approximately 0.9 million kWH per year, and at build-out, operation of the upgraded WWTP would require approximately 1.9 million kWH per year. Project operation would generate approximately 366 metric tons/year of CO_2e due to indirect emissions from the incremental increase in use of electricity. In addition, project operation would generate up to 30 additional truck trips per week, or up to six truck trips per day, associated with hauling of sludge, screenings, and grit, delivery of chemicals, and delivery of recycled water. Approximately 14 metric tons/year of CO_2e would be generated due to on-road vehicle exhaust. Combined with amortized construction-related GHG emissions as recommended by SLOCAPCD, project operation would generate approximately 415 metric tons/year of CO_2e. The project would not be classified as a major source of greenhouse gas emissions. Operational emissions would be about 1.7 percent of the lower reporting limit, which is 25,000 metric tons/year of CO_2e.

When compared to the overall State reduction goal of approximately 169 million metric tons/year of CO_2e, the maximum GHG emissions for the project (401 metric tons/year of CO_2e or 0.0000025 percent of the State goal) would be quite small and should not conflict with the State's ability to meet the AB 32 goals.

With regard to Item C, the project would upgrade treatment facilities at the WWTP to produce full-secondary treated effluent with tertiary filtration. The requirement of the SWRCB to upgrade the WWTP to full-secondary treatment results in an increase in energy usage to provide the additional level of treatment. There would be an incremental increase in electricity use at the new WWTP, from 0.9 million (kWH) per year to up to approximately 1.9 million kWH per year at build-out. As described above, project operation would produce approximately 366 metric tons/year of CO_2e associated with the generation of additional electricity required to power the project at build-out, plus 14 metric tons/year of CO_2e associated with operational truck trips. The proposed project would produce tertiary filtered effluent that meets Title 22 standards for disinfected secondary-23 recycled water, which could be used for end uses such as municipal and

agricultural irrigation (see Table 1-1 in Chapter 1). In general, the use of recycled water instead of potable water uses less energy in the long term, relative to alternative water sources such as imported water and desalinated water.

Imported water delivered through the SWP consumes a substantial amount of energy to convey water to southern California from the Sacramento-San Joaquin River Delta in northern California. A recent study by West Basin Municipal Water District has shown that the energy required to import SWP water is over six times the energy requirement for Title 22 recycled water when considering kilowatt-hours per acre-foot (West Basin, 2007). In addition, the same study indicates that Title 22 recycled water produces 338 tons of CO_2 for every 1,000 af of water produced, while the SWP produces 2,250 tons of CO_2 for every 1,000 af of water imported (West Basin, 2007; USEPA, 1995).[1] Based on this analysis, the proposed project would reduce the relative amount of GHG emissions produced for every acre-foot of recycled water provided by the proposed project to offset potable imported water and would be considered to be inherently energy efficient in this respect.

In addition, the City of Morro Bay owns and operates a desalination plant. The plant desalinates seawater produced from five seawater wells located along the Morro Bay harbor. Currently, the plant is only operated to offset seasonal peaking, to offset routine supply when SWP water is not available, and during drought emergencies (Boyle, 2006). Desalinated water is known to have the greatest energy requirement of all water supply sources, including imported water and recycled water. The use of recycled water produced at the new WWTP instead of desalinated water also would reduce the relative amount of GHG emissions produced for every acre-foot of recycled water used; this also would be considered to be inherently energy efficient.

With regard to Item D, the City of Morro Bay has not established any GHG reduction plans or policies. Therefore, the project would not conflict with any local regulations pertaining to greenhouse gases. However, the City is in the planning stages of evaluating its carbon footprint and preparing for future Climate Action Plan requirements to reduce GHG emissions. The proposed project would result in a small increase in local GHG emissions due to construction of the proposed project (36 metric tons/year of CO_2e) and operational truck trips (14 metric tons/year of CO_2e). Local impacts associated with these emissions are unknown at this time as the City has not developed quantitative thresholds of significance for GHG emissions. Emissions associated with an increase in energy consumption at the WWTP would occur offsite. Energy consumption at the proposed WWTP would increase by approximately 1.0 million kWH per year. No off-site improvements would be necessary to provide the additional energy to operate the proposed new WWTP at full capacity. The proposed WWTP would be connected to the existing grid infrastructure. Off-site energy producers would be accountable for emissions associated with energy production.

The review of Items A, B, C and D indicate that the project would not conflict with the State's ability to meet AB 32 goals and would not have a significant impact on global climate change.

[1] Conversion factor: kWh/1333.333 = tons CO_2. (USEPA, 1995)

Mitigation Measures

None required.

Mitigation Measure Summary Table

Table 3.2-8 presents the impacts and mitigation summary for Air Quality and Greenhouse Gas Emissions.

TABLE 3.2-8
AIR QUALITY AND CLIMATE CHANGE IMPACTS AND MITIGATION SUMMARY

Proposed Project Impact	Mitigation Measure	Significance after Mitigation
Air Quality Management Plans and Standards: Construction and operation of the proposed project could violate air quality standards or contribute substantially to an existing or projected air quality violation.	Measures 3.2-1a through 3.2-1c	Less than significant
Cumulative Air Emissions: The proposed project would not result in a cumulatively considerable net increase of any criteria pollutant under an applicable federal or state ambient air quality standard	Measures 3.2-1a through 3.2-1c	Less than significant
Effects on Sensitive Receptors: The proposed project would not expose sensitive receptors to substantial pollutant concentrations.	None required	Less than significant
Odor Impacts: Operation of the proposed project would not create objectionable odors affecting a substantial number of people.	Mitigation Measure 3.2-2	Less than significant
Greenhouse Gas Emissions: The proposed project would not conflict with implementation of state goals for reducing greenhouse gas emissions and would not have a negative effect on Global Climate Change.	None required	Less than significant

References – Air Quality and Greenhouse Gas Emissions

Association of Environmental Professionals (AEP), Alternative Approaches to Analyzing Greenhouse Gas Emissions and Global Climate Change in CEQA Documents, 2007

Boyle Engineering, *City of Morro Bay 2005 Urban Water Management Plan*, February 2006.

California Air Pollution Control Officers Association (CAPCOA), CEQA and Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act, 2008.

California Air Resources Board (CARB), *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*, October 2000.

California Air Resources Board (CARB). *ARB Fact Sheet: Air Pollution Sources, Effects and Control*, http://www.arb.ca.gov/research/health/fs/fs2/fs2.htm, last updated December 2005.

California Air Resources Board (CARB) and Office of Environmental Health Hazard Assessment, Staff Report: Public Hearing to Consider Amendments to the Ambient Air Quality Standards for Particulate Matter and Sulfates, available at http://www.arb.ca.gov/research/aaqs/std-rs/pm-final/pm-final.htm, 2002.

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3.3 Biological Resources

This section establishes the existing conditions and provides an evaluation of potential impacts to biological resources associated with the proposed project.

3.3.1 Environmental Setting

Methodology

A site visit was conducted on December 30, 2008 by ESA. In addition, the following sources were consulted for information on biological resources within the project area:

- U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle maps: Morro Bay North, and Morro Bay South;
- California Department of Fish and Game's (CDFG) CNDDB 2008 record search for USGS 7.5-minute topographic quadrangle maps: Morro Bay North, and Morro Bay South;
- Literature specific to sea otter studies; and
- Aerial photographs.

The entire project area is fully developed and occupied by the WWTP, City Corporation Yard and the cement plant. There is no vegetation visible onsite. Several bird species, consisting mostly of inland birds and sea birds (such as seagulls and red-winged blackbirds), were observed using the open water of the trickling filters onsite.

Regional Setting

The WWTP is located in the coastal zone in the City of Morro Bay. The WWTP is in close proximity to the Pacific Ocean and beaches, Keiser Park, Morro Creek, and the Santa Lucia Mountains. Specifically, it is in proximity to Morro Strand State Beach to the west, Morro Bay State Park to the south north and west, and smaller city parks such as Coleman Park to the south and Keiser Park to the east. These parks provide suitable habitat for several coastal and inland wildlife species in the area.

A search and review of the current California Natural Diversity Data Base (CNDDB) for the Morro Bay South and Morro Bay North topographic quadrangles revealed a list of 55 wildlife and plant species known to occur within the area (see Appendix C).

The CNDDB list included 21 wildlife species with the potential to occur within or near the proposed project area. Of these, 13 were ground dwelling and insect species, including the listed California red-legged frog (*Rana draytonii*), Morro Bay kangaroo rat (*Dipodomys heermanni morroensis*) and Morro shoulderband snail (*Helminthoglypta walkeriana*). Six were avian and bat species, including the listed California black rail (*Laterallus jamaicensis coturniculus*), California clapper rail (*Rallus longirostris obsoletus*), and the western snowy plover (*Charadrius*

alexandrinus nivosus). Two fish species were also identified including the steelhead (*Oncorhunchus mykiss irideus*) and tidewater goby (*Eucyclogobius newberryi*).

The CNDDB also lists six Natural Communities of Special Concern with the possibility for occurrence within the City of Morro Bay and surrounding areas. The six communities include Central Dune Scrub, Central Maritime Chaparral, Valley Needlegrass Grassland, Northern Coastal Salt Marsh, Coastal Brackish Marsh, and Coastal and Valley Freshwater Marsh.

One other species of concern within the area, though not revealed by the CNDDB search, is the California sea otter (*Enhydra lutris nereis*). The sea otter is considered a federally threatened species (CDFG, 2010).

Morro Rock, located approximately 0.6 miles west of the treatment plant, is part of Morro Bay State Park and is a known American peregrine falcon (*Falco peregrinus anatum*) nesting area. The American peregrine falcon was delisted as a state endangered species in 2009 and was delisted as a federally endangered species in 1999 (CDFG, 2010).

Four proposed Critical Habitat Units for the California red-legged frog are located within San Luis Obispo County. Critical Habitat Unit SLO-3 is located east of State Route 1 and extends westward into the City of Morro Bay, south of Atascadero Road, primarily overlapping land designated for agriculture and open space uses (USFWS, 2009).

Project Area

The proposed project would be constructed and operated within the existing footprint of the WWTP, neighboring City Corporation Yard, cement plant, and staging areas along Atascadero Road. The entire project area is previously disturbed and occupied by industrial facilities. There is no vegetation visible onsite. Several bird species, consisting mostly of inland birds and sea birds (such as seagulls and red-winged blackbirds), were observed using the open water of the trickling filters onsite.

The treatment plant's existing storm drain system discharges to multiple locations: Morro Creek, the storm drain outfall on the beach, and the WWTP ocean outfall. Morro Creek connects to the Pacific Ocean and contains lush riparian habitat.

The WWTP discharges treated municipal wastewater into the Pacific Ocean via a multiport diffuser situated approximately 2,900 feet from shore. The plant has been operating under a 301(h) modified NPDES permit since 1985, which allows MBCSD to discharge a combination of disinfected primary and secondary treated water into the ocean. Under the proposed project, the WWTP would be upgraded to provide full secondary treatment to all wastewater entering the proposed new treatment facilities. This upgrade would serve to improve the quality of the treated wastewater discharged into the ocean.

The California Ocean Plan, issued and updated every three years by the SWRCB, sets forth standards for any water discharged into the ocean. The plan was intended to preserve and enhance designated Areas of Special Biological Significance, rare and endangered species, marine habitat,

fish migration, fish spawning and shellfish harvesting. Bacterial, physical, chemical, and biological characteristics and radioactivity are used to measure water quality. The WWTP currently is in compliance with the California Ocean Plan and, as mentioned above, the quality of effluent discharged into the ocean would be improved by the implementation of the proposed project.

3.3.2 Regulatory Framework

Federal

Federal Endangered Species Act

The United States Fish and Wildlife Service (USFWS) administers FESA, which provides a process for listing species as either threatened or endangered, and methods of protecting listed species. Species are listed as either endangered or threatened under Section 4 of the FESA that defines as “endangered” any plant or animal species that is in danger of extinction throughout all or a significant portion of its range and “threatened” if a species is likely to become endangered in the foreseeable future. Section 9 of the FESA prohibits “take” of listed threatened or endangered species. The term “take” means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in such conduct. Harm under the definition of “take” includes disturbance or loss of habitats used by a threatened or endangered species during any portion of its life history. Under the regulations of the FESA, the USFWS may authorize “take” when it is incidental to, but not the purpose of, an otherwise lawful act.

The Migratory Bird Treaty Act of 1918

The Migratory Bird Treaty Act of 1918 (16 U.S.C. 703-711) makes it unlawful to possess, buy, sell, purchase, barter or “take” any migratory bird listed in Title 50 of the Code of Federal Regulations Part 10. “Take” is defined as possession or destruction of migratory birds, their nests or eggs. Disturbances that cause nest abandonment and/or loss of reproductive effort or the loss of habitats upon which these birds depend may be a violation of the Migratory Bird Treaty Act.

Clean Water Act Section 404

Wetlands are generally considered to be areas that are periodically or permanently inundated by surface or ground water, and support vegetation adapted to life in saturated soil. Wetlands are recognized as important features on a regional and national level due to their high inherent value to fish and wildlife, use as storage areas for storm and floodwaters, and water recharge, filtration, and purification functions. Technical standards for delineating wetlands have been developed by the U.S. Army Corps of Engineers (Corps), which generally defines wetlands through consideration of three criteria: hydrology, soils, and vegetation. Under Section 404 of the CWA, the Corps is responsible for regulating the discharge of dredged or fill material into waters of the United States. The term “waters” includes wetlands and non-wetland bodies of water that meet specific criteria as defined in the Code of Federal Regulations.

State

California Endangered Species Act

The California Endangered Species Act (CESA) is similar to the main provisions of the FESA and is administered by the California Department of Fish and Game (CDFG). Unlike its federal counterpart, CESA applies the take prohibitions to not only listed threatened and endangered species, but also to state candidate species for listing. Section 86 of the Fish and Game Code defines "take" as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." The CDFG maintains lists for Candidate-Endangered Species and Candidate-Threatened Species, which have the same protection as listed species. Under CESA the term "endangered species" is defined as a species of plant, fish, or wildlife, which is "in serious danger of becoming extinct throughout all, or a significant portion of its range" and is limited to species or subspecies native to California.

3.3.3 Impact Assessment

Thresholds of Significance

The criteria used to determine the significance of impacts related to aesthetic resources are based on Appendix G of the *CEQA Guidelines*. The proposed project would result in a significant impact if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFG or USFWS;
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.

A discussion of the impacts and mitigation measures for the proposed project is presented below.

Impacts Discussion

Wildlife Movement

The WWTP is located in close proximity to Morro Creek, which is potentially a wildlife movement corridor. However the proposed project construction would occur within the footprint of the existing WWTP, Corporation Yard, cement plant, and staging areas along Atascadero Road. The proposed project would not encroach upon Morro Creek. No impacts to wildlife movement would occur, and no mitigation would be required.

Habitat Conservation Plans

The proposed project area does not fall within the jurisdiction of an adopted habitat conservation plan or natural community conservation plan and therefore would not conflict with any such provisions. No impact would occur, and no mitigation would be required.

Local Policies and Ordinances

No local policies or ordinances referring to biological resources pertain to the proposed project. No impact would occur, and no mitigation would be required.

Special-Status Species

Impact 3.3-1: Implementation of the proposed project could have a substantial adverse effect on listed, candidate or special-status ground dwelling wildlife species. (No Impact)

The proposed project would occur entirely within a disturbed and developed area that does not contain suitable habitat for any ground dwelling wildlife species. There would be no impact to ground dwelling wildlife species, and no mitigation is required.

California red-legged frog critical habitat is located east of the proposed project area and east of State Route 1. The nearest recorded occurrence of a California red-legged frog is approximately 3,500 feet north of the proposed project site. All proposed project activities would occur within the existing footprint of the WWTP, Corporation Yard, cement plant, and staging areas along Atascadero Road, and would not impact California red-legged frog critical habitat. Therefore, there would be no impact, and no mitigation is required.

Mitigation Measures

None required.

Impact 3.3-2: Implementation of the proposed project could have a substantial adverse effect on listed, candidate or special-status bat and avian species. (Less than Significant)

The federal Migratory Bird Treaty Act (16 USC, Sec. 703, Supp. I, 1989) prohibits killing, possessing, or trading in migratory birds, except in accordance with regulations prescribed by the

Secretary of the Interior, including take of bird nests and eggs. Birds of prey are protected in California under the State Fish and Game Code, Section 3503.5, which states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Project impacts to these species would not be considered significant unless they are known or have a high potential to nest in the project area or to rely on it for primary foraging.

Morro Creek, located approximately 550 feet south of the site, and the beach, located approximately 350 feet west of the site could potentially provide suitable habitat for avian species. However, the proposed project would occur entirely within the existing footprint of the WWTP, Corporation Yard, cement plant, and staging areas along Atascadero Road, which have been previously disturbed.

Several existing structures within the WWTP contain open water that attract birds. Several birds were observed utilizing the structures (e.g., trickling filters) for water during the site visit. These birds are not utilizing the structures for nesting as the structures have moving parts. The birds are simply foraging for insects and stopping to take advantage of the water source. Impacts to avian species due to construction and/or retirement and demolition of existing structures would be considered less than significant.

Potentially nesting peregrine falcons are located in close proximity to the proposed project site at Morro Rock. The proposed project would not impact Morro Rock, or the peregrine falcon due to localized construction within the existing footprint of the WWTP, Corporation Yard, cement plant, and staging areas. There would be no impact.

Mitigation Measures

None required.

Impact 3.3-3: Implementation of the proposed project could have a substantial adverse effect on listed, candidate or special-status fish species. (Less than Significant with Mitigation)

Two fish species with the possibility to occur near the proposed project site are the formally listed tidewater goby and steelhead – south/central California coast ESU.[1] The tidewater goby's nearest recorded occurrence is south of the proposed project area within Morro Bay. The proposed project would be located within the Morro Watershed, which does not drain to Morro Bay, but rather to Estero Bay and the Pacific Ocean. In addition, the WWTP outfall is located offshore in Estero Bay. Construction and operation of the proposed project, therefore, would not impact Morro Bay. There would be no impact to the tidewater goby, and no mitigation is required.

[1] Evolutionarily significant unit (ESU).

Steelhead have been recorded to occur within Morro Creek, which is designated as critical habitat for south/central California coast ESU. However, there are no recent recordings of steelhead near the mouth of Morro Creek in the vicinity of the WWTP. The existing WWTP's storm drain system includes some drains that connect to the creek. However, since 2007, most of the storm water that otherwise would discharge into the creek has been diverted to the WWTP headworks due to the recent installation of a valve on a portion of the drain that leads to the creek. A small amount of storm water runoff may discharge into the creek during project construction. Prior to the start of construction, the City would be required to obtain coverage under the NPDES General Construction Permit by preparing a Risk Assessment, NOI, and a Storm Water Pollution Prevention Plan (SWPPP), which would include BMPs to control erosion, sedimentation, and hazardous materials release. Implementation of the SWPPP and BMPs as required by Mitigation Measure 3.7-1 (see Chapter 3.7 Hydrology and Water Quality) would ensure storm water runoff would not violate any water quality standards or waste discharge requirements. Impacts to steelhead would be considered less than significant with mitigation.

Construction of new project facilities would require dewatering during excavation activities. Dewatering discharges would be used for dust suppression onsite during project construction and discharged in accordance with the SWRCB General Waste Discharge Requirements for Discharges to Land with a Low Threat to Water Quality (Water Quality Order No. 2003-003-DWQ), or the CCRWQCB's General Waste Discharge Requirements for Discharges with Low Threat to Water Quality (Water Quality Order No. R3-2006-0063). MBCSD would obtain and comply with the requirements of the dewatering permit issued by the SWRCB or CCRWQCB for dewatering activities, as required by Mitigation Measure 3.7-3 (see Chapter 3.7 Hydrology and Water Quality). If dewatering discharges were placed in Morro Creek, then compliance with the permit would ensure that any potential impacts of construction dewatering to water quality would be less than significant. Dewatering discharges would not affect habitat for steelhead in Morro Creek. Impacts to steelhead would be considered less than significant with mitigation.

Mitigation Measures

Implement Mitigation Measure 3.7-1 and 3.7-3.

Significance after Mitigation: Less than significant.

Impact 3.3-4: Implementation of the proposed project could have a substantial effect on the California sea otter. (No Impact)

The California sea otter is known to occur in Estero Bay in the vicinity of the WWTP outfall. The sea otter is considered a federally threatened species. The sea otter population along the California coast has been affected by parasites, such as *Toxoplasma gondii*, which are known to infect sea otters. Encephalitis, including that caused by *T. gondii*, is thought to be one of the major causes of mortality in sea otter populations during the last decade (USEPA, 2007). Felids are a primary host of *T. gondii*, due to the fact that the parasite requires a cat's digestive system to complete its life cycle. The parasite is introduced into terrestrial ecosystems via the feces of

felids, including household cats, and then further transported from land to the ocean via storm water runoff. Once it enters the marine environment, *T. gondii* is taken up by filter feeders such as mussels, which bioaccumulate the microorganisms in their tissue and are then consumed by other animals, such as sea otters.

Studies have suggested there is a link between high freshwater runoff areas (such as streams) and *T. gondii* infection in sea otters (Johnson et al., 2008). It also has been suggested that parasites enter the marine environment through wastewater effluent when cat feces is flushed down household toilets.

According to radio-tagged otter studies conducted along the California coastline, sea otters have been observed near the outfall structure, and their presence within Estero Bay varies potentially in part due to fluctuations of available prey (USEPA, 2007). Sea otters are infected by *T. gondii* via the ingestion of infected prey.

MBCSD supported a study by Dr. Patricia Conrad at the University of California, Davis School of Veterinary Medicine to determine what, if any, effect the effluent from the WWTP may have on the release of *T. gondii* into Estero Bay. During 2003 and 2004, mussels were outplanted at the WWTP's outfall diffuser buoy at different times of year and then later assayed for the presence of *T. gondii* RNA. There was no *T. gondii* RNA detected in any of the mussels tested, thus suggesting the WWTP is not a major contributor to the contamination of filter feeders in Estero Bay.

In 2007, USEPA consulted with USFWS, pursuant to Section 7 of the federal ESA, regarding the potential effects of reissuing the 301(h) modified permit for the WWTP on federally listed species. USEPA determined that the continued discharge from the WWTP would not adversely affect the southern sea otter. USFWS concurred with USEPA's findings (USFWS, 2007). As a condition of the 301(h) permit (issued in 2008), MBCSD developed and implemented a Cat Litter Public Outreach Program that educates the general public on the topic of cat litter and waste disposal and targets specific commercial and professional establishments to encourage them to establish appropriate policies and procedures to properly dispose of cat waste. This program was required as a condition of the 301(h) permit to help minimize or reduce the amount of cat feces in raw wastewater that enters the WWTP.

A recent study of pathogen exposure for sea otters along California's central coast, between Santa Cruz and Point Conception, identified a high prevalence of *T. gondii* near the coastal towns of San Simeon and Cambria, north of Morro Bay (Johnson et al, 2008). The high-risk population of sea otters utilizing habitat in this area primarily preyed on marine snails, whereas individual otters that preyed on other bivalves such as abalone had lower risk of *T. gondii* infection, suggesting that prey selection, not just geographic location, influences the risk of parasitic infection in sea otters (Johnson et al, 2008). The study sheds light on a previously-documented high prevalence of *T. gondii*-infected otters in Estero Bay, which was based on discovery of infected beachcast sea otter carcasses. Otters from San Simeon and Cambria that die at sea are likely to "drift southward with prevailing winds and currents, accumulate within sandy embayments, and be detected in areas that are densely populated with humans" (i.e., Morro Bay) (Johnson et al, 2008). The

majority of the San Simeon and Cambria otters do not have home ranges that reach to Morro Bay, and thus are unlikely to travel to Morro Bay otherwise. These results reinforce the lack of a mechanistic connection between the discharge of effluent through WWTP outfall and any adverse effects to sea otters, brown pelicans, or their prey in Estero Bay.

Findings by the USEPA, concurrence by USFWS, and the studies conducted by Conrad (2005) and Johnson et al. (2008), all determined that discharges associated with existing WWTP operations do not adversely affect sea otters.

The proposed project would improve the quality of effluent discharged at the WWTP outfall by upgrading the plant to secondary treatment with tertiary filtration. The upgrade would remove additional solids from WWTP effluent and thus could result in the removal of *T. gondii* oocysts associated with solids. The proposed project would have no adverse impact on the California sea otter, and no mitigation is required.

Mitigation Measures

None required.

Impact 3.3-5: Implementation of the proposed project could have a substantial effect on special-status plant species. (Less than Significant with Mitigation)

No vegetation is present within the project area. The proposed project would occur entirely within the boundaries of the existing WWTP, Corporation Yard, cement plant, and staging areas along Atascadero Road, which are all previously disturbed. Due to the lack of vegetation onsite, the proposed project would not impact any special-status plant species. There would be no impact, and no mitigation is required.

Morro Creek is comprised of riparian habitat that could potentially include special-status plant species that would be indirectly affected by storm water discharges from the WWTP during both project construction and operation. Prior to the start of construction, the City would be required to obtain coverage under the NPDES General Construction Permit by preparing a Risk Assessment, NOI, and SWPPP, which would include BMPs to control erosion, sedimentation, and hazardous materials release. Implementation of the SWPPP and BMPs as required by Mitigation Measure 3.7-1 (see Chapter 3.7 Hydrology and Water Quality) would ensure storm water runoff would not violate any water quality standards or waste discharge requirements. Impacts to special-status plant species in Morro Creek due to storm water quality would be considered less than significant.

Storm water discharge during operation of the proposed WWTP would be subject to regulation by an NPDES General Industrial Permit, which requires implementation of best available technology (BAT) and best pollutant control technology (BCT) to control the quality of storm water runoff from industrial land uses. The General Industrial Permit also requires the preparation of a SWPPP and a monitoring plan. The SWPPP must identify the sources of pollutants and the means to

manage the sources to reduce storm water pollution. Due to the size of the proposed WWTP, a pretreatment program for storm water also may be required. MBCSD would be required to submit a new NOI to comply with the General Industrial Permit for the proposed new WWTP following completion of the proposed project. The WWTP is also subject to the BMPs included in the City of Morro Bay's SWMP, including any relevant post-construction BMPs to control runoff and protect water quality. Implementation of Mitigation Measures 3.7-3 (see Chapter 3.7 Hydrology and Water Quality) would ensure that project operation does not impact water quality standards or violate waste discharge requirements by requiring implementation of the SWPPP, monitoring plan, and BMPs. Impacts to special-status plant species in Morro Creek due to storm water quality would be considered less than significant.

Mitigation Measures

Implement Mitigation Measure 3.7-1 and 3.7-3.

Significance after Mitigation: Less than significant.

Riparian Habitat and Natural Communities of Special Concern

Impact 3.3-6: Construction of the proposed project could have a substantial adverse effect on riparian habitats and natural communities of special concern. (Less than Significant with Mitigation)

Northern Coastal Salt Marsh is the closest Natural Community of Special Concern to the proposed project site and is located along the beach sand, between the WWTP and the Pacific Ocean. The entire project area has been previously developed and there are no areas containing native habitat. Based on the localized construction within the existing boundary of the WWTP, Corporation Yard, cement plant, and staging areas, the proposed project would not affect any listed communities; therefore no impact would occur, and no mitigation would be required.

Morro Creek contains riparian habitat which could potentially be indirectly impacted by storm water discharge into the creek, during both project construction and operation. As discussed above under Impact 3.3-5, implementation of Mitigation Measures 3.7-1 and 3.7-3 would ensure that project construction and operation would not affect storm water quality and would not violate any water quality standards or waste discharge requirements. Mitigation Measure 3.7-1 requires implementation of a SWPPP and BMPs during project construction in accordance with the NPDES General Construction Permit. Mitigation Measure 3.7-3 requires implementation of a SWPPP, monitoring plan, and BMPs in accordance with the NPDES General Industrial Permit and the City's SWMP. Impacts to riparian habitat in Morro Creek during project construction and operation would be less than significant with mitigation

Mitigation Measures

Implement Mitigation Measure 3.7-1 and 3.7-3.

Significance after Mitigation: Less than significant.

Wetlands

Impact 3.3-7: Construction of the proposed project could have a substantial adverse effect on wetlands considered waters of the US or the State. (Less than Significant with Mitigation)

The proposed project construction would take place entirely within the footprint of the existing WWTP, Corporation Yard, cement plant, and staging areas. The project area is disturbed and does not contain any wetlands or water of the U.S. or state. The closest wetlands to the proposed project site are located approximately 0.7 miles south within Morro Bay. The proposed project is not located in the Morro Bay Watershed (see Chapter 3.7, Hydrology and Water Quality), and thus wetlands would not be impacted by the proposed project. No mitigation is required.

Morro Creek is considered waters of the U.S. and state based on its hydrologic connection to the Pacific Ocean. The WWTP is connected to Morro Creek by a storm drain, such that storm water discharges into the creek during project construction and operation could potentially impact waters of the U.S. and/or state. As discussed above under Impact 3.3-5, implementation of Mitigation Measures 3.7-1 and 3.7-3 would ensure that project construction and operation would not affect storm water quality and would not violate any water quality standards or waste discharge requirements. Mitigation Measure 3.7-1 requires implementation of a SWPPP and BMPs during project construction in accordance with the NPDES General Construction Permit. Mitigation Measure 3.7-3 requires implementation of a SWPPP, monitoring plan, and BMPs in accordance with the NPDES General Industrial Permit and the City's SWMP. Impacts to wetland in Morro Creek during project construction and operation would be less than significant with mitigation.

Mitigation Measures

Implement Mitigation Measure 3.7-1 and 3.7-3.

Significance after Mitigation: Less than significant.

Mitigation Measure Summary Table

Table 3.3-1 presents the impacts and mitigation summary for Biological Resources.

TABLE 3.3-1
BIOLOGICAL RESOURCES IMPACTS AND MITIGATION SUMMARY

Proposed Project Impact	Mitigation Measure	Significance after Mitigation
Sensitive Species and Habitats: The proposed project could have a substantial adverse effect on listed, candidate or special-status species.	Mitigation Measure 3.7-1 and 3.7-3	Less than significant
Riparian Habitat and Natural Communities of Special Concern: Construction of the proposed project could have a substantial adverse effect on riparian habitats and natural communities of special concern.	Mitigation Measure 3.7-1 and 3.7-3	Less than significant
Wetlands: Construction of the proposed project could have a substantial adverse effect on wetlands considered waters of the state.	Mitigation Measure 3.7-1 and 3.7-3	Less than significant

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3.4 Cultural Resources

This section is based on a cultural resources technical report prepared by Environmental Science Associates (ESA) (Brewster and Bray, 2010).

Cultural resources are defined as prehistoric and historic sites, structures, and districts, or any other physical evidence associated with human activity considered important to a culture, a subculture, or a community for scientific, traditional, religious or any other reason. For analysis purposes, cultural resources may be categorized into three groups: archaeological resources, historic resources, and contemporary Native American resources.

Archaeological resources are places where human activity has measurably altered the earth or left deposits of physical remains. Archaeological resources may be either prehistoric-era (before the introduction of writing in a particular area) or historic-era (after the introduction of writing). The majority of such places in California are associated with either Native American or Euro-American occupation of the area. The most frequently encountered prehistoric or historic Native American archaeological sites are village settlements with residential areas and sometimes cemeteries; temporary camps where food and raw materials were collected; smaller, briefly occupied sites where tools were manufactured or repaired; and special-use areas like caves, rock shelters, and sites of rock art. Historic-era archeological sites may include foundations or features such as privies, corrals, and trash dumps.

Historic resources are standing structures of historic or aesthetic significance that are generally 50 years of age or older (i.e., anything built in the year 1960 or before). In California, historic resources considered for protection tend to focus on architectural sites dating from the Spanish Period (1529-1822) through the early years of the Depression (1929-1930), although there has been recent attention paid to WWII and Cold War era facilities. Earlier historic resources are often associated with archaeological deposits of the same age.

Contemporary Native American resources, also called ethnographic resources, can include archaeological resources, rock art, and the prominent topographical areas, features, habitats, plants, animals, and minerals that contemporary Native Americans value and consider essential for the preservation of their traditional values. These locations are sometimes hard to define and traditional culture often prohibits Native Americans from sharing these locations with the public.

Paleontology is a branch of geology that studies the life forms of the past, especially prehistoric life forms, through the study of plant and animal fossils. Paleontological resources represent a limited, non-renewable, and impact-sensitive scientific and educational resource. As defined in this section, paleontological resources are the fossilized remains or traces of multi-cellular invertebrate and vertebrate animals and multi-cellular plants, including their imprints from a previous geologic period. Fossil remains such as bones, teeth, shells, and leaves are found in the geologic deposits (rock formations) where they were originally buried. Paleontological resources include not only the actual fossil remains, but also the collecting localities, and the geologic formations containing those localities.

3.4.1 Environmental Setting

Natural Setting

The Central Coast is marked by a series of low northwest-southeast trending mountain ranges, with the Santa Lucia Range located nearest to the coast. Morro Bay is a major estuary along the coast. The climate is Mediterranean, with warm dry summers and cooler, wet winters.

The estuary at Morro Bay provided a wealth of natural resources for the prehistoric-era inhabitants of Morro Bay. Sea mammals, fish, waterfowl and shorebirds, shellfish, deer, elk, and rabbits were important marine and terrestrial animal resources. Paleobotanical remains from archaeological sites reveal the use of plant resources such as oak, elderberry, grey pine, goosefoot, yucca, Manzanita, and a variety of grass seeds (Bertrando, 2006).

Alluvium consisting of unconsolidated sedimentary deposits and fine-grained sediments overlay the metamorphic bedrock in the Morro Bay area. The project area is underlain by Holocene (younger) alluvium, which is comprised of cobble-pebble gravel, sand, silt, and clay (Hall et al. 1979). Soils in the region generally consist of loamy sands, sandy loam, clays, clay loam, and silty clay loam. Within the project site, younger alluvium consisting of poorly drained clays and sand dune deposits can be found.

Prehistoric Setting

Human settlement is recorded in Morro Bay as early as 8,000 years before present (BP). At that time, the sea level would have been about 10 feet lower than it is at present. The Morro Bay estuary was created when the sea level began to rise over the next few thousand years, filling the low-lying river valleys and mixing fresh and salt water (Far Western, 2009).The earliest period of human habitation in Morro Bay, the Millingstone period (8,000–5,500 BP), is characterized by handstones, millingstones, and shellfish remains, suggesting that subsistence was largely based around the processing of hard seeds and marine resources (Jones et al, 2007).

The subsequent Early Period (5500–3000 BP) saw the introduction of the mortar and pestle and an abundance of hunting implements, suggesting a shift in focus to acorn gathering and terrestrial and marine hunting. The Early Period component of site CA-SLO-165, a prehistoric village site located in Morro Bay, indicates that a wide variety of fish, shellfish, waterfowl, and plant resources were exploited (Far Western, 2009). In the Middle Period (3000–1000 BP) shellfish exploitation decreased while the mortar and pestle continued to increase in importance. In addition, systems of trade were established, focusing particularly on obsidian from eastern and northern California (Jones et al., 2007).

Towards the end of the Middle Period, drought conditions severely reduced resources in the Morro Bay area. Perhaps as a result of this, scholars have theorized that settlement in the Late Period (700 BP to Spanish contact) was confined to small, seasonal, special-use sites such as fishing camps. However, recent oxygen isotope analysis of mollusk shells has shown that during the Late Period coastal marine resources were exploited on a year-round basis in coastal sites, indicating that habitation along the coast may not have been seasonal. Interior sites display a

more seasonal exploitation of resources, indicating that residents made periodic migrations to the coast to gather marine resources (Jones et al., 2008)

Numerous important prehistoric sites are located in Morro Bay, testifying to a near-continuous human habitation (Jones et al., 2007). Site CA-SLO-165, located within 0.5 miles of the project area, is a large village site with components dating to 8,000 BP, 5600-3000 BP, and 3000-1000 BP. Site CA-SLO-239, located less than 0.5 mile from the project area, is a Middle/Late Period habitation site notable for a deep midden and a well-preserved house floor. Site CA-SLO-16, located within 300 feet of the project area, has been less well studied than CA-SLO-239 and CA-SLO-165, but is also characterized by deep midden and numerous human burials and probably represents another major village location.

Ethnographic Setting

The primary ethnographic groups present within the Project vicinity were the Chumash and the Salinan. Kroeber (1925) identifies the Chumash as “predominantly a coast people” that “were more nearly maritime in their habits than any other Californian group”. Chumash territory included the Topanga and Malibu areas in the south, north to the approximate location of Morro Bay and east across the coastal range toward the San Joaquin Valley. The Santa Barbara Channel Islands (San Miguel, Santa Rosa, Santa Cruz, and Anacapa) were also included within Chumash territory. Chumash living near the project area were known as Obispeño Chumash, after the Mission San Luis Obispo to which many of them were relocated in the 18th century AD (Greenwood, 1978).

Chumash society consisted of tribal groups lead by a single chief who was responsible for the management and distribution of tribal resources. Chumash settlement sites included established village sites with large, circular residential huts of willow or pole construction and covered with tule mats or thatch. Also present within a Chumash village was a large ceremonial lodge or sweathouse. Along with more permanently settled villages, temporary short-term camps were established by the Chumash for use during resource foraging excursions.

The Chumash were a complex society with a strict social order, a well-established and prosperous system of trade, and standardized money exchange in the form of shell beads. With settlements along the Channel Islands, the Chumash were master maritime navigators, having developed the *tomol*, a wooden plank canoe, to ferry people and trade goods between the islands and the mainland. Other key cultural items representative of the Chumash are finely crafted basketry of all forms, sizes, and decorations. Chumash peoples made use of their diverse environment, capitalizing upon a wide range of natural and animal resources for food and as raw material for the crafting of function tools and non-functional, ornamental items (Kroeber, 1925). Burial practices of the Chumash involved mourning ceremonies and permanent cemeteries near to villages in which the remains were buried. Personal items of the deceased as well as other offerings or objects were placed into the grave, prior to the completion of burial.

Far less well studied than the Chumash are their northern neighbors, the Salinan. Salinan territory extended between the Pacific Ocean and the South Coast Ranges from the Salinas River Valley near the Mission Soledad on the north to the vicinity of Morro Bay on the south (Hester, 1978).

There were two major divisions of Salinan: the Antoniaños on the north, and the Migueleños on the south, both named for the Spanish missions with which they were associated. The Salinan language had similarities to the Chumash language (as both are of Hokan stock), but is completely unrelated to neighboring Yokuts and Costanoan languages (Kroeber, 1925).

As with other central Californian groups, subsistence was based on the gathering of plant foods such as acorns, wild oats, sage seeds, berries, and fruits, and the hunting of small game. Material culture was typified by basketry, stone artifacts such as projectile points and grinding stones, bone and shell fishhooks, and some wooden implements. Houses were square, domed structures constructed of wooden poles and covered with tule or other grass. Autonomous villages were the primary sociopolitical unit, each ruled by a chief, and decent was primarily patrilineal. About 20 villages are known ethnographically; while many cannot be accurately mapped, the known Salinan villages nearest to the project area were located near Santa Margarita and San Simeon.

Juan Rodriguez Cabrillo's 1542 expedition, the first recorded visit by Europeans to the California coast, did not record the presence of Native Americans along the Salinan Coast. The first description of Chumash and Salinan villages comes some two centuries later, with the expeditions of Don Gaspar de Portolá in 1769. Records describe about 10 different towns along the coast between what is now San Luis Obispo and Monterey, with population estimates of between 30 and 400 residents per village. This territory would have included Salinan, Chumash, Esselen and Costanoan villages (Kroeber, 1925).

After the arrival of the Spanish and the establishment of the missions, disease and hard labor took a toll on the native populations. The Salinan population, estimated at 3,000 at the time of Spanish contact, dropped to fewer than 700 by 1831, and the Chumash population fell from 8,000 to 2,500 in the same period (Hester, 1978). After secularization, populations dropped even faster, with only three Salinan families being reported by early 20th-century anthropologists. In addition, native economies were disrupted, trade routes were interrupted, and native ways of life were significantly altered.

Historic Setting

Morro Rock, the prominent landmark at the entrance to Morro Bay, was first named by Spanish explorer Juan Rodriguez Cabrillo during his voyage of the California coast in 1542. Cabrillo called the rock "El Moro," because it resembled the head of a Moor, the people from North Africa known for the turbans they wore.

Several centuries later, Don Gaspar de Portolá and his party camped near the rock during their march to Monterey in 1769 (Greenwood, 1978). Also In 1769, the Spanish began establishing missions in California and forcibly relocating and coiverting native peoples. Mission San Luis Obispo, Mission San Antonio de Padua, and Mission San Miguel were the most prominent missions in the area, with Mission San Luis Obispo being nearest to the project area.

Morro Bay pioneer and founder Franklin Riley moved to Morro Bay from San Simeon Creek in 1864 in search of better farming land. Riley built the first house in Morro Bay, which stood on what is now Morro Street between Morro Bay Boulevard and Harbor Street. In 1870, Riley

officially founded the town of Morro Bay on a homestead of 160 acres, and built a wharf on what would become the Embarcadero (Morrobay.com, 2008).

The town grew quickly in the 1870s as schooners docked along the Embarcadero to pick up local products. Although hazardous due to the swift currents and high surf, boats could enter the harbor through channels on the north and south side of Morro Rock. The nascent town centered on the Embarcadero, where fisherman and coastal travelers would arrive and disembark.

In the late 1800s, Captain James Cass built a deep water wharf in the neighboring town of Cayucos, which began to compete with Morro Bay for shipping traffic. Many ships captains preferred to dock in Cayucos, rather than face the hazardous Morro Bay entrance. While the Embarcadero began to falter due to the competition posed by Cayucos's new deep-water port, land development elsewhere was taking off. Throughout the early 1900's, various real estate developers promoted Morro Bay as a seaside resort (Morrobay.com, 2008).

Morro Rock had been quarried since the late 19th century, but in the early 1930s, a WPA project resulted in much of the base of the rock being dynamited and the volcanic rock used to construct a jetty that would connect the rock to the mainland and close the north entrance to the harbor. The north and south breakwaters, the inner harbor revetment, and the two T-Piers were created; the Morro Channel was dredged and the spoils deposited behind the inner harbor revetment, creating what is now the Embarcadero Road Area (Morrobay.com, 2008). Once the waterfront became more protected from high surf, the Embarcadero once again grew as a commercial fishing port. Fishermen began to bring in huge catches of albacore, salmon, and cod. Numerous oyster beds, which provided an abundance of oysters for local and regional consumption, were also constructed in the shallow back-bay called Estero Bay.

The U.S. Navy began training operations in Morro Bay in 1940, and base was constructed where the PG&E power plant now stands (City of Morro Bay, 2004). Amphibious landing crafts frequently staged "invasions" along the beach north of the Rock. During World War II, naval operations were expanded.

By 1951, Morro Bay had grown to a population of 2,000 residents. In 1953, groundbreaking ceremonies were held for the PG&E power plant, which was completed the following year and would eventually provide the tax base for Morro Bay's incorporation, which occurred in 1964 (Caste and Ream, 2006). Morro Rock was declared a State Historical Landmark in 1968. Although Morro Bay continues to operate the Embarcadero as a working waterfront, and it remains a fishing port for halibut, sole, rockfish, albacore, and many other species for both commercial and sport vessels, tourism is the city's largest industry. Morro Bay had a population of approximately 10,000 residents in the 2000 Census (City of Morro Bay, 2004).

History of the MBCSD WWTP

Prior to construction of the MBCSD WWTP in 1954, Morro Bay Sanitation District maintained a large septic tank on the waterfront at the foot of Ninth Street which disposed of untreated wastewater directly into the Bay. Harvesting of oysters off the Bay was stopped by the state health department in early 1952, following the illness of Los Angeles residents who had

transported the seafood south where it was consumed. However, it was never established that the oysters contained a high bacteria count when they were harvested from the Bay (The Sun, June 19, 1953).

The Morro Bay Sanitation District purchased and installed a chlorinator in mid-1952 for $2,440 as a temporary measure to reduce the bacterial count and to the improve water quality in the Bay until a new sewage treatment plan could be constructed. According to newspaper accounts of the day, “The sanitary board is confident that with the installation of the chlorinator into the maintenance system, the bacterial count in the bay can be brought down within a safe limit and that the state health department will reopen the oyster beds within the bay and declare them safe for human consumption” (The Sun, June 19, 1953).

Following concern over the safety of the local oyster beds, the Morro Bay Sanitary District voted for a bond measure in November 1952 to construct a sewage disposal system and treatment plant. Earlier in 1952, the Cayucos Sanitary District had approved a bond to construct the trunk lines, outfall, and disposal plant with Morro Bay Sanitary District in a joint agreement (The Sun, June 12, 1953).

The site selected for the new treatment plant was located at the end of 66th Street (now Atascadero Road) on a parcel of land on Morro Beach that was donated to the Districts by San Luis Obispo County. The low-lying site adjacent to the ocean was selected to allow wastewater to flow to the plant by gravity, eliminating the need for expensive pumps or lift stations, and to shorten the length of the outfall pipe leading from the plant into Estero Bay.

The Los Angeles engineering firm of Daniel, Mann, Johnson, and Mendenhall was selected to design both the collection system and the treatment plant at the same time and under the same contract according to the joint District agreement. However, design of the plant was delayed pending receipt of guidance from the State Water Pollution Control Board on the type of effluent the plant must discharge (The Sun, June 23, 1953).

Plans for the new treatment plant were completed by Mendenhall in September 1953, and construction of the plant began in late 1953, with completion in mid-1954. The plant originally consisted of four structures immediately south of Atascadero Road: the Primary Clarifier, Digester No. 1, Trickling Filter No. 1, and the Sludge Drying Beds. The outfall pipe extended 2,900 feet offshore into Estero Bay.

By the 1960s, growth in Morro Bay and Cayucos, as well as additional environmental requirements, required expansion of the plant. Plans for the expansion of the plant were completed by John Carollo Engineers of Phoenix and Berkeley in August 1964. These included a second primary and secondary clarifier, biofilter, chlorination facilities, and a digester (Sedimentation Clarifiers No. 1 and 2, Digester No. 2, Trickling Filter No. 2). This expanded the plant further south, eliminating the earlier Sludge Drying Beds.

Continued growth in the area in the 1970s and early 1980s necessitated further expansion of the plant. In September 1981, the engineering firm of Brown and Caldwell prepared plans for the plant’s third expansion, which occurred between 1982 and 1984. Numerous new buildings and

structures were added to the plant at this time, which continued to expand southward. These included the Administration Building, the Interstage Pumping Station, a Flash Mixer addition to the earlier Primary Clarifier/Chlorine Contact Basin, Maintenance Building, Digester No. 3, the Secondary Clarifier/Sedimentation Tank, Headworks Building, Secondary MCC Building, the Chlorine Storage Building, and twelve new Sludge Drying Beds. The plant took on its current appearance at this time. The plant is currently rated for an average dry weather flow of 2.06 million gallons per day (mgd), a peak seasonal dry weather flow of 2.36 mgd, and a peak hour flow of 6.6 mgd. (Marine Research Specialists, 2008).

3.4.2 Regulatory Setting

Cultural Resources

Numerous laws and regulations require federal, state, and local agencies to consider the effects a Project may have on cultural resources. These laws and regulations stipulate a process for compliance, define the responsibilities of the various agencies proposing the action, and prescribe the relationship among other involved agencies (e.g., State Historic Preservation Office and the Advisory Council on Historic Preservation). The National Historic Preservation Act (NHPA) of 1966, as amended; the California Environmental Quality Act (CEQA); and the California Register of Historical Resources (California Register), Public Resources Code (PRC) 5024, are the primary federal and State laws governing and affecting preservation of cultural resources of national, state, regional, and local significance.

Federal

Section 106 of the NHPA

Archaeological resources are protected through the NHPA of 1966, as amended (16 USC 470f), and its implementing regulation, Protection of Historic Properties (36 CFR Part 800); the Archaeological and Historic Preservation Act of 1974; and the Archaeological Resources Protection Act of 1979. Prior to implementing an “undertaking” (e.g., issuing a federal permit), Section 106 of the NHPA requires federal agencies to consider the effects of the undertaking on historic properties and to afford the Advisory Council on Historic Preservation and the State Historic Preservation Officer a reasonable opportunity to comment on any undertaking that would adversely affect properties eligible for listing in the National Register of Historic Places (National Register). As indicated in Section 101(d)(6)(A) of the NHPA, properties of traditional religious and cultural importance to a tribe are eligible for inclusion in the National Register. Under the NHPA, a resource is considered significant if it meets the National Register listing criteria at 36 CFR 60.4.

National Register of Historic Places

The National Register was established by the NHPA of 1966, as “an authoritative guide to be used by federal, State, and local governments, private groups and citizens to identify the Nation’s historic resources and to indicate what properties should be considered for protection from destruction or impairment” (Code of Federal Regulations [CFR] 36 Section 60.2). The National

Register recognizes both historical-period and prehistoric archaeological properties that are significant at the national, state, and local levels.

To be eligible for listing in the National Register, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Districts, sites, buildings, structures, and objects of potential significance must meet one or more of the following four established criteria (U.S. Department of the Interior, 1995):

- Are associated with events that have made a significant contribution to the broad patterns of our history;
- Are associated with the lives of persons significant in our past;
- Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- Have yielded, or may be likely to yield, information important in prehistory or history.

Unless the property possesses exceptional significance, it must be at least 50 years old to be eligible for National Register listing (U.S. Department of the Interior, 1995).

In addition to meeting the criteria of significance, a property must have integrity. Integrity is defined as “the ability of a property to convey its significance” (U.S. Department of the Interior 1995). The National Register recognizes seven qualities that, in various combinations, define integrity. To retain historic integrity a property must possess several, and usually most, of these seven aspects. Thus, the retention of the specific aspects of integrity is paramount for a property to convey its significance. The seven factors that define integrity are location, design, setting, materials, workmanship, feeling, and association.

State

The State implements the NHPA through its statewide comprehensive cultural resources surveys and preservation programs. The OHP, as an office of the California Department of Parks and Recreation, implements the policies of the NHPA on a statewide level. The OHP also maintains the California Historic Resources Inventory. The SHPO is an appointed official who implements historic preservation programs within the State’s jurisdictions.

California Register of Historical Resources

The California Register is “an authoritative listing and guide to be used by State and local agencies, private groups, and citizens in identifying the existing historical resources of the State and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change.” (California Public Resources Code § 5024.1[a]). The criteria for eligibility for listing on the California Register are based upon National Register criteria (California Public Resources Code § 5024.1[b]). Certain resources are determined by the statute to be automatically included in the California Register, including California properties formally determined eligible for, or listed in, the National Register.

To be eligible for the California Register, a prehistoric or historical-period property must be significant at the local, state, and/or federal level under one or more of the following criteria:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Is associated with the lives of persons important in our past;
- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- Has yielded, or may be likely to yield, information important in prehistory or history.

A resource eligible for listing in the California Register must meet one of the criteria of significance described above, and retain enough of its historic character or appearance (integrity) to be recognizable as a historical resource and to convey the reason for its significance. It is possible that a historic resource may not retain sufficient integrity to meet the criteria for listing in the National Register, but it may still be eligible for listing in the California Register.

Additionally, the California Register consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The California Register automatically includes the following:

- California properties listed in the National Register and those formally Determined Eligible for the National Register;
- California Registered Historical Landmarks from No. 770 onward; and,
- Those California Points of Historical Interest that have been evaluated by the OHP and have been recommended to the State Historical Commission for inclusion on the California Register.

Other resources that may be nominated to the California Register include:

- Historical resources with a significance rating of Category 3 through 5 (Those properties identified as eligible for listing in the National Register of Historic Places, the California Register, and/or a local jurisdiction register);
- Individual historical resources;
- Historical resources contributing to historic districts; and,
- Historical resources designated or listed as local landmarks, or designated under any local ordinance, such as an historic preservation overlay zone.

California Environmental Quality Act

CEQA is the principal statute governing environmental review of projects occurring in the State. CEQA requires lead agencies to determine if a proposed project would have a significant effect on archaeological resources. CEQA is codified at Public Resources Code sec 21000 et seq. As defined in Section 21083.2 of CEQA a "unique" archaeological resource is an archaeological artifact, object, or site, about which it can be clearly demonstrated that without merely adding to

the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information;
- Has a special and particular quality such as being the oldest of its type or the best available example of its type; or,
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

In addition, the *CEQA Guidelines* recognize that certain historical resources may also have significance. The *Guidelines* recognize that a historical resource includes: (1) a resource in the California Register; (2) a resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); and (3) any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California by the lead agency, provided the lead agency's determination is supported by substantial evidence in light of the whole record.

If a lead agency determines that an archaeological site is a historical resource, the provisions of Section 21084.1 of CEQA and Section 15064.5 of the *CEQA Guidelines* apply. If an archaeological site does not meet the criteria for a historical resource contained in the *CEQA Guidelines*, then the site is to be treated in accordance with the provisions of CEQA Section 21083, which is as a unique archaeological resource. The *CEQA Guidelines* note that if an archaeological resource is neither a unique archaeological nor a historical resource, the effects of a project on those resources shall not be considered a significant effect on the environment (Section 15064.5(c)(4)).

California Coastal Act

In 1972, voters in California passed Proposition 20, which was designed to protect California's coast from unchecked development and other risks to coastal resources, such as point and non-point source pollution. The proposition created the California Coastal Commission (CCC), which, in 1976, was made permanent by the passage of the California Coastal Act. In addition, the California Coastal Act defined the Coastal Zone and established a coastal protection program designed to incorporate both local governments and the CCC into the planning and decision-making processes for coastal resources.

Under the California Coastal Act, local governments develop a Local Coastal Program (LCP) to identify land use classifications, zoning ordinances, and goals and policies concerning development which is submitted to the CCC for approval. Once approved, the local government becomes the Coastal Development Permit permitting authority. Permits are generally required for any development in the Coastal Zone that involves new construction, changes in land use density and/or intensity, changes to water demand or changes to access to water, and major vegetation removal. Some local government permit decisions may be appealed by the CCC and permit

decisions related to development on tidelands, submerged lands, and public trust lands remains with the CCC.

Under the California Coastal Act (section 30244), "where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required."

Local

City of Morro Bay Zoning Code 17.48.310: Protection of Archaeological Resources.

The City of Morro Bay's Zoning code (17.48.310) contains the following applicable regulations concerning archaeological resources, with the goal of the protection of cultural resources "to the greatest extent possible":

> **B. Archaeological Reconnaissance.** An archaeological reconnaissance by a qualified archaeologist shall be required as part of initial review for application submission for the following proposed development projects:
>
> > 1. *Potential archaeological sites*: projects located within three hundred feet of areas identified by the city through an archaeological resource inventory as having potential archaeological sites.
> >
> > 2. *Archaeological resources*: where evidence of potentially significant archaeological resources is found in an initial study conducted pursuant to the California Environmental Quality Act (CEQA).
>
> **C. Mitigation Plans for Archaeological Sites**. Mitigation plans for the protection of archaeological resources during development and related activities shall be required in accordance with the following provisions:
>
> > 1. *Site Reconnaissance.* Where unique, significant or valuable archaeological resources are found as a result of a site reconnaissance as required above, the city shall either require a mitigation plan to protect the site, or to recover the resources.
> >
> > 2. *Construction.* Where archaeological resources are discovered during construction of new development (including otherwise ministerial activities such as repair and maintenance of certain public utility facilities) all activities shall cease. Such activities may resume when the director finds the following:
> >
> > > a. Determination of Significance. That a qualified archaeologist knowledgeable in Chumash culture has determined the significance of the resource and the designated mitigation measures for the protection of such resources;
> > >
> > > b. Potential Impacts. That the potential impacts of the development will be mitigated in the manner recommended by the archaeologist, and/or by one of the following techniques:
> > >
> > > > i. Removal of artifacts;
> > > >
> > > > ii. Dedication of impacted area as permanent open space;
> > > >
> > > > iii. Coverage of the archaeological site by at least 24 inches of sterile sand;

iv. Any other available measures to avoid development of significant archaeological sites, including purchase tax relief and transfer of development rights.

Paleontological Resources

Federal

A variety of federal statutes specifically address paleontological resources. They are generally applicable to a project if that project includes federally owned or federally managed lands or involves a federal agency license, permit, approval, or funding. Federal legislative protection for paleontological resources stems from the Antiquities Act of 1906 (PL 59-209; 16 United States Code 431 et. seq.; 34 Stat. 225), which calls for protection of historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest on federal lands.

State

Paleontological resources are also afforded protection by CEQA. Appendix G (Part V) of the *CEQA Guidelines* provides guidance relative to significant impacts on paleontological resources, stating that a project will normally result in a significant impact on the environment if it will "…disrupt or adversely affect a paleontologic resource or site or unique geologic feature, except as part of a scientific study." Section 5097.5 of the Public Resources Code specifies that any unauthorized removal of paleontological remains is a misdemeanor. Further, the California Penal Code Section 622.5 sets the penalties for the damage or removal of paleontological resources.

Professional Standards

The Society for Vertebrate Paleontology (SVP) has established standard guidelines for acceptable professional practices in the conduct of paleontological resource assessments and surveys, monitoring and mitigation, data and fossil recovery, sampling procedures, and specimen preparation, identification, analysis, and curation. Most practicing professional paleontologists in the nation adhere closely to the SVP's assessment, mitigation, and monitoring requirements as specifically provided in its standard guidelines. Most State regulatory agencies in California accept the SVP standard guidelines as a measure of professional practice.

3.4.3 Impact Assessment

Records Search

A project-specific records search of the California Historical Resources Information System – Central Coast Information Center (CCIC) was performed on December 3, 2008. The records search included an examination of previous survey coverage and reports, historic maps, and known cultural resources within a 0.5-mile radius of the project area. Other sources that were reviewed included the California Points of Historical Interest, the California Historical Landmarks, the California Register, the National Register, and the California State Historic Resources Inventory. Maps, records, and reports concerning archaeological resources, on file at

the City of Morro Bay's Planning Division, were inspected by ESA archaeologist Madeleine Bray on November 20, 2009.

Previous Cultural Resources Investigations

The records search indicated that a total of 45 cultural resources studies have been conducted within a 0.5-mile radius of the project area. Of these studies, at least one included portions of the project area. An archaeological survey of the Morro Bay WWTP property was undertaken in 1977 in advance of plant upgrades. No cultural resources were recorded during this survey (Spanne, 1977).

Cultural Resources

The records search revealed that nine prehistoric archaeological sites have been recorded within 0.5 miles of the project area (**Table 3.4-1**). These included CA-SLO-2143, a small midden site; CA-SLO-2142, a midden site with human burials; CA-SLO-165, an extensive village site along Morro Creek; CA-SLO-43, a shell midden; CA-SLO-2222, a small occupation site; CA-SLO-2124, a shellfish collection camp; and CA-SLO-239, a large village site with human burials. Also nearby is Morro Rock (CA-SLO-41), a natural feature sacred to both Chumash and Salinan (Native American) cultures.

TABLE 3.4-1
PREVIOUSLY RECORDED CULTURAL RESOURCES WITHIN 0.5 MILE OF THE PROJECT SITE

Permanent Trinomial (CA-SLO-)	P-Number (P-40-)	Other Number	National Register/California Register eligibility	Description	Date Recorded
16	000016	–	Recommended eligible for California Register	Possible large prehistoric village site with burials	Numerous, 1926–2000
29	000029	–	Not evaluated	Prehistoric shell mound	1948
43	000043	–	Not evaluated	Large prehistoric village	1900, 1948
165	000165	–	Not evaluated	Large prehistoric village with burials	Numerous, 1960–1999
239	000239	–	Recommended eligible for California Register	Large prehistoric village with house floor and burials	Numerous, 1952–1999
2124	002124	Duke Site	Recommended eligible for California Register	Seasonal shellfish collection camp	2001
2142	002142	MBHS Site #1	Not evaluated	Seasonal shellfish collection camp; one burial	2000
2143	002143	MBHS Site #2	Not evaluated	Seasonal shellfish collection camp	2000
2222	002222	Morro Bay Chevron	Not evaluated	Prehistoric midden deposit	2003

SOURCE: CCIC, 2008.

Two additional prehistoric archaeological sites were located immediately (600–800 feet) south of the project site and are described here in more detail:

CA-SLO-16: CA-SLO-16 is located about 600 feet from the project area. First discovered in 1926 by the Whitlock family, who built their home on top of the site, this site represents a large habitation site along Morro Creek. Between 49 and 59 burials were removed by the original owners. More burials were found in 1952 and again in 1997, when a burial was found to be exposed in the Morro Creek channel.

In 1973, auguring was performed in order to determine site boundaries (Greenwood, 1973, cited in Parker, 1999). Very little of the site was observable on the surface, and it appeared that much of the site was buried beneath stream channel deposits. Cultural deposits were recorded to be to 30 cm to 2.74 meters (1 to 9 feet) thick, beneath an overburden that ranged from 30 cm to 2.4 meters (1 to 8 feet) thick. Despite the channelization of Morro Creek and numerous disturbances, the site was found to be largely intact in 1999. Cultural deposits were recorded to be 1 to 9 feet thick, beneath an overburden that ranged from 1 to 8 feet thick. This site has previously been recommended as eligible for the California Register (California Energy Commission, 2001).

CA-SLO-29: This site, recorded in the 1940s, is described as a shell mound on Morro Creek with "flint artifacts…scrapers and projectile points." It appears that no archaeological work has been performed at the site since that time. CA-SLO-29 is about 800 feet from the project area. It has never been evaluated for National Register or California Register eligibility.

Several sites have been recorded within the Morro Bay Power Plant property (MBPP), located south of the project area. Ground disturbance at SLO-239 during construction at the MBPP in 1961 disturbed at least 48 burials (California Energy Commission, 2001). In 2001, a new site was recorded on the MBPP property (CA-SLO-2124). Subsurface testing revealed that cultural deposits extended to a depth of 9 feet, and may have extended beneath an existing tank.

Recorded Historical Resources in the Project Vicinity

No historical resources listed in or formally determined eligible for listing in the National Register or California Register are located in Morro Bay. The nearest National Register-listed resources are in San Luis Obispo, approximately 14 miles southeast of Morro Bay. Morro Rock, located approximately 0.6 mile southwest from the plant site, was declared a State Historical Landmark (No. 821) in 1968. It is the city's only state historical landmark. According to the Morro Bay General Plan, the Morro Elementary School at 1130 Napa Street and a residential adobe located at 499 Little Morro Creek Road may be eligible for listing in the California Register (City of Morro Bay, 2004). These structures are located approximately one mile southeast and 0.5 mile east, respectively, from the WWTP.

Native American Contact

Contact was made with the Native American Heritage Commission (NAHC) in December 2008, in order to request a search of their Sacred Lands File (SLF) for the proposed Project. The NAHC SLF search, performed on December 9, 2008, indicated that there are several Native American sites near the project area, including CA-SLO-239, CA-SLO-16, and Morro Rock (described

above). Also named were CA-SLO-2040 (Eagle Rock), and the Toro Creek Headwaters Cemetery, neither of which are in close proximity to the project area or would be impacted by the project. A December 15, 2008 phone call to Katy Sanchez of the NAHC verified that these were all of the sacred sites listed in the SLF for the Morro Bay area and that none of them were located in the project area.

A letter from the NAHC addressed to the City of Morro Bay had been received in response to the publication of the Project's Notice of Preparation on November 4, 2008. On November 24, 2008, letters were sent to those Native American contacts on the list provided by the NAHC in the November 4 letter. Follow-up contact was also conducted on December 10, 2008 with all individuals and groups indicated by the NAHC as having affiliation with the project area in their December 9, 2008 SLF search response letter. Follow-up contact consisted of a letter sent via certified mail describing the project and a map indicating the project area. Recipients were requested to reply with any information they are able to share about Native American resources that might be affected by the project.

To date, three responses have been received from follow-up contact with local Native Americans. On December 1, 2008, a call was received from Freddy Romero of the Santa Ynez Band of Mission Indians, who had no comment on the project and stated that the Santa Ynez Band of Mission Indians would defer to the northern Chumash tribes on the matter. On December 5, 2008, an email was received from Fred Collins of the Northern Chumash Tribal Council, who expressed concern about the proximity of the project to archaeological sites in the area.

On December 30, 2008, John Burch of the Salinan Tribe called to express concern about the project. He stated that all of the area in the shadow cast by Morro Rock at sunset between the winter and summer solstices was a burial ground, and that human remains had been found during the original construction of the power plant and the wastewater treatment plant, as well as at Morro Bay High School. In addition, human remains had in the past washed down Morro Creek. He recommended Native American monitoring during project construction.

Site Visits

Archaeological reconnaissance survey

The entire project area was surveyed for cultural resources in December, 2008 and November, 2009, as described in detail below. No cultural resources were recorded during the two archaeological reconnaissance surveys. However, because of low surface visibility in most parts of the project area, the fact that no cultural resources were recorded does not preclude the existence of cultural resources within the WWTP property. The project area should still be considered to have a high archaeological sensitivity.

December 2008 Site Visit

On December 30, 2008, a site visit was made by ESA archaeologist Madeleine Bray. As the original ground surface was almost completely obscured due to the fact that most of the WWTP property was either paved or highly disturbed, a systematic pedestrian survey could not be performed; however, the entire WWTP and the portion of the adjacent properties (City

Corporation Yard and cement plant) that may be subject to ground disturbance were thoroughly inspected for cultural resources. Any open and unpaved areas, such as gravel or dirt roads, were inspected. No cultural resources were observed during the archaeological reconnaissance of the WWTP in December, 2008. However, due to cover by pavement, structures, and fill soil, visibility within the WWTP was very low, about 10 percent.

In addition, an attempt was made to locate sites CA-SLO-16 and CA-SLO-29. Site CA-SLO-16 was located. The site was identified by the presence of shell (clam, abalone, and mussel) and charcoal on the surface and in a cut bank along the Morro Creek channel. The recorded boundaries of the site place it approximately 600 feet from the project area. Since the site is buried and little evidence of it exists on the surface, it is difficult to ascertain whether the site may extend nearer to the project area. Site CA-SLO-29 could not be located.

November 2009 Site Visit

An additional site visit was conducted by ESA archaeologist Madeleine Bray on November 20, 2009, as a result of a change to the project area. Newly added portions of the project area were inspected. This included a possible staging area in the neighboring City Corporation Yard and cement plant, and a possible staging area north of Atascadero Road, on the corner of Atascadero Road and State Route 1.

During the second archaeological inspection in November, 2009, those areas newly identified as a part of the project area were closely inspected for any evidence of archaeological resources. No archaeological sites or isolated artifacts were recorded during this visit. Each specific area is described in detail below:

Potential staging area, Cement Plant/City of Morro Bay Corporation Yard: This 0.48-acre area was not paved, although about 25 percent was in use for equipment storage and thus not visible. No cultural resources or marine shell were noted.

Potential staging area, north of the WWTP: This 0.80-acre area is currently in use for beach parking. A large amount of fragmentary marine shell was noted in the western half of this potential staging area (nearest to the beach). No cultural resources were recorded.

Historical reconnaissance survey

ESA architectural historian Brad Brewster performed a site visit on January 30, 2009. Plant records and interviews with plant employees were conducted. The historic survey resulted in the documentation and evaluation of the WWTP for its potential historic significance. State DPR forms of the plant were completed. The results of this evaluation are presented below.

The MBCSD WWTP contains a total of 16 buildings or structures on a 5.5-acre site that were constructed between 1954 and 1984. Three of these structures, the Primary Clarifier/Chlorine Contact Chamber, the Biofilter/Trickling Filter No. 1, and the Digester No. 1, date from the original construction of the plant in 1954.

The following discussion provides an evaluation of historical significance of the MBCSD WWTP under federal, state, and local evaluation criteria (presented above in the Regulatory Framework section):

Criterion A (National Register)/Criterion 1(California Register) (events**)**. The MBCSD WWTP was built at a time during growing concern over the health and safety of the local oyster beds in Morro Bay, as well as a period of increased post-war population and associated increase in wastewater generation in the towns of Morro Bay and Cayucos. The two towns each voted for bond measures to construct a sewage disposal system and treatment plant in a joint agreement between the Morro Bay and the Cayucos Sanitary Districts. The site selected for the treatment plant was located on a parcel of land on Morro Beach that was donated to the Sanitation Districts by San Luis Obispo County. The low-lying site adjacent to the ocean was selected to allow wastewater to flow to the plant by gravity, eliminating the need for expensive pumps or lift stations, and to shorten the length of the outfall pipe leading from the plant to the Bay.

While the operation of the plant undoubtedly improved local water quality after its construction in 1954, and may have improved the health of the local fishing industry by reducing the bacterial count, it does not appear to have played an important role in the history of Morro Bay. Aside from newspaper articles which discuss its initial construction, very little mention of the plant is made in the historical annals of Morro Bay after 1954. Of greater historical importance at the time was the construction of the PG&E plant in 1954, and roadway improvements to State Route 1 through Morro Bay. Therefore, the MBCSD WWTP does not appear to be eligible for listing under Criterion A/1.

Criterion B/2 (persons). Research did not reveal that the MBCSD WWTP is associated with any persons important to national, state, or local history. Therefore, the MBCSD WWTP does not appear to be eligible for listing under Criterion B/2.

Criterion C/3 (architecture). The Los Angeles engineering firm of Daniel, Mann, Johnson, and Mendenhall was selected to design both the collection system and the treatment plant at the same time and under the same contract according to the joint District agreement. Plans for the new treatment plant were completed by Mendenhall in September, 1953, and construction of the plant was completed by mid-1954. The plant originally consisted of four industrial structures: the Primary Clarifier, Digester No. 1, Trickling Filter No. 1, and the Sludge Drying Beds. Plans for the expansion of the plant were completed by John Carollo Engineers in 1964. These included four additional structures: the Sedimentation Clarifiers No. 1 and 2, Digester No. 2, Trickling Filter No. 2. This expanded the plant further south, eliminating the earlier Sludge Drying Beds. The engineering firm of Brown and Caldwell prepared plans for the plant's third expansion, which occurred in 1982 – 1984. Approximately eight new structures and an addition to an existing building were added to the plant at this time, which continued to expand southward.

The MBCSD WWTP is an industrial facility that is typical in design of a mid-twentieth century wastewater treatment plant, with numerous concrete tanks and other low-rise utilitarian structures arranged around a looping roadway system. The plant appears to be a

more typical example, rather than the embodiment of the particular characteristics of a type, method, or style of industrial architecture or design. While the engineering firms of Mendenhall, Carollo, and Brown and Caldwell, which designed the three phases of the plant are well-known engineering firms, the plant does not readily convey any associations with these engineering firms, and no individual designer(s) are named on the plans. Therefore, the MBCSD WWTP does not appear to be eligible for listing under Criterion C/3.

Criterion D/4 (information). While buildings can sometimes provide important information on historic construction techniques and technologies (Criterion D/4), the types of structures present within the WWTP are well documented in both written and visual sources, and do not appear likely to yield such important primary information. Therefore, the MBCSD WWTP does not appear to be eligible for listing under Criterion D/4.

Integrity. The original four-structure plant built in 1954 was greatly expanded by the addition of twelve new facilities between 1964 and 1984. These later additions altered the size, appearance, and layout of the original plant, greatly affecting its physical integrity.

Summary. The MBCSD WWTP does not appear to be eligible for listing under the National Register/California Register Criteria due to a lack of historical and architectural merit, and has a reduced level of physical integrity due to the numerous additions to the plant after its original construction. As such, the MBCSD WWTP would not qualify for listing as an historical resource.

The proposed project would retire and demolish at least three structures that date to the original construction of the plant in 1954. However, as the MBCSD WWTP would not qualify for listing as an historical resource on the California Register or National Register, the proposed changes to it, including demolition of some of the structures which date to the 1950s and replacement with newer facilities, would have no significant impact to historic resources. No mitigation would be required.

Thresholds of Significance

According to Appendix G of the *CEQA Guidelines*, a project is considered to have a significant impact if it would lead to:

- A substantial adverse change in the significance of a historical resource that is either listed or eligible for listing in the National Register of Historic Places, the California Register of Historical Resources, or a local register of historic resources;
- A substantial adverse change in the significance of a unique archaeological resource;
- Disturbance or destruction of a unique paleontological resource or site or unique geologic feature; or
- Disturbance of any human remains, including those interred outside or formal cemeteries.

CEQA provides that a project may cause a significant environmental effect where the project could result in a substantial adverse change in the significance of a historical resource (Public

Resources Code, Section 21084.1). *CEQA Guidelines* Section 15064.5 defines a "substantial adverse change" in the significance of a historical resource to mean physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be "materially impaired" (CEQA Guidelines, Section 15064.5[b][1]).

CEQA Guidelines, Section 15064.5(b)(2), defines that the significance of a historic resources is "materially impaired" when a project:

(A) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or

(B) Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to Section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or

(C) Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.

Impacts Discussion

Archaeological Resources

Impact 3.4-1: Implementation of the proposed project could adversely affect previously undocumented archaeological resources. (Less than Significant with Mitigation)

No archaeological resources have been documented within the project area. However, the possibility of uncovering previously unknown archaeological deposits or artifacts is high. Nine prehistoric archaeological sites, many of which have yielded multiple human burials, are located within a 0.5-mile radius of the project area. These include CA-SLO-2143, a small midden site, CA-SLO-2142, a midden site with human burials; CA-SLO-165, an extensive village site with human burials; CA-SLO-43, a shell midden; CA-SLO-2222, a small occupation site; CA-SLO-2124, a shellfish collection camp; and CA-SLO-239, a large village site with burials. Two of previously recorded sites, CA-SLO-16 and CA-SLO-29, are within 500 feet of the project area.

Based on the presence of numerous significant archaeological sites within close proximity to the project area, and the level of concern expressed by Salinan and Chumash groups, the project area should be considered to have a high archaeological sensitivity for both prehistoric and historic-era buried deposits.

In addition, given the depositional environment, it is possible that cultural resources, if present, may be buried at substantial depths. At nearby prehistoric sites CA-SLO-16 and CA-SLO-2124,

cultural material was found at depths of up to 3 meters (10 feet) below the surface. Subsurface testing at site CA-SLO-2124 revealed that cultural deposits were buried beneath at least 2.8 meters (9 feet) of overburden and extended to a depth of about 3.6 meters (12 feet). At CA-SLO-16, a site located 600 feet from the project area and situated within a similar depositional environment, auger testing revealed that deposits of cultural material were up to 3.8 meters (12.5 feet) thick, and were buried beneath alluvium that was as thick as 2.4 meters (8 feet) (Parker, 1999). This indicates that substantial cultural deposits can exist at great depths below the surface.

Archaeological material could be encountered that may have been present during original construction of the plant in 1954. It is unknown whether archaeological studies were conducted prior to construction of the plant, and what, if any, steps were taken to mitigate impacts to potential cultural resources. Therefore, it is possible that undisturbed or partially disturbed buried archaeological resource may be present in areas immediately adjacent to the older facilities.

The case of the Morro Bay Power Plant provides a comparative example. Several sites have been recorded in disturbed soils within the Morro Bay Power Plant property, which is located to the south and east of the project area. Ground disturbance at site CA-SLO-239 during construction at the power plant in 1961 disturbed at least 48 burials (California Energy Commission, 2001). In 2003, a new site was recorded on the MBPP property (CA-SLO-2124), uncovered during test excavation between tanks. Subsurface testing revealed that cultural deposits extended to a depth of 9 feet, and may extend beneath an existing tank.

The WWTP has been upgraded at least twice in its history, and the project area has been highly disturbed by construction in the past. During the 1982-1984 plant expansion, soil stabilization through vibrocompaction (in which soil is stripped and compacted) was performed for all areas where new structures were to be constructed, up to a depth of 25 feet below the ground surface (Carollo Engineers, 2007). These areas subject to vibrocompaction have been highly disturbed and excavation in such places is not likely to encounter buried cultural resources. However, only 0.95 acre of the approximately five-acre plant were subject to this procedure. It is unknown how much of the subsurface environment of the WWTP has been disturbed and to what extent; however, it is likely that some undisturbed native soil may remain. While an archaeological study was conducted prior to the 1982-1984 expansion, no archaeological monitoring was recommended and it was unclear whether any was performed during construction.

Construction activity related to the proposed project, in particular the demolition of WWTP facilities that date to 1954, could inadvertently disturb, damage, or destroy previously unknown buried archaeological resources, which would be a significant impact.

Off-site Staging Areas

The possible staging area located within the cement plant is currently in use as a roadway and for equipment storage. It appears highly disturbed and no cultural resources are located on or near the surface of this area. No marine shell was noted during the site visit. Similar to the WWTP, there may be the possibility for buried cultural resources or human remains; however, if activity in this

area is limited to surficial use, for example for equipment staging and vehicle traffic, there would be no impacts to cultural resources.

The possible staging area to the north of the WWTP appears to have a higher archaeological sensitivity. The site is less disturbed than the WWTP or cement plant, and marine shell was noted to be scattered across the surface. The potential staging area may have some sensitivity for buried cultural resources or human remains; however, if activity in this area is limited to surficial use, for example for equipment staging and vehicle traffic, there would be no impacts to cultural resources. If grading, excavation, or other subsurface disturbance would occur in either of these staging areas, archaeological testing to determine the presence or absence of subsurface archaeological deposits is recommended.

Mitigation Measures 3.4-1a and 3.4-1b would mitigate impacts to archaeological resources to a less than significant level.

Mitigation Measures

Mitigation Measure 3.4-1a: Prior to issuance of a grading permit, an archaeologist meeting the Secretary of the Interior's Standards for professional archaeology (Appendix A of 36 CFR Part 61) ("qualified archaeologist") shall be retained by the City to develop and implement an archaeological monitoring plan. The plan shall include, but not be limited to, provisions for the monitoring of all ground-disturbing activities by a qualified archaeologist, including but not limited to trenching, boring, grading, removal of retired facilities, and use of staging areas and access roads. The duration and timing of monitoring shall be determined by the qualified archaeologist in consultation with the lead agency and based on the grading plans.

In the event that cultural resources are unearthed during ground-disturbing activities, the archaeological monitor shall be empowered to halt or redirect ground-disturbing activities away from the vicinity of the find so that the find can be evaluated. The monitor shall prepare and submit to the City brief weekly monitoring reports as well as one final monitoring report summarizing the results of the monitoring activity and describing any cultural resources recovered in the duration of monitoring.

Due to the sensitivity of the project area for Native American resources, at least one Native American monitor shall also monitor all ground-disturbing activities in the project area. Selection of monitors shall be made by agreement of the City and the Native American groups identified by the Native American Heritage Commission as having affiliation with the project area.

Mitigation Measure 3.4-1b: If cultural resources are encountered, all activity in the vicinity of the find shall cease until it can be evaluated by a qualified archaeologist. If the archaeological monitor determines that the resources may be significant, the qualified archaeologist will notify the lead agency and will develop an appropriate treatment plan for the resources. The archaeologist shall consult with Native American monitors or other appropriate Native American representatives in determining appropriate treatment for unearthed cultural resources if the resources are prehistoric or Native American in nature.

In considering any suggested mitigation proposed by the archaeologist in order to mitigate impacts to cultural resources, the Project proponent will determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is infeasible, other appropriate measures (e.g.,

data recovery) will be instituted. Work may proceed on other parts of the Project site while mitigation for cultural resources is being carried out.

Significance after Mitigation: Less than significant.

Historical Resources

Impact 3.4-2: Implementation of the proposed project could adversely affect known historical resources. (No Impact)

The project would result in the demolition of at least three structures that date to the original construction of the plant in 1954. However, as the MBCSD WWTP does not appear to qualify for listing as an historical resource in the California Register or National Register, the proposed changes to the WWTP, including demolition of some of the structures which date to the 1950s and replacement with newer facilities, would have no significant impact to historic resources. No mitigation is required.

Mitigation Measures

None required.

Paleontological Resources

Impact 3.4-3: Implementation of the proposed project could adversely affect paleontological resources. (Less than Significant with Mitigation)

Fossil remains are found in the geologic deposits (sedimentary rock formations) within which they were originally buried. A paleontologically important deposit is one that has a high probability of producing unique, scientifically important fossils. This is determined by the abundance and densities of fossil specimens and/or previously recorded fossil sites in exposures of the deposit. Therefore, the potential paleontological sensitivity of the project site can be assessed by identifying the paleontological importance of geologic deposits within the project site.

According to the geologic base maps, the majority of the project area is underlain by active beach and dune sands and Holocene (younger) alluvium, which is comprised of cobble-pebble gravel, sand, silt, and clay (Hall et al, 1979). This type of young alluvium has a low potential to produce fossils and is not considered paleontologically sensitive at shallow depths. However, at depth older Quaternary alluvial deposits may occur that may contain significant vertebrate fossils.

A search of the Natural History Museum of Los Angeles County's vertebrate paleontology specimen and locality records and geologic maps was conducted in November, 2009. No vertebrate fossil localities are present within the project area (McLeod, 2009). However, a locality nearby is from the same or similar older Quaternary deposits as occur in the project area. This

locality, LACM 5903, which is east of Morro Bay and north of Chorro Creek and has produced a fossil mastodon specimen at a depth of just six feet below the surface.

The beach and dune sands and younger Quaternary deposits are not generally paleontologically sensitive; however, the older Quaternary deposits are considered sensitive for significant paleontological resources. Therefore, although surface grading and very shallow excavation is unlikely to impact sensitive paleontological resources, it is possible that deeper project-related excavation could extend into undisturbed older alluvium and impact significant vertebrate fossil resources. Implementation of **Mitigation Measure 3.4-3** would reduce impacts to a less-than-significant level.

Mitigation Measures

Mitigation Measure 3.4-3: During all construction activities that involve substantial soil disturbance at a depth of greater than 5 feet below the current ground surface, the following activities will be conducted:

a. A qualified Paleontologist will be retained to supervise monitoring of construction excavations and to produce a monitoring and mitigation plan for the proposed project. Paleontological monitoring will include inspection of exposed rock units and microscopic examination of matrix to determine if fossils are present.

b. Artificial fill, active beach and dune sand, and younger Quaternary alluvium have little paleontological sensitivity level, and will be spot-checked on a periodic basis to ensure that older underlying sediments are not being penetrated and fossils are not being exposed. All earth moving in older Quaternary alluvial deposits will be monitored at a schedule developed by the Paleontologist in consultation with the City and based on grading plans.

c. The monitor will have authority to temporarily divert grading away from exposed fossils in order to recover the fossil specimens. An emphasis will be placed on thorough fossil locality documentation stratigraphic data collection.

d. If microfossils are present, the monitor will collect matrix for processing. In order to expedite removal of fossiliferous matrix, the monitor may request heavy machinery assistance to move large quantities of matrix out of the path of construction to designated stockpile areas. Testing of stockpiles will consist of screen washing small samples (approximately 90 kilograms, or 200 pounds) to determine if significant fossils are present. Productive tests will result in screen washing of additional matrix from the stockpiles to a maximum of 2,700 kg (6,000 lbs) per locality to ensure recovery of a scientifically significant sample.

e. Recovered fossils will be prepared to the point of identification, identified by qualified experts, entered in a database to facilitate inventory, analyzed for significance, and deposited in a designated repository. At each fossil locality, field data forms will be used to record the locality, stratigraphic columns will be measured and appropriate scientific samples submitted for analysis.

f. The Paleontologist will prepare brief weekly progress reports to be filed with the client and the lead agencies. The Paleontologist will prepare a final mitigation report to be filed with the client, the lead agencies, and the repository.

Significance after Mitigation: Less than significant.

Native American Resources and Human Remains

Impact 3.4-4: Implementation of the proposed project could result in the disturbance of human remains. (Less than Significant with Mitigation)

The high level of both historic and prehistoric activity in the area, evidenced by the large number of historic and prehistoric sites near the project area, and the large number of burials present in nearby sites, including at CA-SLO-16, immediately adjacent to the project area, suggests that burials could be present in the project area. In the event that human remains were discovered during subsurface activities, the human remains could be inadvertently damaged, which could be a significant impact. However, this impact would be minimized by implementation of Mitigation Measures 3.4-1a and 3.4-4.

Mitigation Measures

Implement Mitigation Measure 3.4-1a.

Mitigation Measure 3.4-4: Halt Work if Human Skeletal Remains are Identified During Construction. If human skeletal remains are uncovered during Project construction, the Project proponent will immediately halt work, contact the San Luis Obispo County coroner to evaluate the remains, and follow the procedures and protocols set forth in Section 15064.5 (e)(1) of the CEQA Guidelines. If the County coroner determines that the remains are Native American, the coroner will contact the NAHC, in accordance with Health and Safety Code Section 7050.5, subdivision (c), and Public Resources Code 5097.98 (as amended by AB 2641). The NAHC will then identify the person(s) thought to be the Most Likely Descendent (MLD) of the deceased Native American, who will then help determine what course of action should be taken in dealing with the remains.

The archaeologist, City, and MLD shall make all reasonable efforts to develop an agreement for the treatment, with appropriate dignity, of human remains and associated or unassociated funerary objects (CEQA Guidelines Section 15064.5(d)). The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects. If the MLD and the other parties do not agree on the reburial method, the project will follow Section 5097.98(b) of the California Public Resources Code, which states that “the landowner or his or her authorized representative shall reinter the human remains and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance.”

Per Public Resources Code 5097.98, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred, as prescribed in this section (PRC 5097.98), with the most likely descendents regarding their recommendations.

Significance after Mitigation: Less than significant.

Mitigation Measure Summary Table

Table 3.4-2 presents the impacts and mitigation summary for Cultural Resources.

TABLE 3.4-2
CULTURAL RESOURCES IMPACTS AND MITIGATION SUMMARY

Proposed Project Impact	Mitigation Measure	Significance after Mitigation
Archaeological Resources: Implementation of the proposed project could adversely affect previously undocumented archaeological resources.	Mitigation Measures 3.4-1a and 3.4-1b	Less than significant
Historical Resources: Implementation of the proposed project would not adversely affect historical resources.	None	No Impact
Paleontological Resources: Implementation of the proposed project could adversely affect paleontological resources.	Mitigation Measure 3.4-3	Less than significant
Native American Resources and Human Remains: Implementation of the proposed project could result in the disturbance of human remains.	Mitigation Measures 3.4-1a and 3.4-4	Less than significant

References – Cultural Resources

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3.5 Geology, Soils, Seismicity, and Mineral Resources

This section evaluates whether construction and operation of the proposed project would result in potential adverse impacts related to local geology, existing soil conditions, or seismicity. The evaluation and analysis of geology, soils, and seismicity are based, in part, on review of various geologic maps and reports. The geologic and geotechnical evaluation of the proposed project also include review of available geologic maps, resources, geotechnical studies, and subsurface boring data.

3.5.1 Environmental Setting

Regional Geology

The project area lies within the region of central California referred to as the Coast Ranges geomorphic province.[1] The Coast Ranges consist of northwest-trending mountain ranges and valleys that extend from the coastline of northern California down to the east-west trending Transverse Mountain Ranges of southern California. The Pacific Ocean borders to the west, Transverse Mountain Ranges to the south, Great Valley to the east, and Klamath Mountains to the north. The ranges and valleys run roughly parallel to the active San Andreas Fault line and are composed largely of thick sedimentary strata. The northern ranges, dominated by the irregular landslide-topography of the Franciscan Complex, are separated from the southern ranges by a depression in the San Francisco Bay. Coastlines are generally uplifted, terraced, and wave cut whereas eastern borders contain strike-ridges and valleys (CGS, 2002a).

Within the area of Morro Bay, the Coast Ranges are comprised of metamorphic rocks from what is known as the Franciscan Formation. Bay mud and alluvium consisting of unconsolidated sedimentary deposits and fine grained sediments overlay the bedrock in the region. In southern Morro Bay, an 18-mile long series of volcanic rocks have pierced through the Franciscan Formation to create the unique Islay Hill-Morro Rock complex (Boyle, 2006).

Topography

The project area is bounded by the Santa Lucia Mountain Range to the northeast and southeast, a series of ancient volcanic peaks known as Park Ridge to the southwest, and the Pacific Ocean to the west. The topography within the region is characterized by hilly and mountainous terrain with coastal plains and valleys utilized for agriculture. Elevations range from sea level to 2,624 feet above mean sea level (amsl) at Cerro Alto peak, with low elevations containing grasslands and higher elevations containing Chaparral. While slope grades range in steepness from 20 to 50 percent for much of the area, the project site is located within the coastal plain and contains a slope of less than 20 percent (Boyle, 2006).

[1] A geomorphic province is an area that possesses similar bedrock, structure, history, and age. California has 11 geomorphic provinces (CGS, 2002a).

Soils

Soils in the region generally consist of loamy sands, sandy loam, clays, clay loam, and silty clay loam. Within the project site, younger alluvium consisting of poorly drained clays and sand dune deposits can be found. The U.S. Department of Agriculture (USDA) Soil Conservation Service indicates that Dune Land is present within the project site with a typical profile of fine sand. The minor components within this soil grouping are Baywood and Capistrano Soils (Boyle, 2006; County of San Luis Obispo, 2008b; USDA, 2009). According to the geotechnical investigation prepared for the project site, the site is primarily underlain by alluvium and dune sand deposits. The project site was likely originally prepared for building by cutting into the sand dunes that previously occupied the site (Fugro, 2010). The alluvium and dune sand deposits are locally overlain by approximately one to four feet of artificial fill. The fill consisted mainly of medium dense to dense sand with varying fines and gravel content. The artificial fill is likely associated with site preparation and grading for the existing plant.

Seismicity

Southern California is a region of high seismic activity with numerous active and potentially active faults.[2] Major earthquakes have affected the region in the past and can be expected to occur again in the near future on one of the active faults within the vicinity of Morro Bay. The principal active faults in the region include the Los Osos and Hosgri faults. Potentially active faults include the Cambria and Rinconada faults. Significant earthquakes have occurred within a fifty mile radius of the project site as recently as five years ago (USGS, 2009).

Richter magnitude (M) is a measure of the size of an earthquake as recorded by a seismograph, the standard instrument that records ground shaking. The reported Richter magnitude for an earthquake represents the highest amplitude measured by the seismograph at a distance of 100 kilometers from the epicenter. Richter magnitudes vary logarithmically, with each whole number step representing a tenfold increase in the amplitude of the recorded seismic waves. Earthquake magnitudes are also measured by their moment magnitude (Mw), which is related to the physical characteristics of a fault, including the rigidity of the rock, the size of fault rupture, and the movement or displacement across a fault (CGS, 2002b).

The project site is bound by the Cambria and Rinconada fault to the east, the Los Osos fault to the south, and the Hosgri fault to the west (**Figure 3.5-1**). The Hosgri fault may have experienced significant activity during historic time (within the last 200 years) but it has not been confirmed.[3]

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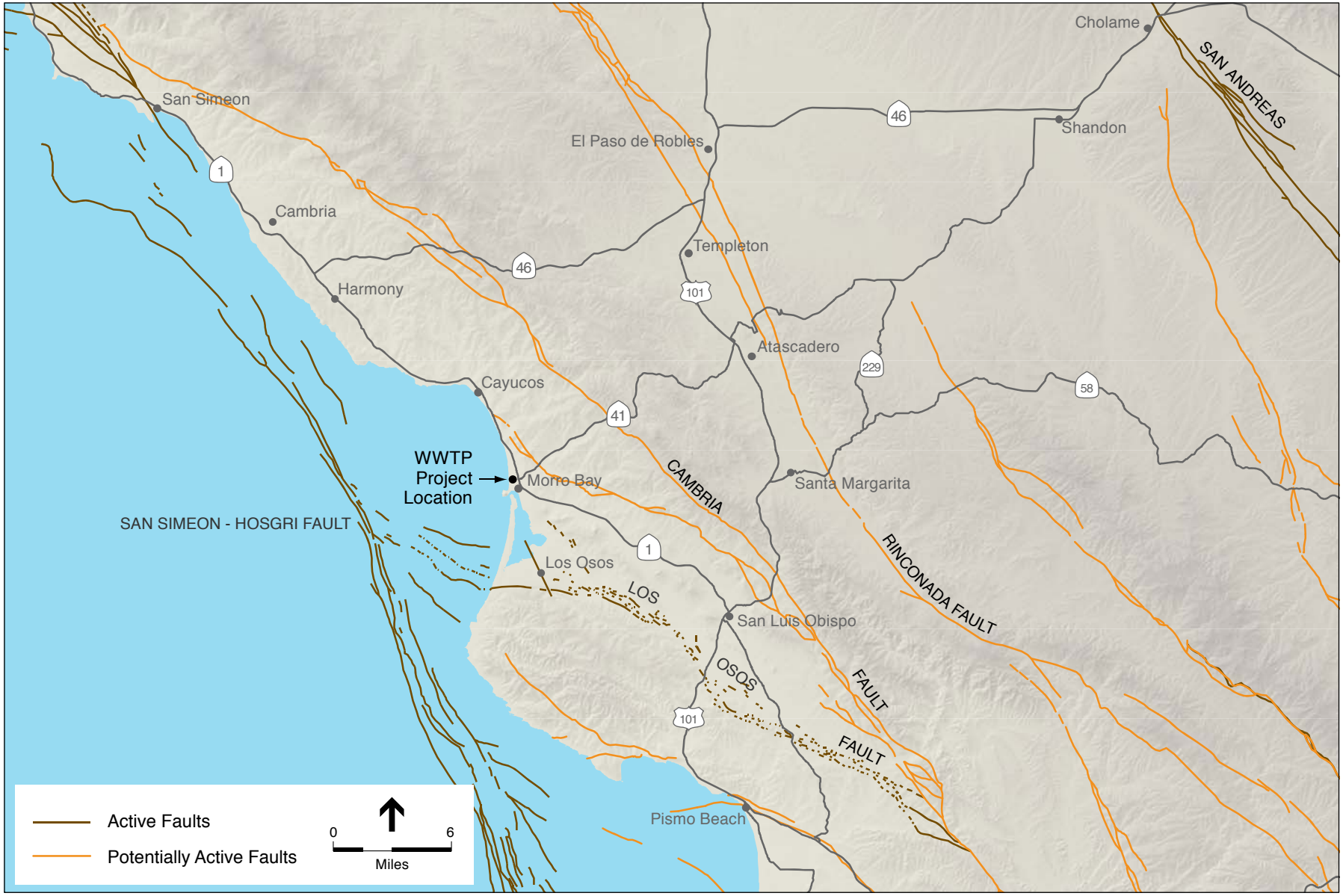
2 An *active* fault is defined by the California Geological Survey is a fault that has had surface displacement within Holocene time (approximately the last 11,000 years). A *potentially active* fault is a fault that has shown evidence of surface displacement during the last 1.6 million years, unless direct geologic evidence demonstrates inactivity for the last 11,000 years or longer. This definition does not mean that faults lacking evidence of surface displacement are necessarily inactive. *Sufficiently active* is also used to describe a fault if there is some evidence that Holocene surface displacement occurred on one or more of its segments or branches (Hart, 1997).

3 The 1927 M7.3 Lompoc earthquake may have occurred along the Hosgri fault.



SOURCE: San Luis Obispo GIS, 2008; ESA, 2008

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Figure 3.5-1
Principal Faults in the Morro Bay Area

Table 3.5-1 lists the location of regionally active faults and potentially active faults significant to the project area due to proximity, activity status, date of most recent motion, and maximum moment magnitude (Mmax). The Mmax is the strongest earthquake that is likely to be generated along a fault and is based on empirical relationships of surface rupture length, rupture area, and fault type, which are all related to the physical size of fault rupture and displacement across a fault.

TABLE 3.5-1
ACTIVE FAULTS IN THE PROJECT VICINITY

Fault	Location and Direction from Project Site	Recency of Movement	Fault Classification[a]	Historical Seismicity[b]	Maximum Moment Magnitude Earthquake (Mmax)[c]
Los Osos	3.5 miles south	Holocene	Active	n/a	6.8
Hosgri (includes San Simeon segment)	12 miles southwest	Historic (1927 rupture) Holocene	Active	M 7.1 1927	7.3

[a] Jennings, 1994, and Hart, 1997. An active fault is defined by the California Geological Survey as one that has had surface displacement within approximately the last 11,000 years. A potentially active fault is defined as a fault that has showed evidence of surface displacement during approximately the last 1.6 million years.
[b] Richter magnitude (M) and year for recent and/or large events. Richter magnitude scale reflects the maximum amplitude of a seismic wave measured at a distance of 100 kilometers from the epicenter.
[c] Moment magnitude is related to the physical size of a fault rupture and movement across a fault. The maximum moment magnitude (Mmax) is the strongest earthquake that is likely to be generated along a fault and is based on empirical relationships of surface rupture length, rupture area, and fault type.

SOURCES: Jennings, 1994; Hart, 1997, Hart et al, 1989, USGS, 2008.

The 45-kilometer Los Osos fault zone is comprised of a complex set of fault segments, with normal, reverse, and thrust faulting all occurring. The eastern half of the zone is sometimes referred to as the Edna fault zone, an older zone of faulting that branches off where the two faults cross Highway 101 (Figure 3.5-1). This zone eventually terminates in a complex intersection involving the West Huasna fault zone and the Oceanic fault zone. The western half of the Los Osos fault zone may extend offshore and intersect the Hosgri fault zone.

The Los Osos fault zone is the closest active fault zone to the WWTP at approximately 3.5 miles to the south. It is characterized by uplift of marine terraces and assumed fault dip of 30–60 degrees. Although no significant earthquakes have occurred along the fault within the last 200 years, it is considered active and a seismic event could potentially take place (USGS, 2008).

The Hosgri fault zone contains 140 kilometers of interlaced and parallel fault segments that dip to the northeast. It is located almost entirely offshore with the exception of the San Simeon fault segment, which is mapped 30 miles north of the site. On November 4, 1927, a magnitude 7.3 earthquake occurred, most likely along the Hosgri fault that produced a sea-quake and seismic sea wave resulting in one of the most powerful shocks in southern California during that century (USGS, 2003; Jennings, 1994). On December 22, 2003, the magnitude 6.5 San Simeon Earthquake occurred in the Santa Lucia mountains north of the City of Cambria, approximately 10 km northeast of the Hosgri-San Simeon fault system (USGS, 2009).

Seismic Hazards

Surface Fault Rupture

Seismically induced ground rupture is defined as the physical displacement of surface deposits in response to an earthquake's seismic waves. The magnitude and nature of fault rupture can vary for different faults, or even along different strands of the same fault. Ground rupture is considered more likely along active faults.

The project site is not located within an Alquist-Priolo Earthquake Fault Zone, as designated by the Alquist-Priolo Earthquake Fault Zoning Act, and no mapped active faults are known to pass through the immediate project region (CGS, 2009). Therefore, the risk of ground rupture at the project site is very low.

Ground Shaking

Earthquakes in the central California region could produce strong ground shaking in the project vicinity. Ground-shaking intensity is partly related to the size of an earthquake, the distance to the site, and the response of the geologic materials that underlie a site. As a rule, the greater the earthquake magnitude and the closer the fault rupture to a site, the greater the intensity of ground shaking. Violent ground shaking is generally expected at and near the epicenter of a large earthquake; however, different types of geologic materials respond differently to earthquake waves. For instance, deep unconsolidated materials can amplify earthquake waves and cause longer periods of ground shaking. The project site is located in an area of potential ground-shaking according to the City of Morro Bay 1988 General Plan Safety Element (City of Morro Bay, 1998).

Ground motion during an earthquake can be described using the motion parameters of acceleration, velocity, and duration of shaking. A common measure of ground motion is the peak ground acceleration (PGA). The PGA for a given component of motion is the largest value of horizontal acceleration obtained from a seismograph. PGA is expressed as the percentage of the acceleration due to gravity (g), which is approximately 980 centimeters per second squared. For example, the maximum PGA recorded during the 1989 Loma Prieta earthquake (San Andreas fault) was in the vicinity of the epicenter, near Santa Cruz, at 0.64 g. According to estimates made by the CGS, the PGA at the site could reach up to 0.33 g (CGS, 2008b).[4]

[4] A probabilistic seismic hazard map shows the predicted level of hazard from earthquakes that seismologists and geologist believe could occur. The map's analysis takes into consideration uncertainties in the size and location of earthquakes and the resulting ground motions that can affect a particular site. The maps are typically expressed in terms of probability of exceeding a certain ground motion. These maps depict a 10% probability of being exceeded in 50 years. There is a 90% chance that these ground motions will NOT be exceeded. This probability level allows engineers to design buildings for larger ground motions than seismologists think will occur during a 50-year interval, making buildings safer than if they were only designed for the ground motions that are expected to occur in the 50 years. Seismic shaking maps are prepared using consensus information on historical earthquakes and faults. These levels of ground shaking are used primarily for formulating building codes and for designing buildings. (CGS, 2008a)

Liquefaction

Soil liquefaction, a phenomenon in which soils lose strength, can result in ground failure. The soils most susceptible to liquefaction are clean, loose, uniformly graded, saturated, fine-grained soils that occur close to the ground surface, usually at depths of less than 50 feet. In general, upland areas have a low liquefaction potential, except where significant alluvium is present in creek bottoms or swales.

Within the project site, the potential for seismically induced liquefaction of foundation soils exists. According to the City of Morro Bay 1988 General Plan Safety Element, the project site is located within an area of moderate to high liquefaction hazard (City of Morro Bay, 1988). Because soils consisting of younger alluvium with a typical profile of fine sand are found throughout the vicinity of the project, the unconsolidated material may lose strength in the event of an earthquake. According to the geotechnical investigation for the project site, there are soils that are potentially liquefiable at the site; however no effects of liquefaction were observed during the 2003 M6.5 San Simeon earthquake (Fugro, 2010).

Seismically Induced Landslides

A landslide is a mass of rock, soil, and debris displaced down-slope by sliding, flowing, or falling. The susceptibility of land (slope) failure is dependent on the slope and geology as well as the amount of rainfall, excavation, or seismic activities. Factors that decrease resistance to movement in a slope include pore water pressure, material changes, and structure. Removing the lower portion (the toe) of a slope decreases or eliminates the support that opposes lateral motion in a slope. Shaking during an earthquake may lead materials in a slope to lose cohesion and collapse.

A review of the County of San Luis Obispo Landslide Hazards of Morro Bay map indicates that according to the City of Morro Bay 1988 General Plan Safety Element, the project site is not located in an area that is considered susceptible to an earthquake-induced landslide (City of Morro Bay, 1988). The geotechnical investigation for the project site also concluded that the site topography suggested a low potential for landslides (Fugro, 2010). Because the project site has a slope gradient of less than 20 percent, there is a low potential for slope failure in the event of an earthquake.

Geologic Hazards

Landslides and Slope Failure

Ground failure is dependent on the slope and geology as well as the amount of rainfall, human activities such as excavation, or seismic activity. A slope failure is a mass of rock, soil, and debris displaced downslope by sliding, flowing, or falling. Landslide-susceptible areas are characterized by steep slopes and downslope creep of surface materials. Debris flows consist of a loose mass of rocks and other granular material that, if saturated and present on a steep slope, can move downslope.

The rate of rock and soil movements can vary from a slow creep over many years to a sudden mass movement. Landslides occur throughout the state of California, but the density of incidents increases in zones of active faulting. At the project site, there is a low potential for landslides as the slope gradient is less than 20 percent and considered to be relatively flat (City of Morro Bay, 1988; County of San Luis Obispo, 2008d; Fugro, 2010).

Expansive Soils

Expansive soils possess a shrink-swell characteristic that can result in structural damage over a long period of time. Expansive soils are largely comprised of silicate clays, which expand in volume when water is absorbed and shrink when dried. Subsurface soils at the project site consist primarily of sand that generally have a low potential for expansion and no geotechnical improvements for mitigation of expansion are likely (Fugro, 2010).

Erosion

Erosion is the detachment and movement of soil materials through natural processes or human activities. The detachment of soil particles can be initiated through the suspension of material by wind or water. Silt-sized particles are the most easily removed particles, due to low particle mass and cohesiveness. Soils in the project area are susceptible to wind erosion, especially during the spring and fall months when wind speeds increase.

Settlement

Settlement is the gradual downward movement of an engineered structure (such as a building) due to the compaction of unconsolidated material below the foundation. Settlement accelerated by earthquakes can result in vertical or horizontal separations of structures or portions of one structure; cracked foundations, roads, sidewalks, and walls; and (in severe situations) building collapse and bending or breaking underground utility lines. Because the project site consists predominantly of unconsolidated fine sand, new and renovated facilities may be susceptible to settlement damage.

Mineral Resources

The California Geological Survey (CGS) classifies the regional significance of mineral resources in accordance with the California Surface Mining and Reclamation Act of 1975. Mineral Resource Zones (MRZ) have been designated to indicate the significance of mineral deposits. The MRZ categories are as follows:

MRZ-1: Areas where adequate information indicates that no significant mineral deposits are present or where it is judged that little likelihood exists for their presence.

MRZ-2: Areas where adequate information indicates significant mineral deposits are present, or where it is judged that a high likelihood exists for their presence.

MRZ-3: Areas containing mineral deposits the significance of which cannot be evaluated from available data.

MRZ-4: Areas where available information is inadequate for assignment to any other MRZ.

There are no MRZs at or within the vicinity of the project site.

3.5.2 Regulatory Framework

State

California Building Code (CBC)

The California Building Code (CBC) has been codified in the California Code of Regulations (CCR) as Title 24, Part 2. Title 24 is administered by the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. Under state law, all building standards must be centralized in Title 24 or they are not enforceable. The purpose of the CBC is to establish minimum standards to safeguard the public health, safety and general welfare through structural strength, means of egress facilities, and general stability by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all building and structures within its jurisdiction. The 2007 CBC is based on the 2006 International Building Code (IBC) published by the International Code Conference. In addition, the CBC contains necessary California amendments based on the American Society of Civil Engineers (ASCE) Minimum Design Standards 7-05. ASCE 7-05 provides requirements for general structural design and includes means for determining earthquake loads as well as other loads (flood, snow, wind, etc.) for inclusion into building codes. The provisions of the CBC apply to the construction, alteration, movement, replacement, and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures throughout California.

The earthquake design requirements take into account the occupancy category of the structure, site class, soil classifications, and various seismic coefficients which are used to determine a Seismic Design Category (SDC) for a project. The SDC is a classification system that combines the occupancy categories with the level of expected ground motions at the site and ranges from SDC A (very small seismic vulnerability) to SDC E/F (very high seismic vulnerability and near a major fault). Design specifications are then determined according to the SDC.

Local

The City of Morro Bay General Plan (1988) and Coastal Land Use Plan (1982)

The following policies and programs from the City's certified General Plan are relevant to seismicity and geologic hazard:

> **Policy S-1:** To the extent feasible, the City will ensure that development within the City's jurisdiction is designed to withstand natural and man-made hazards to acceptable levels of risk.
>
> > **Program S-1.2**: All new construction in the City should, as a minimum, be built according to the most recent safety requirements in the Building Code.

Program S-1.5: All new development shall ensure structural stability while not creating nor contributing to erosion or geologic instability or destruction of the site or surrounding area.

Policy S-5: The City will continue to enforce measures to ensure that seismic safety hazards are minimized.

Policy S-7: Measures should be instituted to reduce the incidence of erosion.

Policy S-7.3: Temporary vegetation, seeding, mulching, or other suitable stabilization methods shall be used to protect soils subject to erosion that have been disturbed during grading or development. All cut and fill slopes shall be stabilized immediately with planting of native grasses and shrubs, appropriate nonnative plants, or with accepted landscaping practices.

Program S-7.4: In permitted development, drainage devices shall be required in order to conduct surface water to storm drains or suitable watercourses to prevent erosion. Drainage devices shall be designed to accommodate increased runoff resulting from modified soil and surface conditions as a result of development. Water runoff shall be retained on-site whenever possible or whenever there is the capability to facilitate groundwater recharge.

Morro Bay Municipal Code: Building Code

Title 14, Buildings and Construction, of the Morro Bay Municipal Code includes Section 14.16.010, which adopts by reference the 2007 California Building Code.

3.5.3 Impact Assessment

Thresholds of Significance

In accordance with Appendix G of the *CEQA Guidelines*, a geologic, seismic, or mineral impact is considered significant if it would:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
  - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault
  - Strong seismic ground shaking
  - Seismic-related ground failure, including liquefaction
  - Landslides
- Result in substantial soil erosion or the loss of topsoil;

- Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence (i.e., settlement), liquefaction, or collapse;
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property;
- Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater;
- Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state; or
- Result in the loss of availability of a locally important mineral resource recovery site delineated on a local General Plan, Specific Plan, or other land use plan.

Impacts Discussion

Based on the geologic, seismic, and mineral conditions in the project area, the proposed project would not result in impacts associated with fault rupture, landslides, or septic tanks for the following reasons:

Surface Fault Rupture

The faults most susceptible to earthquake rupture are active faults, which are faults that have experienced surface displacement within the last 11,000 years. No active faults cross the project site, and the nearest active fault (Los Osos) is approximately 3.5 miles away. The project site is not located within an Alquist-Priolo Fault Zone and the potential for fault rupture to affect the proposed project is considered very low. There would be no impact.

Landslides

The topography in the project area is flat, and the project site has a gradient of less than 20 percent (County of San Luis Obispo, 2008d). Generally, slopes that are below 50 percent are considered relatively stable. Therefore, the Project area would not be subject to landslide including seismically induced landslide. There would be no impact.

Septic Tanks

The proposed project would not require the use of septic or other alternative disposal wastewater systems, and therefore no impact associated with this hazard would result.

Mineral Resources Zones

The proposed project would not be located within a MRZ designated in accordance with the California Surface Mining and Reclamation Act of 1975. There would be no impact.

Ground Shaking

Impact 3.5-1: The proposed project could expose new structures to risk of damage due to strong seismic ground shaking. (Less than Significant with Mitigation)

Due to its proximity to historically active faults, including the Hosgri and the Los Osos faults, the proposed project is located within an area that has a high potential for seismic ground shaking. According to estimates made by the CGS, the PGA at the site could reach up to 0.33 g, and ground shaking could potentially be prolonged due to the unconsolidated fine sand underlying the site (CGS, 2008b). As such, new facilities could suffer structural damage in the event of an earthquake. In order to reduce the potential hazards associated with seismic shaking, the CBC requires that projects located in areas with high potential for seismic activity meet stringent engineering and design criteria. These criteria are designed to ensure the safety of a project and to minimize the amount of damage that is sustained by a structure during strong seismic activity, including ground shaking. Additionally, the Safety Element of the City's General Plan would require the proposed project to adhere to the City's seismic standards for grading and construction, and also provides for the City to implement additional design and construction standards to mitigate and alleviate potential hazards associated with seismic activity. The City's Building Code Section 14.16.010 incorporates by reference the 2007 CBC. Implementation of Mitigation Measure 3.5-1 would incorporate these measures and, along with adherence to the most recent version of the CBC, would ensure that potential impacts from strong seismic ground shaking is reduced to a less than significant level.

Mitigation Measures

> **Mitigation Measure 3.5-1:** MBCSD shall ensure construction of the proposed project facilities adhere to the City's seismic standards and to the California Building Code requirements to reduce risks of damage from potential seismic ground shaking.

Significance after Mitigation: Less than significant.

Liquefaction

Impact 3.5-2: The proposed project could expose new structures to risk of damage due to liquefaction. (Less than Significant with Mitigation)

The City of Morro Bay General Plan Safety Element locates the proposed project in an area with high liquefaction susceptibility. Secondary ground failures caused by liquefaction would be most prevalent in the saturated unconsolidated fine sands underlying the project site. Liquefaction could cause structural damage or the collapse of new buildings and structures and might also damage the project's engineered fills, resulting in a significant impact. As part of the proposed project, MBCSD will conduct final geotechnical investigations prior to the construction of project elements. A preliminary geotechnical investigation has already been completed and potentially liquefiable materials have been identified in shallow soils (Fugro, 2010). Final geotechnical

design criteria would be determined on a site by site basis based on the heterogeneity of the subsurface materials encountered at the site (Fugro, 2010). Final recommendations to mitigate the potential effects of liquefaction would be included as part of the design process of the proposed project. The proposed subsurface soil stabilization method, known as vibro compaction, was used in the original construction of the existing WWTP. Vibro compaction is an engineering method that compacts and densifies the native material, laterally, from ground surface to a minimum specified elevation. It is a highly specialized technique used in areas with a clean saturated sand profile that results in a material that is much less susceptible to liquefaction (Carollo, 2007). Implementation of Mitigation Measure 3.5-2 would require the project to be designed in accordance with the recommendations of a site-specific geotechnical survey that would identify areas within the project site requiring subsoil stabilization. The impact after mitigation would be less than significant.

Mitigation Measures

Mitigation Measure 3.5-2: Prior to the acceptance of construction plans for the project by the JPA Board, a design-level geotechnical investigation, including collection of site-specific subsurface data shall be completed by MBCSD. The geotechnical evaluation shall identify density profiles, approximate maximum shallow groundwater levels, characterize the vertical and lateral extent of the saturated sand/silt layers that could undergo liquefaction during strong ground shaking, and develop site-specific design criteria to mitigate potential risks. Recommendations made as a result of these investigations to protect new structures from seismic hazards shall become part of the proposed project.

Significance after Mitigation: Less than significant.

Soil Erosion

Impact 3.5-3: The construction of new facilities and demolition of existing facilities could result in substantial soil erosion. (Less than Significant with Mitigation)

During construction and demolition activities, erosion could occur during rain or high wind events. Excavated soils and exposed earth could erode if prevention measures are not implemented. As required by state law, a Storm Water Pollution Prevention Plan (SWPPP) would be a requirement of project approval. (See Chapter 3.7, Hydrology and Water Quality, for more information.) The SWPPP would outline BMPs intended to reduce erosion that could otherwise flow to Morro Creek or the Pacific Ocean. Implementation of Mitigation Measure 3.5-3 would ensure that the SWPPP includes, but is not limited to, specific BMPs that would reduce erosion to less than significant levels.

Mitigation Measures

Mitigation Measure 3.5-3: To control water and wind erosion during construction of the project, MBCSD shall ensure that contractors implement Best Management Practices (BMPs) to control wind and water erosion during and shortly after construction of the

project and permanent BMPs to control erosion and sedimentation once construction is complete. The BMPs could include, but would not be limited to, sediment barriers and traps, silt basins, silt fences, and soil stockpile protection measures.

Significance after Mitigation: Less than significant.

Unstable Soils and Subsidence

Impact 3.5-4: The proposed project components would be located on unstable soils that could expose structures to risk of damage due to settlement. (Less than Significant with Mitigation)

Due to unconsolidated soils underlying the project site, the proposed new facilities could gradually subside resulting in structural damage. In the event of an earthquake, the unconsolidated soils could induce vertical or horizontal separations of structures or portions of one structure, cracked foundations and walls, and building collapse. However, the impact would be less than significant with implementation of Mitigation Measure 3.5-2 and 3.5-4.

Excavation would be required for construction of the proposed new treatment facility and would generate spoil material that would need to be stockpiled. Depending on the size of the stockpiles and the nature of the underlying soils, there is a potential for subsidence of the ground surface underneath the stockpiles. The impact would be less than significant with the implementation of Mitigation Measure 3.5-2 and 3.5-4.

Mitigation Measures

Implement Mitigation Measure 3.5-2.

Mitigation Measure 3.5-4: The design-level geotechnical evaluation described in Mitigation Measure 3.5-2 shall include a review of the surface and near-surface soils in the areas where new project components will be constructed and where excavated spoil materials will be stockpiled. The evaluation shall determine if the underlying soils have adequate strength to support the proposed facilities and stockpiles and, if not, shall provide recommendations to avoid this hazard. Recommendations made as a result of these investigations shall be considered during project design and the evaluation report shall become part of the construction documents for the project.

Significance after Mitigation: Less than significant.

Expansive Soils

Impact 3.5-5: The proposed project components could be located on expansive soils that expose structures to risk of damage due to shrink-swell potential. (Less than Significant)

If any of the proposed facilities are located above expansive soils, they could over time become damaged due to volumetric changes from cyclic changes in moisture content. However, in accordance with building code requirements and current geotechnical engineering practices, the design level geotechnical investigation would include an evaluation for the presence of expansive soils. Building code requirements include maximum allowable specifications for expansive properties. However, the preliminary geotechnical investigation prepared for the project site concluded that the potential for expansion is low due to the predominantly sandy nature of the site soils (Fugro, 2010). Therefore the potential impacts to project facilities due to expansive soils are considered less than significant.

Mitigation Measures

None required.

Mitigation Measure Summary Table

Table 3.5-2 presents the impacts and mitigation summary for Geology, Soils, Seismicity, and Mineral Resources.

TABLE 3.5-2
GEOLOGY, SOILS, SEISMICITY, AND MINERAL RESOURCES IMPACTS AND MITIGATION SUMMARY

Proposed Project Impact	Mitigation Measure	Significance after Mitigation
Ground Shaking: The proposed project could expose new structures to risk of damage due to strong seismic ground shaking.	Mitigation Measure 3.5-1	Less than significant
Liquefaction: The proposed project could expose new structures to risk of damage due to liquefaction.	Mitigation Measure 3.5-2	Less than significant
Soil Erosion: The construction of new facilities and demolition of existing facilities could result in substantial soil erosion.	Mitigation Measure 3.5-3	Less than significant
Unstable Soils and Subsidence: The proposed project components would be located on unstable soils that could expose structures to risk of damage due to settlement.	Mitigation Measure 3.5-2 and 3.5-4	Less than significant
Expansive Soils: The proposed project components could be located on expansive soils that expose structures to risk of damage due to shrink-swell potential.	None required	Less than significant

References – Geology, Soils, Seismicity, and Mineral Resources

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3.6 Hazards and Hazardous Materials

This section assesses potential hazardous materials that may arise as a result of the proposed project. A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, state, or local agency, or if it has characteristics defined as hazardous by such an agency. Chemical and physical properties cause a substance to be considered hazardous, including the properties of toxicity, ignitability, corrosively and reactivity. These properties are defined in California Code of Regulations, Title 22, Sections 66261.20 to 66261.24. Common materials that are considered hazardous include fuels, motor oil, grease, various lubricants, solvents, soldering equipment and glues. A "hazardous waste" is any hazardous material that is discarded, abandoned, or recycled. The criteria that render a material hazardous also make a waste hazardous (California Health and Safety Code, Section 25117). The project area includes the existing WWTP, City of Morro Bay Corporation Yard, and Hanson Heidelberg Cement Group (cement plant). The assessment of hazards and hazardous materials in this chapter includes the project area and a 0.5-mile buffer surrounding the project elements.

3.6.1 Environmental Setting

Numerous sites in the project area generate, use, or store hazardous substances, including the PG&E Morro Bay Power Plant, the City of Morro Bay Corporation Yare, the IWMA's Household Hazardous Waste Drop-Off Facility, and the Morro Bay-Cayucos WWTP. The PG&E Morro Bay Powerplant provides electricity to the central coast and central valley of California. Hazardous waste generated onsite includes contaminated sludge and polychlorinated biphenyl (PCB) – containing waste, acidic waste, metals-containing waste, waste petroleum products, paint and solvent wastes, and contaminated soil (CPUC, 2009). The City of Morro Bay Corporation Yard is 2.2 acres and houses the city's parks storage building, vehicle maintenance bays and underground fueling facility, water storage buildings, streets sign shop, common offices and restrooms, desalination plant, and several covered parking structures. Hazardous waste stored onsite includes various chemicals and waste used by the City of Morro Bay (RRM, 2008).

The Household Hazardous Waste Drop-Off Facility, currently located onsite at the WWTP, provides residents with a location to drop off household hazardous waste on Saturdays between 11:00 AM and 3:00 PM. This includes paint products, glues, polishes, disinfectants, drain and oven cleaners, automotive products, pesticides, pool chemicals, batteries, and electronic waste (cell phones and computers) (IWMA, 2009). The IWMA is responsible for removing such waste products from the Drop-Off Facility and transporting them offsite for proper disposal in accordance with state and federal regulations.

The existing Morro Bay-Cayucos WWTP stores and uses sodium hypochlorite (NaOCl) and sodium bisulfite ($NaHSO_3$), which are considered hazardous substances by the DTSC. The existing WWTP also produces and stores biosolids onsite, which are not considered hazardous substances by the DTSC. Biosolids are treated sewage sludge, which is the byproduct of municipal wastewater treatment.

Contaminated Soils

Potential sites of contaminated soils within the project vicinity were identified by reviewing the following databases:

- Leaking Underground Storage Tank (LUST) databases: Identifies potential sources of soil contamination by petroleum hydrocarbons and petroleum related volatile organic compounds (VOCs) (SWRCB, 2010).
- EnviroStor databases: The California Department of Toxic Substances Control's (CDTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifies sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites (CDTSC, 2010).
- Cortese databases: Hazardous Waste & Substances Sites. List of sites designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites). This listing is no longer updated by the state agency (CDTSC, 2010).
- Solid Waste Landfill (SWLF) and Toxic Pits databases: potential sources of soil contamination associated with solid waste landfills, including petroleum constituents, VOCs, and metals (CALEPA, 2010).

Table 3.6-1 summarizes the findings from the database search. For the purpose of this review, sites are considered relevant if they appear on the LUST database and the case remains open or undefined, if they appear on the EnviroStor database, or if they appear on the SWLF or Cortese databases.

The review of the database report indicates that a total of nine (9) sites qualify as potential sources of soil contamination within the project vicinity as indicated in Table 3.6-1. Site names and addresses are listed as they appear in the database report. The WWTP is included in Table 3.6-1 because it is listed on the Solid Waste Landfill and Toxic Pits (SWLF) database for its current biosolids composting operations. (See Chapter 3.10, Public Services and Utilities, for more information regarding solids waste and biosolids disposal.)

Chemical Usage

Existing chemicals used in the wastewater treatment process at the WWTP include sodium hypochlorite (NaOCl), sodium bisulfite ($NaHSO_3$), and ferrous chloride ($FeCl_2$), which are considered hazardous materials by the state of California. These process chemicals are stored in

TABLE 3.6-1
POTENTIAL CONTAMINATION OF SOILS IN THE PROJECT AREA[a]

Site Name	Site Address	Database
Central Coast Seafood	Front and Beach Street	LUST
Chevron Station 9-1928	1798 Main Street	LUST
Circle K Service Station	1860 Main Street	LUST
Duke Energy Plant Impounds	1290 Embarcadero Road	LUST
Dynergy (Former Duke / PG&E) Morro Bay Powerplant	1290 Embarcadero Road	EnviroStor
Gallo & Sons #103	1190 Main Street	LUST
PGE, Morro Bay Powerplant	1290 Embarcadero Road	LUST
Shell Service Station	1840 Main Street	LUST
Morro Bay-Cayucos POTW Composting	160 Atascadero Road	SWFL

[a] Search area: within a ¼-mile radius of project site.

aboveground storage tanks onsite. It is estimated that the rate and quantity of use of sodium hypochlorite and sodium bisulfite would not change as a result of the proposed project. Ferrous chloride would no longer be used in the treatment process at the new WWTP. Rather, the proposed project would introduce onsite storage of a new substance, approximately 800 gallons of polymer used for thickening of WAS prior to dewatering. The polymer is not a hazardous or regulated material. Chemicals are delivered to the WWTP on a regular basis. The following is a summary of the chemicals used and stored onsite at the WWTP:

Sodium Hypochlorite (NaOCl) is a liquid form of chlorine. NaOCl is used as a chlorination technique for disinfection purposes. NaOCl solutions are used in place of gaseous chloride, an acutely toxin chemical. NaOCl solutions are unstable and some chlorine vapor may be released in the event of a spill. Chlorine vapor productions from using NaOCl is minimal and poses minimum public health risks in comparison to using pressurized gaseous chlorine. NaOCl is stored in large tanks and fed using metering pumps to control chemical dosage. Because NaOCl degrades with time, the volume in storage must be balanced by the amount used.

Sodium Bisulfite ($NaHSO_3$) is used for dechlorination prior to discharge. It is a noncombustible, corrosive solid that is harmful if swallowed or inhaled. It may cause allergic respiratory reactions and act as an irritant to skin, eyes, and the respiratory tract. $NaHSO_3$ is moderately reactive and releases toxic sulfur dioxide gas if it comes in contact with acids or water. $NaHSO_3$ strength diminishes somewhat with age and will gradually decompose in air to sulfate, generating sulfurous acid gas.

Hazardous Waste Disposal

Hazardous waste generated onsite includes a minimal amount of volatile organic chemicals from cleaners and paints. No other hazardous materials are generated at the WWTP. The biosolids produced onsite at the WWTP are not considered hazardous materials. The small quantities of hazardous materials generated are disposed of through the San Luis Obispo IWMA's Household

Hazardous Waste Drop-Off Facility located on-site at the WWTP. The IWMA is responsible for removing such waste products from the Drop-Off Facility and transporting them offsite for proper disposal in accordance with state and federal regulations.

Transport of Hazardous Materials

State Routes 1 and 41 allow vehicles transporting hazardous materials / waste (City of Morro Bay, 2004). City streets and County areas are generally not designated as hazardous materials/waste transportation routes, but a permit may be granted on a case-by-case basis by the City or County. Transporters of hazardous waste are required to be certified by Caltrans and manifests are required to track the hazardous waste. The Morro Bay Fire Department is responsible for responding to hazardous materials accidents at all locations within the city.

3.6.2 Regulatory Framework

Federal

Occupational Safety and Health Administration

The federal Occupational Safety and Health Administration (OSHA) enforces regulations covering the handling of hazardous materials. The regulations established in the Code of Federal Regulations (CFR) Title 29 are designed to protect workers from encountering hazardous materials at the work site. These regulations require certain training, operating procedures, and protective equipment to be used at work sites where hazardous materials might be encountered.

In accordance with federal OSHA regulations, the City of Morro Bay has implemented an Integrated Emergency Response Plan and an Illness and Injury Prevention Program for the WWTP. The latter includes a Business Management Plan that requires the City of Morro Bay to provide a list of hazardous materials stored on site to the local fire department.

Resource Conservation and Recovery Act

Under the federal Resource Conservation and Recovery Act (RCRA), individual states may implement their own hazardous waste programs in lieu of RCRA as long as the state program is at least as stringent as federal RCRA requirements and is approved by the USEPA. The USEPA approved California's RCRA program, as defined by the Hazardous Waste Control Law (HWCL), in 1992. The California Environmental Protection Agency (Cal EPA) and Cal EPA's Department of Toxic Substance Control (DTSC), regulate the generation, transportation, treatment, storage, and disposal of hazardous waste. DTSC has primary hazardous materials regulatory responsibility, but can delegate enforcement responsibilities to local jurisdictions that enter into agreements with DTSC for the generation, transport, and disposal of hazardous materials under the authority of the HWCL.

Toxic Substance Control Act

The Toxic Substances Control Act (TSCA) of 1976 was enacted by Congress to give the USEPA the ability to track the 75,000 industrial chemicals currently produced or imported into the United States. The USEPA repeatedly screens these chemicals and can require reporting or testing of

those that may pose an environmental or human-health hazard. The USEPA can ban the manufacture and import of those chemicals that pose an unreasonable risk.

CERCLA

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 was developed to protect the water, air, and land resources from the risk created by past chemical disposal practices. This act is also referred to as the Superfund Act, and the sites listed under it are referred to as Superfund sites. Under CERCLA, the USEPA maintains a list, the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS), of all contaminated sites in the nation that have in part or are currently undergoing clean-up activities. CERCLIS contains information on current hazardous waste sites, potential hazardous waste sites, and remedial activities. This includes sites that are on the National Priorities List (NPL) or being considered for the NPL.

State

California Office of Emergency Services

The California Office of Emergency Services oversees state agencies and programs that regulate hazardous materials (Health and Safety Code, Article 1, Chapter 6.95). Hazardous materials, defined in Section 25501(h) of the California Health and Safety Code, are materials that, because of their quantity, concentration, or physical or chemical characteristics, pose a potential hazard to human health and safety or to the environment if released. Title 22 of the California Code of Regulations, Division 4.5, Chapter 11 contains regulations for the classification of hazardous wastes. A waste is considered hazardous if it is toxic (causes human health effects), ignitable (has the ability to burn), corrosive (causes severe burns or damage to materials), or reactive (causes explosions or generates toxic gases) in accordance with the criteria established in Article 3. Article 4 lists specific hazardous wastes, and Article 5 identifies specific waste categories, including Resource Conservation and Recovery Act (RCRA) hazardous wastes, non-RCRA hazardous wastes, extremely hazardous wastes, and special wastes.

California Accidental Release Prevention Program

The California Accidental Release Prevention (CalARP) Program regulates facilities that use or store regulated substances, such as toxic or flammable chemicals, in quantities that exceed established thresholds CCR Title 19, Division 2, Chapter 4.5). The purpose of the CalARP Program is to prevent accidental releases of regulated substances and reduce the severity of releases that do occur. The CalARP Program meets all requirements of the USEPA's Risk Management Program, established pursuant to the Clean Air Act Amendments (42 USCA Section 7412(4)). The Environmental Health Services Division of the San Luis Obispo County Public Health Department administers the CalARP Program in San Luis Obispo County.

The CalARP Program requires facilities that use regulated substances to develop a Risk Management Plan (RMP). The WWTP has an existing RMP on file with the San Luis Obispo County Environmental Health Department and the Morro Bay Fire Department. According to the

WWTP RMP, there are three regulated substances in use at the WWTP, sodium hypochlorite, sodium bisulfite, and ferrous chloride, as described above.

California Hazardous Materials Release Response Plans and Inventory Program

The California Hazardous Materials Release Response Plans and Inventory Program (CCR Title 19, Division 2, Chapter 4) requires facilities that store hazardous materials on site to prepare a Hazardous Materials Business Plan (HMBP) that includes an inventory of hazardous substances and an Emergency Response Plan (ERP). The HMBP is submitted to local health and fire departments. The WWTP HMBP is on file with the San Luis Obispo County Environmental Health Department and the Morro Bay Fire Department. The ERP for the WWTP covers worker safety, spill prevention, emergency response and hazardous materials management at the WWTP. The ERP also includes safety procedures for operations and maintenance workers, including worker safety training, hazard communications, personal protective equipment, site security, and departmental organization. There is no history of accidental release of chemicals at the WWTP. However, in the event of an accident, the release of hazardous materials would be immediately reported to local fire and emergency personnel and appropriate county and state agencies.

Department of Toxic Substance Control

The DTSC maintains a Hazardous Waste and Substances Site List for site cleanup. This list is commonly referred to as the Cortese List. The List is a planning document used by the State, local agencies and developers to comply with CEQA requirements in providing information about the location of hazardous materials release sites. Government Code Section 65962.5 requires the Cal EPA to develop at least annually an updated Cortese List. DTSC is responsible for a portion of the information contained in the Cortese List. Other state and local government agencies are required to provide additional hazardous material release information for the Cortese List.

DTSC's Site Mitigation and Brownfields Reuse Program EnviroStor database provides DTSC's component of Cortese List data by identifying an Annual Work Plan (now referred to as State Response Plan and/or Federal Superfund Plan), and Backlog sites listed under Health and Safety Code section 25356. In addition, DTSC's Cortese List includes Certified with Operation and Maintenance sites.

Unified Hazardous Waste and Hazardous Materials Management Regulatory Program

In January 1996, Cal EPA adopted regulations which implemented a Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program). The program addresses six elements: (1) hazardous waste generators and hazardous waste on-site treatment; (2) Underground storage tanks (USTs); (3) Above-ground storage tanks (ASTs); (4) hazardous materials release response plans and inventories; (5) risk management and prevention programs; and (6) Unified Fire Code hazardous materials management plans and inventories. The Unified Program is implemented at the local level, and the agency responsible for implementation of the Unified Program is called the Certified Unified Program Agency (CUPA). In San Luis Obispo County, the Environmental Health Services Division of the San Luis Obispo County Public Health Department is the designated CUPA.

3.6.3 Impacts Assessment

Thresholds of Significance

In accordance with Appendix G of the *CEQA Guidelines*, the proposed project would result in potentially significant impacts if it would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Result in hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, or waste within ¼ mile of an existing or proposed school;
- Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment;
- Be located within an area covered by an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, and would result in a safety hazard for people residing or working in the project area;
- Be located within the vicinity of a private airstrip and would result in a safety hazard for people residing or working in the project area;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

Title 40 of the Code of Federal Regulations (40 CFR) and Title 22 of the California Code of Regulations define and identify hazardous materials and wastes and provide threshold levels for these substances. Regulatory agencies determine what constitutes a “substantial” hazard or an “insignificant” level of hazardous materials on a case-by-case basis, depending on the proposed uses, potential exposure, and degree and type of hazard.

Impacts Discussion

The following impacts were considered in this section, but were found to be absent from or not applicable to the proposed project; therefore, no further discussion of these impacts is provided.

Hazardous Materials Database

The WWTP site is included in the SWLF database (Table 3.6-1) due to the existing onsite biosolids composting program. This program would be discontinued as a result of the proposed project. The proposed project is not otherwise located on a hazardous materials site identified in

the LUST, Cortese, or EnviroStor databases. Therefore it is assumed that the project would not create a significant hazard to the public or the environment.

Airport Safety Hazards

The WWTP is not located in the vicinity of an airport or private airstrip. Therefore the project would not need to adhere to an airport land use plan and will not present a safety hazard to people residing or working in the project area.

Emergency Response Plan

Although construction activities could impede access for emergency response vehicles and therefore interfere with an emergency response plan or emergency evacuation plan, measures to avoid interference with emergency access are addressed in Section 3.8, Traffic and Transportation.

Wildland Fires

Construction of the proposed project would require equipment that uses petroleum fuels and oil and could result in accidental spills or sparks leading to fire related hazards. However, the proposed project is not located in an area characterized by a high risk of wildland fires. Therefore, the proposed project would not expose people or structures to a significant risk of injury or death involving wildland fires. There would be no impact.

Transportation of Hazardous Materials

Impact 3.6-1: The proposed project could create a hazard to the public or environment through the routine use and transport of hazardous materials. (Less than Significant)

Construction of the proposed project would temporarily increase the transport of materials generally regarded as hazardous materials that are used during construction activities. It is anticipated that limited quantities of miscellaneous hazardous substances, such as gasoline, diesel fuel, hydraulic fluids, paint, and other similarly related materials would be brought onto the project site, used, and stored during the construction period. Hazardous materials transportation would be made in accordance with Caltrans requirements and regulations. Impacts would be less than significant.

Operation of the proposed project would not introduce new hazardous materials to the project site. The proposed project would require the use of a new polymer that would need to be transported and stored onsite. However, the polymer is not considered a hazardous or regulated material. Therefore, there would be no potential hazards associated with its use or transport. The proposed WWTP upgrade would not increase the volume of existing hazardous chemicals used onsite. Sodium hypochlorite and sodium bisulfite are currently in use at the WWTP and would not create a new potential hazard to the environment or to the public due to their continued use or delivery. The proposed project also would not affect the size or nature of the IWMA Household Hazardous Waste Drop-off Facility if relocated onsite at the WWTP. The proposed project would

raise the Drop-off Facility out of the floodplain and would replace the facility with a similarly-sized and similarly-designed facility that includes secondary containment to prevent accidental spills of waste products. The IWMA would continue to be responsible for removing waste products from the Drop-Off Facility and transporting them offsite for proper disposal in accordance with state and federal regulations. The proposed project would have a less-than-significant impact to the public or environment due to routine transport or use of hazardous materials.

Mitigation Measures

None required.

Accidental Upset

Impact 3.6-2: Accidental upset of hazardous materials used during project construction or operation may increase the risk of exposure to the environment, workers, and the public. (Less than Significant with Mitigation)

Construction and demolition of new and existing facilities would require equipment utilizing hazardous materials such as gasoline, diesel fuel, hydraulic fluids, paint, and oil. During construction and transportation activities, such hazardous materials could accidently be spilled or otherwise released into the environment exposing construction workers, the public and/or the environment to potentially hazardous conditions.

Operation of the proposed project would not require additional amounts of the existing hazardous materials of sodium hypochlorite and sodium bisulfite. The inclusion of polymer into the wastewater treatment process would result in additional truck replenishment trips to the project site; however the polymer is not considered a hazardous materials and the negligible increase in truck trip would impose a less than significant risk of exposure to the environment, workers, and the public. Continued operation of a relocated Household Hazardous Waste Drop-off Facility also would not result in an increased risk of accidental upset of hazardous materials. As explained above, if relocated onsite, the proposed project would raise the Drop-off Facility out of the floodplain and would replace the facility with a similarly-sized and similarly-designed facility that includes secondary containment to prevent accidental spills of waste products. Operation of the proposed project would not increase the risk of accidental upset of hazardous materials, relative to existing baseline conditions.

Therefore, potential impacts would be limited to the construction phase of the project. Implementation of Mitigation Measure 3.6-1a through 3.6-1f would reduce risks due to accidental upset of hazardous materials by requiring best management practices (BMPs) during project construction.

Mitigation Measures

Mitigation Measure 3.6-1a: Construction contractor(s) shall be required to implement best management practices (BMPs) for handling hazardous materials during the project. The use of the construction BMPs shall minimize negative effects on groundwater and soils, workers, and the public, and will include, without limitation, the following:

- Follow manufacturers' recommendations and regulatory requirements for use, storage, and disposal of chemical products and hazardous materials used in construction.
- Avoid overtopping construction equipment fuel tanks.
- During routing maintenance of construction equipment, properly contain and remove grease and oils.
- Properly dispose of discarded containers of fuels and other chemicals.

Mitigation Measure 3.6-1b: The implementing agencies shall require the construction contractor(s) to implement safety measures in accordance with General Industry Safety Orders for Spill and Overflow Control (CCR Title 8, Sections 5163-5167) to protect the project area from contamination due to accidental release of hazardous materials. The safety measures shall include, but not be limited to, the following:

- Spills and overflows of hazardous materials shall be neutralized and disposed of promptly.
- Hazardous materials shall be stored in containers that are chemically inert to and appropriate for the type and quantity of the hazardous substance.
- Containers shall not be stored where they are exposed to heat sufficient enough to rupture the containers or cause leakage.
- Specific information shall be provided regarding safe procedures and other precautions before cleaning or subsequent use or disposal of hazardous materials containers.

Disposal of all hazardous materials shall be in compliance with applicable California hazardous waste disposal laws. The construction contractor(s) shall contact the local fire agency and the Environmental Health Services Division of the San Luis Obispo County Public Health Department County Department of Public Health, Environmental Health Division, for any site-specific requirements regarding hazardous materials or hazardous waste containment or handling.

Mitigation Measure 3.6-1c: In the event of an accidental release of hazardous materials during construction, containment and clean up shall occur in accordance with applicable regulatory requirements.

Mitigation Measure 3.6-1d: Oil and other solvents used during maintenance of construction equipment shall be recycled or disposed of in accordance with applicable regulatory requirements. All hazardous materials shall be transported, handled, and disposed of in accordance with applicable regulatory requirements.

Mitigation Measure 3.6-1e: The implementing agencies shall require the construction contractor(s) to prepare a Site Safety Plan in accordance with applicable regulatory requirements.

Mitigation Measure 3.6-1f: The implementing agencies shall require the construction contractor(s) to prepare and implement a Safety Program to ensure the health and safety of construction workers and the public during project construction. The Safety Program shall include an injury and illness prevention program, as site-specific safety plan, and information on the appropriate personal protective equipment to be used during construction.

Significance after Mitigation: Less than significant.

Hazardous Materials near Schools

Impact 3.6-3: The proposed project would handle hazardous materials within one-quarter mile of Morro Bay High School. (Less than Significant with Mitigation)

The WWTP is located less than one-quarter mile from Morro Bay High School. As discussed above under Impact 3.6-1 and Impact 3.6-2, potential impacts from the project are expected to occur only during construction activities, which would be temporary and localized. Construction of new and demolition of existing facilities would require equipment utilizing hazardous materials such as petroleum fuel and oil. During construction and transportation activities, such hazardous materials could be spilled accidently or otherwise released into the environment exposing students, teachers, and the public to potentially hazardous conditions. Implementation of BMPs, a Safety Program, and other safety measures during project construction, as required by Mitigation Measures 3.6-1a through 3.6-1f, would protect the public and the neighboring school from exposure to hazardous materials. In addition, Mitigation Measure 3.11-1 (see Chapter 3.11 Transportation and Traffic) would require coordination of construction activities with San Luis Coastal Unified School District. Impacts would be less than significant with mitigation.

Operation of the proposed WWTP upgrade would not require additional amounts of two of the three existing hazardous materials currently used onsite: sodium hypochlorite and sodium bisulfite. The proposed project would eliminate use of the third hazardous material currently used onsite: ferrous chloride. The proposed project would require 800 gallons of a new polymer to be transported and stored at the new WWTP. However, the polymer is not considered a hazardous or regulated material. The proposed project would raise the existing Household Hazardous Waste Drop-off Facility out of the floodplain and build a new facility that would be similarly-sized and similarly-designed, including secondary containment to prevent accidental spills of waste products. Operation of the proposed project would not increase the risk of release of hazardous materials within one-quarter mile of a school, relative to existing baseline conditions. Impacts would be less than significant.

Mitigation Measures

Implement Mitigation Measures 3.6-1a through 3.6-1f and 3.11-1.

Significance after Mitigation: Less than significant.

Mitigation Measure Summary Table

Table 3.6-2 presents the impacts and mitigation summary for Hazards and Hazardous Materials.

TABLE 3.6-2
HAZARDS AND HAZARDOUS MATERIALS IMPACTS AND MITIGATION SUMMARY

Proposed Project Impact	Mitigation Measure	Significance after Mitigation
Transportation of Hazardous Materials: The proposed project could create a hazard to the public or environment through the routine use and transport of hazardous materials.	None required	Less than significant
Accidental Upset: Accidental upset of hazardous materials used during project construction or operation may increase the risk of exposure to the environment, workers, and the public.	Mitigation Measures 3.6-1a through 3.6-1f	Less than significant
Hazardous Materials Near Schools: The proposed project would handle hazardous materials within one-quarter mile of the Morro Bay High School.	Mitigation Measures 3.6-1a through 3.6-1f and 3.11-1	Less than significant

References – Hazards and Hazardous Materials

California Public Utilities Commission (CPUC), *Online Documents*, available online at http://www.cpuc.ca.gov/PUC/documents, accessed January 2009.

California Department of Toxic Substances Control (CDTSC), Cortese List, available online at http://www.dtsc.ca.gov/SiteCleanup/Cortese_List.cfm, accessed July 2010.

California Environmental Protection Agency (CALEPA), List of solid waste disposal sites identified by the Water Board with waste constituents above hazardous waste levels outside the waste management unit, (available online at http://www.calepa.ca.gov/SiteCleanup/CorteseList), accessed July 2010.

California Department of Toxic Substances Control (CDTSC), EnviroStor – Hazardous Waste and Substance Site List, (available online at http://www.envirostor.dtsc.ca.gov/public), accessed July 2010.

City of Morro Bay, Coastal Land Use Plan, October 1982.

City of Morro Bay, *General Plan / Local Coastal Plan*, February, 2004.

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RRM Design Group, *City of Morro Bay Corporation Yard Master Plan Document*, July, 2008.

San Luis Obispo County Integrate Waste Management Authority (IWMA), *Drop Off Facilities*, (available online at http://www.iwma.com/householdhaz/ dropoff.html), accessed January, 2009.

State Water Resources Control Board (SWRCB), Geotracker, (available online at http://geotracker.swrcb.ca.gov), accessed July 2010.

3.7 Hydrology and Water Quality

This section describes local surface water and groundwater resources and discusses regional water quality issues. This section also evaluates the proposed project's potential impacts on water resources in the project area.

3.7.1 Environmental Setting

Regional Setting

The City of Morro Bay generally lies on the narrow coastal shelf between the Pacific Ocean and the coastal hills. The climate in both Morro Bay and Cayucos is characterized as coastal with mild to moderate temperatures year-round and little diurnal variation. The average annual rainfall in the region is 15 inches per year and usually occurs between the months of October and April (Carollo, 2007).

The City of Morro Bay is located within the Morro Bay and Estero Bay Watersheds and the community of Cayucos is located within the Cayucos Watershed, all of which are subregions of the Central Coastal Watershed (USGS Unit 18060006) (USEPA, 2009). The major surface water features in the region are Chorro Creek, Los Osos Creek, Toro Creek, Alva Paul Creek, San Bernardo Creek, Little Morro Creek, and Morro Creek, which all flow to the Pacific Ocean, either directly or via the Morro Bay estuary (Figure 3.7-1). These creeks and their tributaries also serve as receiving waters for the City's storm drain system. **Figure 3.7-1** identifies major surface water resources in the region.

Project Area Setting

Surface Water

The project site is located within the Morro Creek Watershed (Calwater I.D. 3310.210000), which is a subregion of the Estero Bay Watershed (California Resources Agency, 2009). The main surface water feature in the Morro Creek Watershed is Morro Creek, which drains directly into Estero Bay just south of the WWTP (Figure 3.7-1). The Morro Creek and Morro Bay Watersheds include approximately 18,137 acres of land characterized by grasslands, chaparral, coastal oak woodlands, grasslands, and urban and agricultural land uses (FRAP, 2009).

Water Quality

Section 303(d) of the CWA requires that each state identify water bodies or segments of water bodies that are "impaired" (i.e., do not meet one or more of the water quality standards established by the state). These waters are identified in the Section 303(d) list as waters that are polluted and need further attention to support their beneficial uses. Once the water body or segment is listed, the state is required to establish Total Maximum Daily Load (TMDL) for the pollutant. A TMDL is the maximum amount of a pollutant that a water body can receive and still

SOURCE: San Luis Obispo GIS, 2008; ESA, 200

Morro Bay Cayucos Wastewater Treatment Plant EIR . 208013

Figure 3.7-1
Surface Waters

meet the water quality standards. Typically, TMDL is the sum of the allowable loads of a single pollutant from all contributing point and nonpoint sources.

Table 3.7-1 summarizes the impaired water bodies on the Central Coast Regional Water Quality Control Board (CCRWQCB) 2006 Clean Water Act Section 303(d) list near the proposed project site. Morro Creek, the closest surface water to the project site, is not an impaired water body.

TABLE 3.7-1
IMPAIRED WATER BODIES IN THE PROJECT AREA

Water Body/Reach Name	Pollutant/Stressor	Potential Source
Chorro Creek	Nutrients	Municipal Point Sources, Agriculture, Irrigated Crop Production, Agriculture-storm runoff
	Dissolved Oxygen	Unknown Source
Los Osos Creek	Low Dissolved Oxygen	Agriculture, Silviculture, Road Construction, Disturbed Sites, Erosion/Siltation, Nonpoint Source
Morro Bay	Dissolved Oxygen	Unknown Source
Warden Creek	Low Dissolved Oxygen	Unknown Source

SOURCE: CCRWQCB, 2006.

Groundwater

The City of Morro Bay is located on two small alluvial aquifers, the Morro and Chorro Basins. Twelve small wells pump from the aquifers, however the reliability of obtaining groundwater from the wells has become increasingly limited. Currently, the majority of the City's water supplies are provided by State Water Project (SWP) water. Nitrate pollution of the aquifers has decreased water quality, restricting the City's ability to use groundwater as a potable water supply. The Morro Basin wells have had periodically high iron, manganese, and nitrate levels.

In 1972, the State Water Resources Control Board (SWRCB) issued findings that the Chorro and Morro Basins are riparian underflow. As a result, use of the basins is controlled by the SWRCB. In 1995, the SWRCB approved the City's water rights application to pump up to 1.2 cubic feet per second (cfs) and 581 acre-feet per year (afy) from the Morro Basin and up to 3.171 cfs and 1,142 afy of Chorro Creek underflow from the Chorro Basin. This approval included a condition that the City may pump from Chorro Basin wells only when Chorro Creek flows exceed 1.4 cfs (Boyle, 2006).

In 1999, Methyl Tertiary Butyl Ether (MTBE) was discovered in the Morro Basin, and in 2000, the SWRCB issued an order prohibiting the use of the City's five Morro Basin wells. The source of the MTBE was found to be the Shell gasoline station on Main Street. The CCRWQCB required the Shell station owner to install monitoring wells and to conduct groundwater and soil sampling. Subsequent investigations confirmed the MTBE contamination originated from this former Shell service station. The underground storage tanks (USTs) and gasoline-impacted soils

beneath the USTs were removed from the location in January 2002. The Responsible Party (RP) implemented extensive remedial actions since the discovery of the contamination, which included contaminated soil excavation, addition of oxygen releasing compound to the UST excavation backfill, soil vapor extraction, and onsite and offsite groundwater extraction and treatment. Extensive monitoring conclusively demonstrated that the City's Well Field was never impacted, even prior to MTBE plume stabilization. On September 26, 2008, the CCRWQCB sent case closure letter to Shell Oil Company.

Of the seven wells in the Chorro Basin, one is out of service due to potential water quality concerns and one has been abandoned. The other five wells can be used when the Chorro Creek minimum flow requirements are met (Boyle, 2006).

The City of Morro Bay has a seawater desalination plant that is used during drought emergencies. The plant desalinates seawater produced from five seawater wells located along the Morro Bay harbor. Currently, the plant is only operated to offset seasonal peaking and to offset routine supply replacement when SWP water is not available (Boyle, 2006).

The community of Cayucos is located in the Cayucos Watershed. Cayucos obtains groundwater from a well located on the east side of State Route 1. The remainder of its water supply comes from Whale Rock Reservoir, which was created by the construction of an earthen dam on Old Creek (City of SLO, 2009). Water from the reservoir is piped to the Cayucos Water Treatment Plant (Carollo, 2007).

Storm Water

Flooding has occurred onsite in the past at the WWTP, which is located in a 100-year Flood Insurance Zone as designated by FEMA. The WWTP is located on the floodplain near the mouth of Morro Creek, which drains a 24-square-mile watershed to the east of the plant (Wallace Group, 2009). The WWTP is located in a topographic depression between the sand dunes to the west and higher land elevations to the east; the WWTP is separated from Morro Creek, located 600 feet south, by high ground where Morro Dunes RV Park is located. Flooding at the WWTP is exacerbated by storm water drainage that is subject to blockage and backwater (Wallace Group, 2009). The estimated peak flow rate at the mouth of Morro Creek for a 100-year flood is 14,900 cfs, which is used by FEMA to establish the water surface elevations for their flood plain mapping (Wallace Group, 2009).

Storm water runoff from the WWTP is conveyed offsite via the following five outlets as described by Wallace Group in the *MBCSD WWTP Flood Hazard Analysis* (2009) conducted for the project (**Appendix D**):

> **Storm drain to the ocean:** This underground 24-inch diameter drain captures runoff from the north portion of the WWTP and conveys it to the beach just beyond the dunes. Sand frequently accumulates at the outlet and periodic maintenance is required to maintain capacity.

Storm drain to Morro Creek: This underground 24-inch diameter storm drain captures runoff from the southern portion of the WWTP and conveys it to Morro Creek. This outlet is controlled by a flap gate to prevent flow in the creek from backing up into the plant. The capacity of this drain is greatly diminished during high flows in Morro Creek. Since 2007, most of the storm water that otherwise would discharge into the creek has been diverted to the WWTP headworks due to the recent installation of a valve on a portion of the drain that leads to the creek.

Storm drain to WWTP headworks: When the valve on the storm drain to Morro Creek is closed, storm water captured from the central portion of the WWTP is conveyed to the headworks for treatment and discharge through the ocean outfall.

Surface drain through the dunes at Atascadero Road: Historically, flood flows north of Morro Creek would have flowed through the gap in the dunes at the west end of Atascadero Road, serving as a primary outlet to the ocean. This gap has diminished in width and increased in height over time, such that it currently does not serve as a free outlet for flood flows.

Surface drain through the dunes to the north: The trough running along the dunes between Morro Bay High School and the beach serves as a surface outlet to the ocean for flood flows north of Morro Creek. The outlet to the trough is 1700 feet north of the WWTP. Flow is slow through this outlet and only conveys approximately five percent of the 100-year flood flow to the ocean.

Wallace Group has prepared the *MBCSD WWTP Flood Hazard Analysis* for the proposed project (Appendix D), which provides an updated assessment of flood elevations onsite at the WWTP and surrounding properties. This assessment is being used to revise the existing FEMA Flood Insurance Rate Map through a Letter of Map Revision (LOMR). The Flood Hazard Analysis uses a FLO-2D model, with revised hydrology to better predict flood flows in the project vicinity for a 100-year flood given existing topography and ground surface elevations as surveyed by Wallace Group. Model assumptions are described in the report provided in Appendix D. The Flood Hazard Analysis results suggest that under existing conditions, flood depths at the WWTP during a 100-year flood would be between 3.0 to 4.5 feet (Wallace Group, 2009).

3.7.2 Regulatory Framework

Federal

Clean Water Act

The Federal Water Pollution Control Act (33 U.S.C. 1251 et. sec.) as amended by the Federal Water Pollution Control Act Amendments of 1972, also known as the Clean Water Act (CWA), states that the discharge of pollutants to waters of the United States from any point source is unlawful, unless the discharge is in compliance with a NPDES permit. Amendments (1987) to the CWA added a section that established a framework for regulating municipal and industrial (M&I) storm water discharges under the NPDES program. On November 16, 1990, the USEPA

published final regulations (under the 1987 CWA Amendments) that establish application requirements for storm water permits. These regulations require that discharges of storm water from construction activity of five acres or more must be regulated as an industrial activity and covered by a NPDES permit.

NPDES Phase I

Phase I of the NPDES Program addresses ten categories of industrial activities; construction activities disturbing five acres of land or greater; and storm water runoff from “medium” and “large” municipal separate storm sewer systems (MS4s) generally serving populations of 100,000 or greater.

For construction activities disturbing five acres of land or greater, the SWRCB issued one statewide General Construction Activity Storm Water Permit (on August 20, 1992) to apply to all construction activities. This permit was revised and reissued on August 19, 1999 (Water Quality Order 99-08-DWQ). Landowners are responsible for obtaining and complying with this permit but may delegate specific duties to developers and contractors by mutual consent. For construction activities, the permit generally requires landowners, or their designated agent, to:

- Eliminate or reduce non-storm water discharges to storm water systems and other waters of the United States,
- Develop and implement a SWPPP, and
- Perform inspections of storm water control structures and pollution prevention measures.

A SWPPP prepared in compliance with the General Permit describes the site, erosion and sediment controls, runoff water quality monitoring, means of waste disposal, implementation of approved local plans, control of post-construction sediment and erosion control measures and maintenance responsibilities, and non-storm water management controls. Dischargers are also required to inspect construction sites before and after storms to identify storm water discharge from construction activity, and to identify and implement controls where necessary.

NPDES Phase II

Phase II of the NPDES Program further protects and improves the nation’s water resources from polluted storm water runoff by focusing on urban storm water runoff from additional MS4s in urbanized area and the operations of small construction sites are were not already covered by Phase I NPDES permits. On December 8, 1999 the SWRCB amended Water Quality Order 99-08-DWQ to apply to construction sites of one acre or greater, and NPDES Phase II regulations were finalized and issued by the USEPA in January 2000. The main objectives of the Phase II regulations are to reduce the amount of pollutants being discharged and protect the quality of the receiving waters.

To meet this goal, the permittee must implement a Stormwater Management Program that addresses six minimum control measures, including (1) public education and outreach; (2) public participation/involvement; (3) illicit discharge detection and elimination; (4) construction site storm water runoff control for sites greater than one acre; (5) post-construction storm water

management in new development and redevelopment; and (6) pollution prevention/good housekeeping for municipal operations. These control measures will typically be addressed by developing BMPs.

Federal Emergency Management Agency

Under Executive Order 11988, FEMA is responsible for the management and mapping of areas subject to flooding during a 100-year flood event (i.e., one percent chance of occurring in a given year). FEMA requires that local governments covered by federal flood insurance pass and enforce a floodplain management ordinance that specifies minimum requirements for any construction within the 100-year flood plain, as depicted on FEMA maps. The existing WWTP is located within the Morro Creek 100-year floodplain. The site has also been mapped as an A-14 Zone on FEMA's Flood Insurance Rate Map as shown in **Figure 3.7-2** (Carollo, 2007). Wallace Group has conducted a Flood Hazard Analysis for the proposed project (Appendix D), which provides an updated assessment of flood elevations onsite at the WWTP and surrounding properties. This assessment is being used to revise the FEMA Flood Insurance Rate Map through a Letter of Map Revision (LOMR).

State

Porter-Cologne Water Quality Act

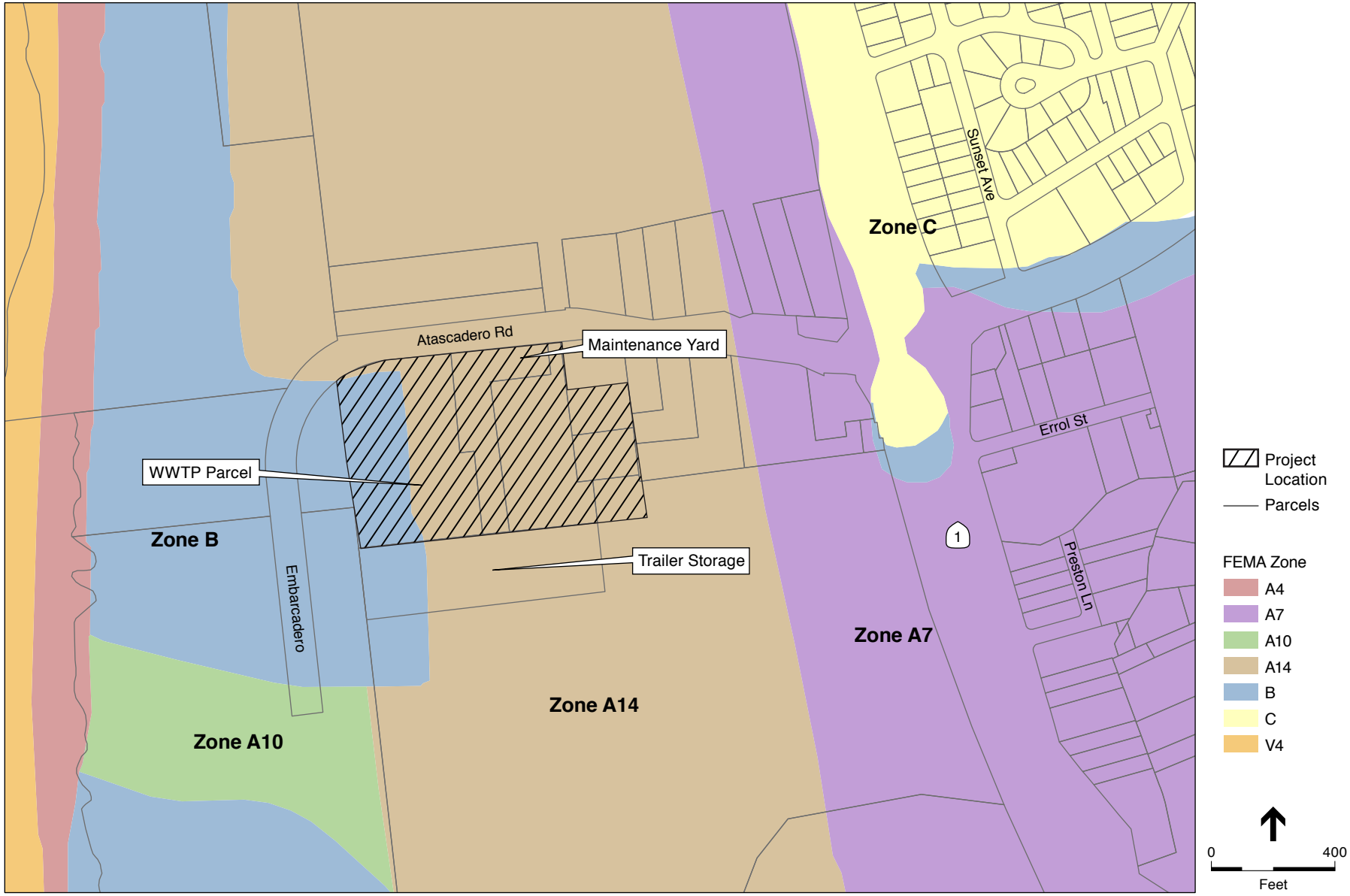
The Porter-Cologne Water Quality Control Act (Division 7 of the California Water Code) provides the basis for water quality regulation within California. This act establishes the authority of the SWRCB and the nine RWQCBs. The SWRCB administers water rights, water pollution control, and water quality functions throughout the state, while the RWQCBs conduct planning, permitting, and enforcement activities. The project area lies within the jurisdiction of the Central Coast RWQCB.

Central Coast Water Quality Control Plan

The SWRCB and the Central Coast RWQCB share the responsibility, under the Porter-Cologne Act, to formulate and adopt water policies and plans and to adopt and implement measures to fulfill CWA requirements. The Central Coast RWQCB has prepared the Central Coast Water Quality Control Plan (Basin Plan) (1994) that identifies beneficial uses for the major creeks in the project area as well as the Morro Bay Estuary, as shown in **Table 3.7-2**. **Table 3.7-3** defines the identified beneficial uses.

Water Quality Control Plan for Ocean Waters of California (Ocean Plan)

The California Ocean Plan was prepared by the SWRCB and was last updated in 2005. It is applicable to point source discharges to the ocean. The Ocean Plan specifies the beneficial uses of the ocean to be protected including industrial water supply, water contact and non-contact recreation, navigation, commercial and sport fishing, mariculture, preservation and enhancement of Areas of Special Biological Significance, rare and endangered species, marine habitat, fish



SOURCE: Carollo, 2008

Figure 3.7-2
FEMA Flood Zones

TABLE 3.7-2
BENEFICIAL USE DESIGNATIONS FOR WATER BODIES IN THE PROJECT AREA

	Water Body						
	Cayucos Creek	**Toro Creek**	**Morro Creek**	**Little Morro Creek**	**Chorro Creek**	**Morro Bay Estuary**	**Estero Bay**
MUN	X	X	X	X	X		
AGR	X	X	X	X	X		
IND						X	X
GWR	X	X	X	X	X		
REC1	X	X	X	X	X	X	X
REC2	X	X	X	X	X	X	X
WILD	X	X	X	X	X	X	X
COLD	X	X	X	X	X	X	
WARM	X	X	X		X		
MIGR	X	X	X	X	X	X	
SPWN	X	X	X	X	X	X	
BIOL	X				X	X	
RARE	X	X	X	X	X	X	X
EST	X	X	X			X	
FRSH	X	X	X		X		
COMM	X	X	X	X	X	X	X
AQUA						X	
NAV							X
MAR							X
SHELL						X	X

X = Present or potential beneficial uses

SOURCE: CCRWQCB Basin Plan, 1994

TABLE 3.7-3
DEFINITIONS OF BENEFICIAL USES OF SURFACE WATERS

Beneficial Use	Description
Municipal and Domestic Supply (MUN)	Waters are used for community, military, municipal or individual water supply systems. These uses may include, but are not limited to, drinking water supply.
Agricultural Supply (AGR)	Uses of water for farming, horticulture, or ranching including, but not limited to, irrigation, stock watering, or support of vegetation for range grazing.
Industrial Service Supply (IND)	Uses of water for industrial activities that do not depend primarily on water quality including, but not limited to, mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, or oil well repressurization.
Groundwater Recharge (GWR)	Uses of water for natural or artificial recharge of groundwater for purposes of future extraction, maintenance of water quality, or halting saltwater intrusion into freshwater aquifers.
Water Contact Recreation (REC 1)	Uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, white-water activities, fishing, or use of natural hot springs.
Non-Contact Water Recreation (REC 2)	Uses of water for recreational activities involving proximity to water, but not normally involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tidepool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.

TABLE 3.7-3 (continued)
DEFINITIONS OF BENEFICIAL USES OF SURFACE WATERS

Beneficial Use	Description
Wildlife Habitat (WILD)	Uses of water that support terrestrial ecosystems including, but not limited to, preservation and enhancement of terrestrial habitats, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.
Cold Freshwater Habitat (COLD)	Uses of water that support cold water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.
Warm Freshwater Habitat (WARM)	Uses of water that support warm water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.
Migration of Aquatic Organisms (MIGR)	Uses of water that support habitats necessary for migration or other temporary activities by aquatic organism, such as anadromous fish.
Spawning, Reproduction, and/or Early Development (SPWN)	Uses of water that support high quality aquatic habitats suitable for reproduction and early development of fish.
Preservation of Biological Habitats of Special Significance (BIOL)	Uses of water that support designated areas of habitats, such as established refuges, parks, sanctuaries, ecological reserves, or Areas of Special Biological Significance (ASBS), where the preservation or enhancement of natural resources requires special protection.
Preservation of Rare and Endangered Species (RARE)	Uses of waters that support habitats necessary for the survival and successful maintenance of plant or animal species established under state and/or federal law as rare, threatened, or endangered.
Estuarine Habitat (EST)	Uses of water that support estuarine ecosystems including, but not limited to, preservation or enhancement of estuarine habitats, vegetation, fish, shellfish, or wildlife (e.g., estuarine mammals, waterfowl, shorebirds). An estuary is generally described as a semi-enclosed body of water having a free connection with the open sea, at least part of the year and within which the seawater is diluted at least seasonally with fresh water drained from the land. Included are water bodies which would naturally fit the definition if not controlled by tidegates or other such devices.
Freshwater Replenishment (FRSH)	Uses of water for natural or artificial maintenance of surface water quantity or quality (e.g., salinity) which includes a water body that supplies water to a different type of water body, such as, streams that supply reservoirs and lakes, or estuaries; or reservoirs and lakes that supply streams. This includes only immediate upstream water bodies and not their tributaries.
Commercial and Sport Fishing (COMM)	Uses of water for commercial or recreational collection of fish, shellfish, or other organism including, but not limited to, uses involving organisms intended for human consumption or bait purposes.
Aquaculture (AQUA)	Uses of water for aquaculture or mariculture operations including, but not limited to, propagation, cultivation, maintenance, or harvesting of aquatic plants and animals for human consumption or bait purposes.
Navigation (NAV)	Uses of water for shipping, travel, or other transportation by private, military, or commercial vessels.
Marine Habitat (MAR)	Uses of water that support marine ecosystems including, but not limited to, preservation and enhancement of terrestrial habitats, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.
Shellfish Harvesting (SHELL)	Uses of water that support habitats suitable for the collection of filter-feeding shellfish (e.g., clams, oysters, and mussels) for human consumption, commercial, or sport purposes. This includes waters that have in the past, or may in the future, contain significant shellfisheries.

SOURCE: CCRWQCB Basin Plan, 1994

migration, fish spawning and shellfish harvesting. The California Ocean Plan establishes water quality objectives for California's ocean waters and provides the basis for regulation of wastes discharged in the state's coastal waters (SWRCB, 2005). Water quality objectives and effluent limits specified in the Ocean Plan are included in the WWTP's NPDES permit (Carollo, 2007). The Ocean Plan requires that effluent discharged to the ocean must have a pH within the limit of 6.0 and 9.0 at all times. It also requires dischargers, on a thirty-day average, to remove 75 percent of all suspended solids from the influent stream before discharging effluent to the ocean, with a lower effluent concentration level of 60 mg/l. In addition, the dissolved oxygen concentration should not be depressed by more than 10 percent from the naturally occurring level as a result of the discharge of oxygen demanding waste materials.

WWTP NPDES Permit

The WWTP currently discharges treated effluent through its ocean outfall under NPDES Permit No. CA0047881. The permit is a modified NPDES Permit with a 301(h) waiver, which waives full secondary treatment requirements for BOD_5 and TSS. The permit requires 75 percent removal of TSS, a 30-day average TSS effluent limit of 70 mg/L, 30 percent removal of BOD_5, and a 30-day average BOD_5 effluent limit of 120 mg/L (CCWB). The permit requirements are summarized in **Table 3.7-4**. The NPDES permit also establishes water quality objectives for receiving waters based on Ocean Plan requirements, as described above, and requires that effluent have a minimum dilution ratio of 133 parts seawater to one part effluent (Carollo, 2007).

TABLE 3.7-4
CURRENT MBCSD NPDES EFFLUENT DISCHARGE REQUIREMENTS FOR WWTP

Constituent	Units	Monthly (30-day) Average	Weekly (7-day) Average	Maximum
Peak Seasonal Dry Weather Flow	mgd	2.36	–	–
5-day Biochemical Oxygen Demand (BOD_5)	mg/L	120	–	180
	lbs/day[a]	2,062		3,092
Total Suspended Solids	mg/L	70	–	105
	lbs/day[1]	1,203		1,804
Total Coliform	MPN/100 ml	23	–	2,400
Grease and Oil	mg/L	25	40	75
	lbs/day[a]	430	687	1,288
Settleable Solids	ml/L	1.0	1.5	3.0
Turbidity	NTU	75	100	225
pH	Within the limits of 6.0 to 9.0 at all times			
Acute Toxicity	TUa	1.5	2.0	2.5

[a] Mass emissions based on average dry weather flow design capacity of 2.06 mgd.

SOURCE: Carollo, 2007.

The objectives of the proposed project are to phase out the need for a 301(h) modified discharge permit by upgrading treatment facilities at the WWTP. After implementation of the proposed project, the WWTP effluent would be able to meet full secondary standards as required by the California Code of Regulations Title 40, Part 133, Secondary Treatment Regulation (40CFR Part 133). The upgraded WWTP facilities would be subject to these treatment standards as a condition of the NPDES permit, requiring MBCSD to remove, as a 30-day average, at least 85 percent of both TSS and BOD_5 from the influent stream before discharging wastewater to the ocean. In addition, the 30-day average effluent limit would be 30 mg/L for both TSS and BOD_5 (40CFR Part 133).

NPDES General Construction Permit for Storm Water Runoff

Construction activities of one acre or more are regulated by the SWRCB and are subject to the permitting requirements of the NPDES General Permit for Discharges of Storm Water Runoff Associated with Construction Activity (General Construction Permit). The SWRCB has the authority to implement the federal CWA NPDES Phase I and Phase II program. The SWRCB reissued the General Construction Permit on December 8, 1999 (WQO 2009-0009-DWQ), which became effective July 1, 2010. The project applicant must submit a Notice of Intent (NOI) to the RWQCB to be covered by the General Permit prior to the beginning of construction. The General Construction Permit requires the preparation and implementation of a SWPPP. The SWPPP must be prepared before project construction begins and must include specifications for BMPs that would be implemented during construction. (BMPs are measures undertaken to control degradation of surface water by preventing soil erosion or the discharge of pollutants from the construction area). Additionally, the SWPPP must describe measures to prevent or control runoff after construction is complete and to identify procedures for inspecting, maintaining, and monitoring BMP facilities or other project elements.

The new General Construction Permit (WQO 2009-0009-DWQ) that became effective July 1, 2010 initiates a new risk-based permitting approach that considers both risk of sedimentation and risk to receiving waters due to project construction. A Risk Assessment is required that considers both parameters and assigns a risk level to each project, ranging from Risk Level 1 to Risk Level 3. The requirements for BMPs, visual monitoring, effluent monitoring, and Rain Event Action Plans, among other things, depend on a project's risk level. The new permit also details the training, education, and/or certifications required for persons responsible for conducting the Risk Assessment, preparing the NOI, preparing the SWPPP, conducting sampling and monitoring, etc.

The proposed project would affect more than one acre during construction and therefore would require preparation of a Risk Assessment, NOI, and SWPPP. Required elements of a SWPPP include:

- Site description addressing the elements and characteristics specific to the site,
- Descriptions of BMPs for erosion and sediment controls,
- BMPs for construction waste handling and disposal,
- Proposed post-construction controls, and
- Procedures for monitoring BMP performance.

NPDES General Industrial Permit for Storm Water Runoff

The NPDES General Industrial Permit regulates storm water discharge associated with ten broad categories of industrial activity within California. The General Industrial Permit requires the implementation of management measures that will achieve the performance standard of best available technology economically achievable and best pollutant control technology. The General Industrial Permit also requires the development of a SWPPP and a monitoring plan. Category 9, Sewage and Wastewater Treatment Works includes facilities used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage and land designated to the disposal of sewage sludge that are located within the confines of a facility with a design flow of one million gallons per day or more are required to have an approved pretreatment program under 40 CFR Part 403 (SWRCB, 2009). MBCSD would be required to revise and renew the General Industrial Permit for the WWTP to include the new proposed facilities.

SWRCB WDRs for Construction Dewatering

Construction of the proposed project would require dewatering during excavation for new facilities. Discharge of the removed waters requires WDRs from the SWRCB. Dewatering discharges are considered a low-threat discharge if the groundwater does not contain significant quantities of pollutants that would violate the provisions of the Basin Plan. The dewatering discharges for the proposed project would be considered low-threat discharges and would be covered under the SWRCB General Waste Discharge Requirements for Discharges to Land with a Low Threat to Water Quality (Water Quality Order No. 2003-003-DWQ) or discharged to surface waters in accordance with the Central Coast Regional Water Quality Control Board's General Waste Discharge Requirements for Discharges with Low Threat to Water Quality (Water Quality Order No. R3-2006-0063). Coverage under the General WDRs requires MBCSD to file a Notice of Intent to comply with the general order and a discharge monitoring plan (DMP) with SWRCB. MBCSD would be required to comply with the terms and conditions of the General WDRs and DMP issued by SWRCB to avoid impacts to surface and groundwater quality.

Local

City of Morro Bay Storm Water Management Plan

The Storm Water Management Plan (SWMP) was prepared by the City of Morro Bay to comply with mandatory requirements of the USEPA NPDES Phase II Final Rule and the SWRCB General Construction Permit. The SWMP, last updated in February 2009, provides an integral approach for the prevention of pollution from storm water runoff in Morro Bay. The program is managed by the City of Morro Bay Public Services Department and implemented by the Harbor Department, Recreation and Parks, and staff from the Public Services Department. The SWMP meets the four additional conditions required by the CCRWQCB: (1) maximize infiltration of clean storm water; and minimize runoff volume and rates; (2) protect riparian areas, wetlands, and their buffer zones; (3) minimize pollutant loading; and (4) provide long-term watershed protection.

City of Morro Bay Stormwater Control Ordinance

The purpose of Chapter 14.48 Building Regulations—Stormwater Control, of the Morro Bay Municipal Code is to prevent water quality degradation and prevent damage to property from increased runoff rates and volumes. In accordance with Chapter 14.48, the SWPPP for the proposed project would need to be approved by the City prior to commencement of construction activities (14.48.020E). In addition, Chapter 14.48 requires management of peak runoff from development and redevelopment sites to prevent significant increases in downstream peak flows. A significant increase in peak flow for 2-year, 10-year, 50-year, and 100-year events is considered to be over five percent at and immediately downstream of the project site (14.48.020C).

City of Morro Bay Flood Damage Prevention Ordinance

The purpose of Chapter 14.72 of the Morro Bay Municipal Code is "to promote public health, safety and general welfare, and to minimize public and private losses due to flood conditions in specific areas" (14.72.010C). The proposed project is considered nonresidential construction, and as such, the following provisions are applicable:

> 14.72.050 A.3.b. Nonresidential construction, new or substantial improvement, shall either be elevated to [at least one foot above the base flood elevation] or together with attendant utility and sanitary facilities:
>
> i. Be floodproofed…so that the structure is watertight with walls substantially impermeable to the passage of water;
>
> ii. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and
>
> iii. Be certified by a registered professional engineer or architect retained by the applicant that the standards of subsection (A)(3)(a) are satisfied.

3.7.3 Impact Assessment

Thresholds of Significance

The criteria used to determine the significance of impacts related to hydrology and water quality are based on Appendix G of the *CEQA Guidelines*. The proposed project would result in a significant impact to hydrology or water quality if it would:

- Violate any water quality standards or waste discharge requirements;
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level;
- Substantially alter the existing drainage pattern of a site or area through the alteration of the course of a stream or river in a manner that would result in substantial erosion or siltation;

- Substantially alter the existing drainage pattern of a site or area through the alteration of the course of a stream or river, or by other means, substantially increase the rate or amount of surface runoff in a manner that would result in onsite or offsite flooding;
- Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- Otherwise substantially degrade water quality;
- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other authoritative flood hazard delineation map;
- Place within a 100-year flood hazard area structures that would impede or redirect flood flows;
- Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam;
- Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow.

A discussion of the impacts and mitigation measures for the proposed project are presented below.

Impacts Discussion

The following sections discuss the potential effects of the proposed project on hydrology and water quality according to the key issue areas identified in Appendix G of the *CEQA Guidelines* and corresponding to the significance criteria identified above.

Levee Failure

The proposed project would not expose people or structures to a significant risk of loss, injury, or death involving flooding due to failure of a levee or dam. The WWTP is not located near a levee or dam nor would it involve construction or other activities that would alter the stability of any levee or dam, or any other flood control structure. This issue is not discussed further as there would be no impact.

Housing in Flood Zone

The proposed project does not involve construction of housing within a 100-year flood hazard area. There would be no impact relative to residential units. This issue is not discussed further as there would be no impact.

Groundwater Depletion

Implementation of the proposed project would not involve or result in any withdrawals of groundwater other than construction dewatering, or any other change in groundwater withdrawal

patterns. In addition, implementation of the proposed project would result in construction of new facilities and demolition of retired facilities, the footprint of which would not result in a substantial increase in the amount of impervious surfaces that could impede percolation of storm water and affect groundwater recharge. There would be no impact to groundwater supplies or a lowering of the groundwater table.

Water Quality

Impact 3.7-1: Construction and operation of the proposed project could violate water quality standards or waste discharge requirements. (Less than Significant with Mitigation)

Construction

Construction of the proposed project would involve earthmoving activities such as excavation, grading, soil stockpiling, and filing. Construction activities could result in soil erosion and the subsequent discharge of sediment to down gradient surface waters or drainages (i.e., Morro Creek and Estero Bay). Sedimentation of down gradient waterways could degrade water quality and affect the associated beneficial uses. Construction activities would also involve the use and handling of chemicals such as, but not limited to, oil, fuels, and lubricants. In the event of accidental release of such chemicals, such as spills during fueling of equipment or vehicles, the chemicals could come into contact with storm water runoff and flow into the nearby water bodies, thus affecting surface water quality and or absorb into the soil and affect groundwater quality.

Prior to the start of project construction, the City would be required to obtain coverage under the NPDES General Construction Permit and prepare NOI, Risk Assessment, and a SWPPP since the construction areas would be greater than one acre in size. The SWPPP would include BMPs to control erosion, sedimentation, and hazardous materials release, appropriate to the project's risk level. The CCRWQCB also would require that the SWPPP contain the necessary BMPs to meet their waste discharge requirements. In addition, construction of the proposed project is also subject to the BMPs included in the City of Morro Bay's SWMP to control runoff and protect water quality during the construction period. In accordance with the City of Morro Bay's Municipal Code for Building Regulations—Stormwater Control (Chapter 14.48), the SWPPP would need to be approved by the City prior to commencement of construction activities (14.48.020E). Implementation Mitigation Measure 3.7-1 would ensure storm water runoff would not violate any water quality standards or waste discharge requirements.

Project construction would require dewatering of groundwater during excavation phases. As required by Mitigation Measure 3.7-2, compliance with the SWRCB Low-Threat General WDRs for construction dewatering would ensure impacts to water quality from construction dewatering discharges are less than significant. The General WDRs would require a DMP and may require treatment of dewatering discharges depending on water quality of the groundwater. Implementation of Mitigation Measure 3.7-2 would ensure construction dewatering would not have a significant impact on water quality.

Operation

The proposed project would enable the WWTP to meet full secondary standards as required by the California Code of Regulations Title 40, Part 133, Secondary Treatment Regulation (40CFR Part 133). The new WWTP facilities would be subject to these treatment standards as a condition of the NPDES permit, requiring MBCSD to remove, based on a 30-day average, at least 85 percent of both TSS and BOD_5 from the influent stream before discharging wastewater to the ocean. In addition, the 30-day average effluent limit would be 30 mg/L for both TSS and BOD_5 (40CFR Part 133). Therefore, the proposed project would increase the quality of effluent discharged to Estero Bay.

Storm water discharge from the proposed WWTP would be subject to regulation by an NPDES General Industrial Permit, which requires implementation of BAT and BCT to control the quality of storm water runoff from industrial land uses. The General Industrial Permit also requires the preparation of a SWPPP and a monitoring plan. The SWPPP must identify the sources of pollutants and the means to manage the sources to reduce storm water pollution. Due to the size of the proposed WWTP, a pretreatment program for storm water also may be required. MBCSD would be required to submit a new NOI to comply with the General Industrial Permit for the proposed new WWTP following completion of the proposed project. The WWTP is also subject to the BMPs included in the City of Morro Bay's SWMP, including any relevant post-construction BMPs to control runoff and protect water quality. Implementation of Mitigation Measures 3.7-3 would ensure that project operation does not impact water quality standards or violate waste discharge requirements.

Mitigation Measures

Mitigation Measure 3.7-1: MBCSD shall require the construction contractor to prepare and implement a SWPPP in accordance with the requirements of the NPDES General Construction Permit. The SWPPP shall include BMPs to control erosion, sedimentation, and hazardous materials release. The SWPPP shall be approved by the City of Morro Bay prior to the start of construction. The BMPs shall be maintained at the site for the duration of construction.

The objectives of the BMPs are to identify pollutant sources that may affect the quality of storm water discharges and to implement measures to reduce pollutants in storm water discharges. The BMPs for the proposed project shall include, but not be limited to, the implementation of the following elements in accordance with the City's Storm Water Management Plan (SWMP):

- Identification of all pollutant sources, including sources of sediment that may affect the quality of storm water
- Identification of non-storm water discharges;
- Estimate of the construction area and impervious surface area;
- Preparation of a site map and maintenance schedule for BMPs installed during construction designed to reduce or eliminate pollutants after construction is completed (post-construction BMPs);

- Applicable erosion and sedimentation control measures, waste management practices, and spill prevention and control measures;
- Maintenance and training practices; and,
- A sampling and analysis strategy and sampling schedule for discharge from construction activities.

Mitigation Measure 3.7-2: MBCSD shall require the construction contractor to file a Notice of Intent to comply with the SWRCB or CCRWQCB Low-Threat General WDRs prior to initiating excavation and dewatering activities and to comply with all requirements and conditions of the General WDRs, including preparation of a discharge monitoring plan (DMP).

Mitigation Measure 3.7-3: MBCSD shall file a Notice of Intent to comply with the NPDES General Industrial Permit requirements upon completion of the proposed project. MBCSD also shall prepare a SWPPP and monitoring plan, as required by the General Industrial Permit, that identify sources of pollutants and the measures to be implemented to manage the sources and reduce storm water pollution. The SWPPP shall include relevant BMPs from the City of Morro Bay's SWMP.

Significance after Mitigation: Less than significant.

Impact 3.7-2: Construction of the proposed project could result in dewatering of shallow groundwater resources and contamination of surface water. (Less than Significant with Mitigation)

Dewatering would be required during the excavation phase for construction of new treatment facilities. Groundwater levels and the depth of excavation vary throughout the proposed project area. Discharge water could potentially degrade surface water or groundwater quality with materials used during typical construction activities, such as silt, fuel, grease or other chemicals. Implementation of Mitigation Measure 3.7-2 would require MBCSD to file a NOI to comply with the SWRCB Low-Threat General WDRs for construction dewatering and a DMP. Provisions of the permit may include treatment of waters to discharge. Compliance with the permit would ensure that impacts of construction dewatering to surface water quality and groundwater quality would be less than significant.

Mitigation Measures

Implementation of Mitigation Measure 3.7-2.

Significance after Mitigation: Less than significant.

Drainage and Flooding

Impact 3.7-3: The proposed project would alter the drainage pattern of the project site and floodplain and could place structures within a 100-year flood hazard area. (Less than Significant with Mitigation)

The existing WWTP is located within a 100-year flood plain. The flood depths at the WWTP during a 100-year flood would be between 3.0 and 4.5 feet (Wallace Group, 2009). Implementation of the proposed project would build new treatment facilities at a higher elevation in an area south of the existing WWRP, effectively removing the new WWTP from the 100-year flood hazard area. The Flood Hazard Analysis (Appendix D) modeled how flood depth would change during a 100-year flood with implementation of the proposed project, assuming application of various flood-proofing strategies. In response to the results of the Flood Hazard Analysis the project description was modified in order to remove the WWRP from the flood zone and minimize the flood impacts to neighboring properties as a result of the project. Building the new treatment facilities in the project area depicted in Figure 2-2 would ensure that the WWTP structures are elevated to at least one foot above the base flood elevation, in accordance with the City of Morro Bay Flood Damage Prevention Ordinance (Chapter 14.72). Implementation of Mitigation Measure 3.7-4 from the Flood Hazard Analysis would ensure that impacts associated with flood hazards are reduced to less-than–significant levels.

Mitigation Measures

Mitigation Measure 3.7-4: To mitigate impacts associated with 100-year flood hazards, MBCSD or the City of Morro Bay shall implement the following measures:

- Construct the new WWTP facilities on higher ground. Construction on elevated fill provides the highest level of protection and least amount of operational inconveniences.

- Construct all or part of the new facilities on City owned land to the south of the current site that is already elevated, modeled in the analysis as MB10 through MB12. Construction at this location will have the least adverse flood impact on neighboring properties.

- Apply for a Letter of Map Revision (LOMR), including new hydrology and new hydraulic analyses, to document the potential reduction of flood levels relative to the current FIRM. The City floodplain management ordinance and funding agencies require that WWTP improvements be protected from flooding to the level of one foot above the 100-year flood elevation.

Seiche, Tsunami, Mudflow

Impact 3.7-4: The proposed project could result in inundation by a seiche, tsunami, or mudflow. (Less than Significant)

Tsunamis are waves caused by an underwater earthquake, landslide, or volcanic eruption. Since the project site is located in the coastal zone, it could experience a tsunami. However, the proposed project is an upgrade to the existing wastewater treatment plant that already is at risk of inundation by tsunami. The proposed project would not affect or change this existing condition.

Governor Schwarzenegger of California issued Executive Order S-13-08 regarding climate change in November 2008. The Order states that the Intergovernmental Panel on Climate Change (IPCC) predicts that global sea levels will rise between 7 to 23 inches this century. It is currently unknown how high sea levels will rise in California. The IPCC's global prediction is the best available estimate at this time. The WWTP currently has an elevation of approximately 16 feet above mean sea level (amsl). As the new WWTP is located higher than 23 inches amsl, the maximum estimated rise in sea level, the effects of global warming are not expected to increase the risk of inundation by a tsunami.

In addition, the City of Morro Bay has an adopted Tsunami Emergency Response Plan. The plan is intended to effectively coordinate the City's response to a tsunami to minimize loss of life and damage to property. The WWTP is required to implement the plan. Although there is no way to completely protect against a potential tsunami near the coast, the Tsunami Emergency Response Plan provides measures that would lessen the potential for catastrophic failure of the plant. The proposed project would not increase potential impacts from tsunamis.

A seiche is the rhythmic motion of water in a partially or completely landlocked water body caused by landslides, earthquake-induced ground acceleration, or ground offset. The proposed project would not be located near a landlocked body of water, and thus it is not at risk of inundation due to a seiche. There would be no impact.

The proposed project site is flat and located on unconsolidated sandy soils. The City of Morro Bay 1988 General Plan Safety Element indicates that the project is not located in an area that is considered susceptible to an earthquake-induced landslide (City of Morro Bay, 1988). Because the project site has a slope gradient of less than 20 percent and is considered to be relatively flat (City of Morro Bay, 1988; County of San Luis Obispo, 2008; Fugro, 2010), there is a low potential for slope failure in the event of an earthquake. Therefore, landslide induced mudflows are not expected to occur. There would be no impact.

Mitigation Measures

None required.

Mitigation Measure Summary Table

Table 3.7-5 presents the impacts and mitigation summary for Hydrology and Water Quality.

TABLE 3.7-5
HYDROLOGY AND WATER QUALITY IMPACTS AND MITIGATION SUMMARY

Proposed Project Impact	Mitigation Measures	Significance after Mitigation
Water Quality: Construction and operation of the proposed project could violate water quality standards or waste discharge requirements.	Mitigation Measure 3.7-1, 3.7-2, and 3.7-3	Less than significant
Groundwater Quality: Construction of the proposed project could result in dewatering of shallow groundwater resources and contamination of surface water.	Mitigation Measure 3.7-2	Less than significant
Drainage and Flooding: The proposed project would alter the drainage pattern of the project site and floodplain and could place structures within a 100-year flood hazard area.	Mitigation Measure 3.7-4	Less than significant
Seiche, Tsunami, Mudflow: The proposed project could be inundated by a tsunami, seiche or mudflow.	None required	Less than significant

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3.8 Land Use, Agriculture, Forestry, and Recreation

This section addresses the impacts of the proposed project on existing and planned land uses, agricultural operations, forestry resources, and recreational opportunities in the vicinity of the project site. Included in this chapter are the existing land use setting, including agriculture, forestry and recreational resources, an overview of the regulatory framework relevant to the proposed project, and an analysis of potential environmental impacts to land uses, agriculture, forestry and recreation that would result from implementation of the proposed project.

3.8.1 Environmental Setting

Regional Setting

The proposed project is located in Morro Bay, one of seven incorporated cities in San Luis Obispo County. As a coastal city, the entirety of Morro Bay is located within the Coastal Zone as defined by the California Coastal Act.

The City's land use pattern is largely defined by Morro Harbor, which is a working waterfront that services commercial fishing operations and offers recreational opportunities. The most dense residential and commercial land uses are located south of Morro Rock around Morro Bay, inland from the sandspit located in the middle of the harbor. Moving outward and eastward from the harbor, the City is surrounded by agricultural land uses that serve to maintain a buffer around the town community, isolating it from other development (City of Morro Bay, 2004). The existing wastewater treatment plant is located north of Morro Rock, one of the defining geologic and topographic characteristics of Morro Bay.

Project Area

Land Use

The City of Morro Bay General Plan is currently in the process of being revised. The General Plan was certified in 1988 and incorporated some components of the Morro Bay Coastal Land Use Plan, certified by the California Coastal Commission in 1982. The proposed 2004 General Plan/Local Coastal Plan (LCP) was designed to consolidate the two documents into one updated comprehensive planning document that would comply with the California Coastal Act. Text of the 2004 General Plan was approved by the Morro Bay City Council and Planning Commission in February 2004; however, the 2004 General Plan/LCP has not been certified by the California Coastal Commission. The proposed project would be in compliance with the certified 1988 General Plan and existing zoning designations and ordinances as discussed below.

Existing land use and zoning designations for the project site and surrounding areas are identified in **Table 3.8-1**. The area currently occupied by the WWTP, Corporation Yard, and cement plant has a land use designation in the 1988 General Plan as General (Light) Industrial and is within the Interim Open Space (I) overlay. The corresponding zoning designation is Light Industrial (M-1), and the project site is located within the Planned Development (PD) and Interim Use (I) overlay zones.

TABLE 3.8-1
EXISTING LAND USE AND ZONING DESIGNATIONS FOR THE PROJECT SITE AND SURROUNDING AREAS

	1988 General Plan Land Use Designation	1988 General Plan Land Use Overlay Designations	Existing Zoning	Existing Zoning Overlays
Project Site	General (Light) Industrial	Planned Development (PD) Interim Open Space (I)	Light Industrial (M-1)	Planned Development (PD) Interim Use (I)
North	Visitor Serving Commercial	–	Visitor Serving Commercial (C-VS)	–
South	General (Light) Industrial	Planned Development (PD) Interim Open Space (I)	Light Industrial (M-1)	Planned Development (PD) Interim Use (I)
East	General (Light) Industrial	Planned Development (PD) Interim Open Space (I)	Light Industrial (M-1)	Planned Development (PD) Interim Use (I)
West	Open Space Recreation	-	Open Area 1 (OA-1) (Listed Uses)	Planned Development (PD)

Because the project site is located within 300 feet of areas zoned for uses other than Light Industrial (M-1) to the north and west, the proposed project would be required to obtain a ConditionalUse Permit (CUP) in compliance with the City of Morro Bay Zoning Code (City of Morro Bay Municipal Code, Section 17.24.140). In addition, because the proposed project would be located within a Planned Development Overlay Zone, the project would be required to prepare a Concept Plan and a Precise Plan for approval by the City Council (City of Morro Bay Municipal Code, Sections 17.40.030.F-G). The Concept Plan also requires the approval of the Morro Bay Planning Commission.

The proposed project would not conflict with the current zoning. The General Plan Program LU-39.3 and Coastal Land Use Plan Policy 5.03 protects the wastewater facilities at the present location stating that "[t]he Morro Bay Wastewater Treatment facilities shall be protected in their present location since an important operational element, the outfall line, is coastal-dependant." The Zoning District M-1 (Light industrial) provides that other uses which are found to be similar and consistent with the General Plan and Local Coastal Plan may be allowed with the appropriate permits and licenses. Since the General Plan and the Local Coastal Plan provides for this use at its present site, the wastewater treatment plan will be a conditionally permitted use in the M-1 zone district.

To the north, the project site is bounded by Atascadero Road, which separates the project site from Morro Bay High School. Adjacent to the eastern edge of the project site is a narrow swath of land that constitutes the City of Morro Bay Corporation Yard, to the east of which is the Hanson Heidelberg Cement Group (cement plant). Further east, west of State Route 1 and south of Atascadero Road, are the Morro Strand R.V. Park and two hotels located in the area designated as Visitor Serving Commercial: Morro Shores Inn and Suites and a Motel 6. South of the inn and

motel and southeast of the project site is Keiser Park. The Morro Dunes R.V. Park and Trailer Storage Lot are located west and south of the project site. **Figure 3.8-1** identifies locations of surrounding land uses.

Within the WWTP, MBCSD leases space to the San Luis Obispo County IWMA for the Household Hazardous Waste Drop-off Facility. This facility accepts all household hazardous waste except radioactive or explosive materials. The existing Household Hazardous Waste Drop-off Facility would be demolished and, if relocated onsite at the WWTP, a replacement facility of similar size would be constructed.

The City of Morro Bay Corporation Yard houses equipment and vehicles for the Public Works Department and Recreation and Parks Department, and is on land owned by the City of Morro Bay (surrounded on both sides by land owned jointly by the City of Morro Bay and the unincorporated community of Cayucos) (RRM Design Group, 2008). The southeastern corner of the Corporation Yard extends east beyond the land owned by the City and occupies land owned jointly by the City of Morro Bay and Cayucos (RRM Design Group, 2008).

The project area for the new WWTP facility includes the southernmost portion of the City of Morro Bay Corporation Yard, including that portion of the Corporation Yard on jointly owned land being leased by the City (RRM Design Group, 2008). The project area boundary extends onto land jointly owned by the City and CSD and being leased to the cement plant.

Recreation

Parks

Both active and passive recreational opportunities are available in Morro Bay, including surfing, fishing, boating, cycling, hiking, nature walks, and sightseeing. In addition to coastal recreational opportunities, Morro Bay includes sports fields, a roller hockey rink, a skate park, bicycle riding, and basketball courts. The City of Morro Bay General Plan/Local Coastal Plan identifies six major areas in Morro Bay that provide significant opportunities for recreation and beach access:

- Morro Rock/Coleman Park is located approximately west and south of the project site and includes the beach from Morro Rock up to Morro Creek. This is the only land access to Morro Rock, a major coastal attraction. Coleman Park includes picnic/chessboard tables, playgrounds, and a skate park.
- Tidelands Park is dedicated to the appreciation of the bluff, bay waters, and sandspit. It contains a public boat launch area and dock, and steps to the tidal zone.
- The Embarcadero/Morro Rock area includes waterfront development that offers commercial recreational opportunities to visitors and includes retail stores, restaurants, commercial boating, and fishing. Access to Morro Rock is available for autos, pedestrians, and bicycles via a causeway and boardwalk.

SOURCE: GlobeXplorer; ESA, 2010

Morro Bay Cayucos Wastewater Treatment Plant EIR . 208013

Figure 3.8-1

Surrounding Land Use

- Morro Bay State Park is the largest park facility in California's Coastal Zone and comprises 2,102 acres and 39,513 linear feet of bay frontage. The park includes campsites, picnic tables, nature trails, an 18-hole golf course, Museum of Natural History, salt marsh, the Black Mountain natural area, and boating facilities.
- Morro Strand State Beach includes 75 acres of public beach used for camping, surfing, fishing, beach activities, picnicking, walking, and jogging.
- Montana de Oro State Park is partially within City limits and includes the sandspit.

In addition to these larger areas, the project site is located approximately 0.2 mile west of Keiser Park. Keiser Park includes a soccer field, picnic shelter, picnic and chessboard tables, little league diamonds, softball diamonds, horseshoe courts and playgrounds. Morro Bay High School, located north of the project site, offers additional public recreational opportunities in the form of baseball diamonds and tennis courts.

Coastal Access

Recreational opportunities in Morro Bay include those afforded by access to coasts and oceans and include surfing, wind surfing, kite surfing, kayaking, fishing, parasurfing, diving, and recreational boating. The City of Morro Bay includes 10.75 linear miles of ocean and bayfront shoreline, of which 95.5 percent is available for lateral access. Vertical access is regularly provided along most segments of the shoreline. (See Section 3.8.2 below for definitions of lateral and vertical access.) Topography is dominated by flat sandy beaches that rise to dunes and short coastal bluffs. Morro Rock, located to the west of the project site, is the most notable rock outcropping amongst the coastal bluffs (City of Morro Bay, 2004).

There are three coastal access points located due west of the project site. The furthest north is located at the Atascadero Road terminus; there are two additional access points located south of this point and north of the Morro Creek outlet.

Agriculture and Forestry

The project site is currently occupied by the WWTP, Corporation Yard, and cement plant, and, as stated above, is not designated or zoned for agricultural production or forest land. There is no agricultural production or areas zoned as timberland or timberland production on or near the project site. The proposed future use of recycled water could provide beneficial agricultural resources, for example, to local avocado farmers who have expressed interest in using recycled water for irrigation, if authorized by the City Council for water service outside the City limits.

In accordance with California's Farmland Mapping and Monitoring Program (FMMP), the land has been mapped and is designated as Urban and Built Up Land. To the north, east, and west, land adjacent to the project site has also been identified as Urban and Built Up Land on FMMP maps. Land to the west of the project site, including Morro Rock Beach and Morro Strand State Beach, has been identified as Other Land. The project site is not part of a Williamson Act contract.

3.8.2 Regulatory Framework

State

California Coastal Act

In 1972, voters in California passed Proposition 20, which was designed to protect California's coast from unchecked development and other risks to coastal resources, such as point and non-point source pollution. The proposition created the California Coastal Commission (CCC), which in 1976 was made permanent by the passing of the California Coastal Act. In addition, the California Coastal Act defined the Coastal Zone and established a coastal protection program designed to incorporate both local governments and the California Coastal Commission into the planning and decision-making processes for coastal resources.

Under the California Coastal Act, local governments develop a Local Coastal Program (LCP) to identify land use classifications, zoning ordinances, and goals and policies concerning development that is submitted to the California Coastal Commission for approval. Once approved, the local government becomes the Coastal Development Permit (CDP) permitting authority. Permits are generally required for any development in the Coastal Zone that involves new construction, changes in land use density and/or intensity, changes to water demand or changes to access to water, and major vegetation removal. Some local government permit decisions may be appealed by the California Coastal Commission and permit decisions related to development on tidelands, submerged lands, and public trust lands remains with the California Coastal Commission (California Coastal Commission).

California Land Conservation Act, 1965

The California Land Conservation Act of 1965 (commonly referred to as the Williamson Act) serves to preserve open spaces and agricultural land. It discourages urban sprawl and prevents landowners from developing their property for the greater land value of commercial and/or residential uses. The Williamson Act created a state program that allows agricultural landowners to pay reduced property taxes in return for their contractual agreement to retain the land in agricultural and open space uses for a period of ten years. The term of the contract automatically renews each year, so that the contract always has a ten-year period left to run. The Williamson Act Program was revised by the enactment of Farmland Security Zone (FSZ) legislation during the 1998 legislative session, offering landowners greater property tax reduction in exchange for a longer contract term than under the Williamson Act Program. None of the land within the project site is under Williamson Act contract or within an FSZ.[1]

California Farmland Mapping and Monitoring Program

The California Department of Conservation, under the Division of Land Resource Protection, has established the FMMP, which monitors the conversion of the state's farmland to and from agricultural use. The map series identifies eight classifications and uses a minimum mapping unit size of 10 acres. The FMMP also produces a biannual report on the amount of land converted

[1] Williamson Act (California Land Conservation Act 1965, Section 51200).

from agricultural to non-agricultural use. The FMMP maintains an inventory of state agricultural land and updates its "Important Farmland Series Maps" every two years. Land is classified as one the following eight designations based on both their existing use and suitability for agriculture:

Prime Farmland. Prime Farmland is land with the best combination of physical and chemical characteristics able to sustain long-term production of agricultural crops. This land has produced irrigated crops at some time within the four years immediately prior to the mapping date.

Farmland of Statewide Importance. Farmland of Statewide Importance is land that meets the criteria for Prime Farmland but with minor shortcomings such as greater slopes or lesser soil moisture capacity.

Unique Farmland. Unique Farmland has even lesser quality soils and produces the state's leading agricultural crops. This land is usually irrigated but also includes non-irrigated orchards and vineyards.

Farmland of Local Importance. Farmland of Local Importance is land that is important to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.

Grazing Land. Grazing Land is land on which the existing vegetation is suited to the grazing of livestock.

Urban and Built Up Land. This is land occupied by structures for residential, industrial, commercial, institutional, transportation yards, airports, golf courses, waste disposal, and other uses.

Other Land. Other land is land not included in any other mapping category, and includes, for example, low density rural developments; open space not suitable for livestock grazing; strip mines; and water bodies smaller than forty acres. In addition, land that is greater than 40 acres in size that is vacant, nonagricultural, and surrounded by urban development is categorized as Other Land.

Water. Perennial water bodies greater than 40 acres in size.

California Public Resources Code section 12220(g)

The California Public Resources Code defines "forest land" under section 12220(g) as land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits. Proposed projects are subject to this code if there are any potentially significant changes to existing areas zoned as forest land.

California Public Resources Code section 4526

The California Public Resources Code defines "timberland" as land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees. Commercial species shall be determined by the board on a district basis after consultation with the district committees and others. Proposed project may have significant impacts to timberland if the project conflicts with existing zoning.

California Government Code section 51104(g)

The California Government Code defines "timberland production zone" under section 51104(g) as an area which has been zoned pursuant to Sections 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, as defined in subdivision (h) of the Government Code 51104. Proposed projects may significantly impact timberland resources if the project conflicts with existing areas zoned for timberland production.

Local

City of Morro Bay General Plan and Local Coastal Plan

As noted above, the City of Morro Bay General Plan is in the process of being updated. Both the certified 1988 General Plan and the 2004 General Plan/LCP incorporate the City of Morro Bay Coastal Land Use Plan. The proposed project is evaluated with respect to the certified 1988 General Plan and 1982 Coastal Land Use Plan.

City of Morro Bay General Plan (1988)

The City of Morro Bay 1988 General Plan addresses comprehensive planning required by growth in the City of Morro Bay. Specifically, the 1988 General Plan addresses the need for organized planning to "maintain and improve the quality of life for residents while accommodating increasing numbers of residents and visitors."

In an effort to eliminate inconsistencies and outdated materials, the 1988 General Plan incorporates ten different documents, including the Local Coastal Plan and distinct Elements of the General Plan prepared at different times in a variety of formats, into one planning document. If there were conflicts between General Plan Elements and coastal policies, policies contained in the Coastal Land Use Plan were retained.

Land Use

The following objectives, policies, and programs are applicable to the proposed project:

Industrial/Energy-Related Development Objective: To provide for a moderate industrial base comprised of clean and non-polluting industries.

Policy LU-39: Industrial uses located on or adjacent to the harbor and beaches shall be regulated to protect the environment and priorities shall be established for coastal dependent land uses.

Program LU-39.3: The Morro Bay Wastewater Treatment facilities shall be protected in their present location since an important operational element, the outfall line, is coastal-dependent.

Program LU-39.4: In the areas designated for industrial land uses, coastal-dependent uses shall have priority over non-coastal dependent uses.

Public Facilities Objective: Maintain the level of service of public facilities in a manner consistent with the expectations that have resulted from past levels of service. Efforts should

continue to strive towards improving public facilities, but such should occur with careful recognition of the range of costs supportable by the community.

Policy LU-81: The City shall endeavor to implement its Wastewater treatment program.

Program LU-81.1: The City will continue a program providing wastewater treatment facilities to accommodate the build-out population of 12,195, determined to be the build-out figure in Coastal Development Permit No. 406-01, which permitted further expansion of the wastewater treatment facilities to 2.4 mgd.

Access and Recreation

The City of Morro Bay General Plan defines access as follows:

Lateral Access: Access along and parallel to the shore. The beaches from Morro Rock northward provide lateral access without interference or hindrance of any kind.

Vertical Access: Access that allows the public to achieve access to the shoreline from the first public road. There are at least 35 vertical access points along the shoreline in Morro Bay. Access is provided to all beach and bayfront areas.

Bluff-Top Access: Lateral access across bluff tops as well as vertical access from the tops of coastal bluffs. Lateral access is somewhat limited by existing development. Vertical access is provided for vehicles and pedestrians.

Visual Access: Visual access to the shoreline areas. (See Section 3.1, *Aesthetics*, for a discussion of visual access as it relates to the proposed project.)

Agriculture

A discussion of agriculture is included in the Land Use, Open Space, and Conservation Element of the General Plan. Objectives, policies, and programs address the preservation and maintenance of agricultural production in the vicinity of urban land uses.

City of Morro Bay Coastal Land Use Plan (1982)

Policy 5.03: The Morro Bay Wastewater Treatment facilities shall be protected in their present location since an important operational element, the outfall line, is coastal-dependant.

3.8.3 Impact Assessment

Thresholds of Significance

The criteria used to determine the significance of impacts related to land use, agriculture, forestry, and recreation are based on Appendix G of the *CEQA Guidelines*. The proposed project would result in a significant impact if it would:

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use;

- Conflict with existing zoning for agricultural use, or a Williamson Act contract;
- Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104 (g));
- Result in the loss of forest land or conversion of forest land to non-forest use;
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use;
- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated;
- Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment;
- Physically divide an established community;
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; or
- Conflict with any applicable habitat conservation plan or natural community conservation plan.

Impacts Discussion

The following sections discuss the potential effects of the proposed projects on land use, recreation, and agriculture and forestry resources according to the key issue areas identified in Appendix G of the *CEQA Guidelines* and corresponding to the significance criteria above. As discussed below, there are no identified impacts to land use, agriculture, forestry or recreation.

Agriculture

The proposed project would not have environmental impacts related to agriculture. The project site is classified as Urban on FMMP maps, as are the adjacent properties, including the City of Morro Bay Corporation Yard and the cement plant into which the WWTP footprint would be expanded. The project site has a land use designation of General (Light) Industrial and is zoned IG, General Industrial and is currently being used as a wastewater treatment plant. There are no Williamson Act contracts on or near the project site. The proposed project would not result in any other changes to the existing environment that would result in the conversion of farmland to non-agricultural uses. The proposed project would be supportive of local agriculture by providing recycled water for beneficial use for farmland irrigation.

Forestry

The proposed project would not have environmental impacts related to forestry resources. The project site is not zoned as forest land or timberland and in turn would not result in rezoning or conversion to non-forest use. Further, the adjacent areas to the project site are also not zoned as forest or timberland resources and would not result in changes to their existing environments due to the construction of the proposed project. The project, site is designated by the General Plan as of General (Light) Industrial and is zoned General Industrial (IG). The proposed project would not result in any other changes to the existing environment that would result in the conversion of forest land to non-forest use.

Recreation

The proposed project would upgrade the WWTP to provide full secondary treatment with tertiary filtration and does not include construction of recreational facilities. The proposed project would not result in direct growth, as would occur from housing or commercial development that would directly affect the number of residents or employees within the area. The proposed project would not result in indirect growth, as could occur if, for example, wastewater treatment capacity was increased. Treatment capacity at the WWTP would decrease as a result of the WWTP upgrade. Therefore, the proposed project would not result in the increased use of existing recreational facilities or create an increased demand for new recreational facilities. The proposed project would not result in the deterioration of existing recreational facilities.

Land Use: Dividing Communities

The proposed project would not divide an established community. The proposed project is not a linear project or new construction that would separate surrounding land uses. The new WWTP would be built on land currently utilized for the existing WWTP, Corporation Yard, and cement plant and entirely on land currently used for and zoned for industrial purposes.

Land Use: Plans and Zoning

The proposed project would not result in a conflict with an applicable land use plan, policy, or regulation adopted for the purpose of avoiding an environmental effect. The proposed project would result in construction of a new treatment facility on land designated and zoned for industrial purposes and would comply with all land use requirements. However, the proposed project is located within the Coastal Zone as defined by the California Coastal Act. A CDP issued by the City of Morro Bay for the upgrade of the WWTP is subject to appeal to or by the California Coastal Commission. Construction of the WWTP would require a CUP from the City of Morro Bay, which requires review and approval of a Concept Plan by the Planning Commission and the Morro Bay City Council and Precise Plan by the Planning Commission.

Land Use: Conservation Plans

The proposed project is not located in or adjacent to a habitat conservation plan or a natural community conservation plan (see Section 3.3, *Biological Resources*). The project site also is not

located within the Morro Bay watershed and thus is not included in the Morro Bay National Estuary Program. There would be no impact to conservation plans.

References – Land Use, Agriculture, Forestry and Recreation

California Public Resources Code, *Section 4526, "Timberland"*, www.leginfo.ca.gov/cgi-bin/waisgate?WAISdocID=5554392227+0+0+0& WAISaction=retrieve, accessed July 15, 2010.

California Public Resources Code, *Section 12220(g), "Forest land"*, www.leginfo.ca.gov/cgi-bin/waisgate?WAISdocID=55404726872+0+0+0& WAISaction=retrieve, accessed July 15, 2010.

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County of San Luis Obispo, July 2004. *Coastal Plan Policies, Summary Only.* Updated July 2004.

Morro Bay National Estuary Program, Morro Bay Watershed Map, http://www.mbnep.org/files/pdfs/MBWatershed-.pdf, accessed April 2, 2009.

RRM Design Group, *City of Morro Bay Corporation Yard Master Plan Document*, July 2008.

3.9. Noise and Vibration

This section includes background information on noise and vibration and applicable noise guidelines and standards, including the City of Morro Bay noise standards. This section also provides information on locations potentially affected by project construction and operation, and assesses the potential impacts due to noise from construction and operation. This section also identifies mitigation measures to reduce or eliminate potential noise impacts of the project.

3.9.1 Environmental Setting

Environmental Noise Fundamentals

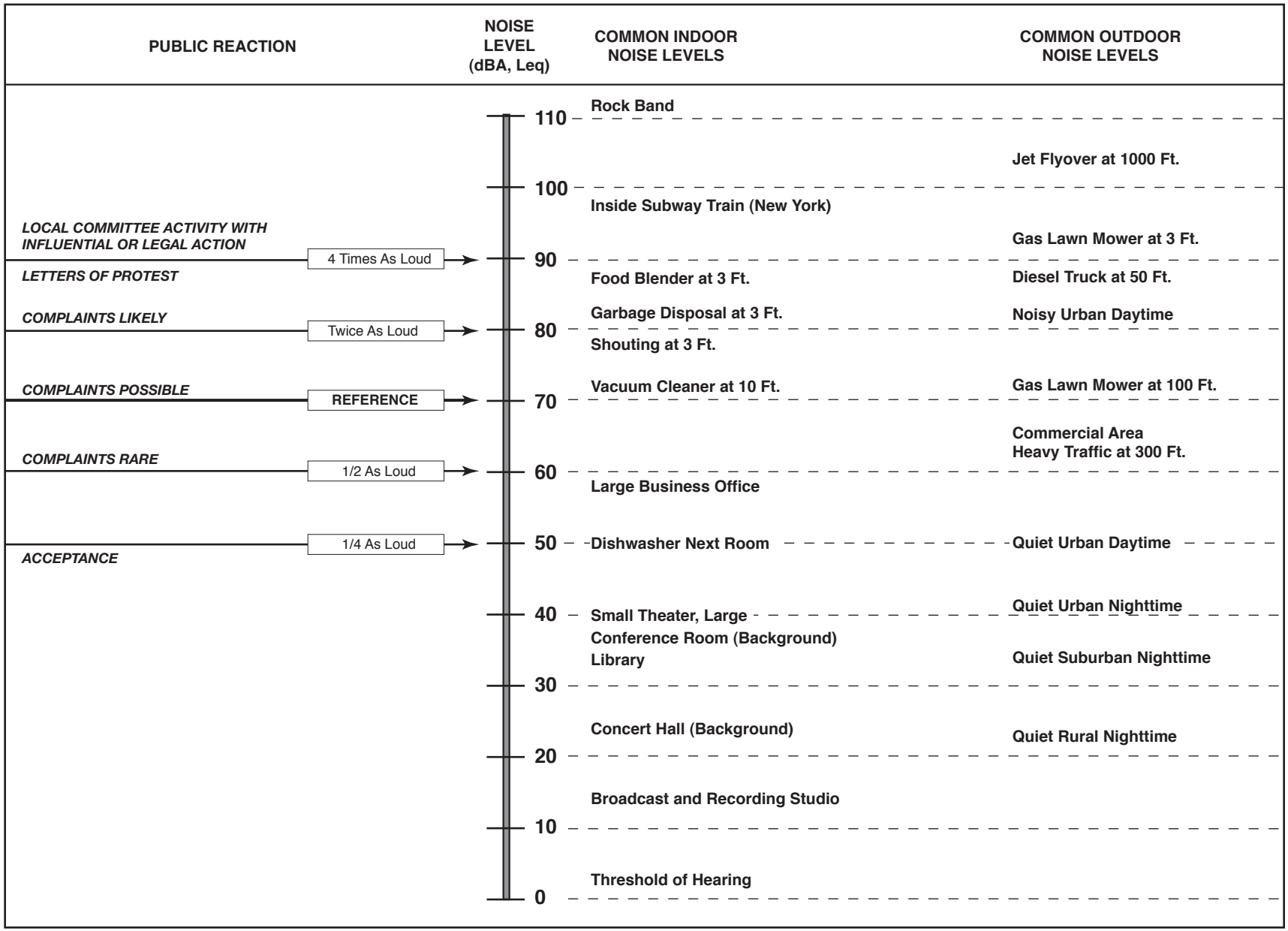
Noise is defined as unwanted sound. Sound, traveling in the form of waves from a source, exerts a sound pressure level (referred to as sound level) which is measured in decibels (dB), with zero dB corresponding roughly to the threshold of human hearing, and 120 to 140 dB corresponding to the threshold of pain. Pressure waves traveling through air exert a force registered by the human ear as sound.

Sound pressure fluctuations can be measured in units of hertz (Hz), which correspond to the frequency of a particular sound. Typically, sound does not consist of a single frequency, but rather a broad band of frequencies varying in levels of magnitude (sound power). When all the audible frequencies of a sound are measured, a sound spectrum is plotted consisting of a range of frequency spanning 20 to 20,000 Hz. The sound pressure level, therefore, constitutes the additive force exerted by a sound corresponding to the sound frequency/sound power level spectrum.

The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum. As a consequence, when assessing potential noise impacts, sound is measured using an electronic filter that de-emphasizes the frequencies below 1,000 Hz and above 5,000 Hz in a manner corresponding to the human ears decreased sensitivity to extremely low and extremely high frequencies. This method of frequency weighting is referred to as A-weighting and is expressed in units of A-weighted decibels (dBA). Frequency A-weighting follows an international standard methodology of frequency de-emphasis and is typically applied to community noise measurements. Some representative noise sources and their corresponding A-weighted noise levels are shown in **Figure 3.9-1**.

Noise Exposure and Community Noise

An individual's noise exposure is a measure of noise over a period of time. A noise level is a measure of noise at a given instant in time. The noise levels presented in Figure 3.9-1 are representative of measured noise at a given instant in time, however, they rarely persist consistently over a long period of time. Community noise varies continuously over a



SOURCE: Caltrans Transportation Laboratory Noise Manual, 1982; and modification by ESA

Figure 3.9-1
Effects of Noise on People

period of time with respect to the contributing sound sources of the community noise environment. Community noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise exposure, with the individual contributors unidentifiable. The background noise level changes throughout a typical day, but does so gradually, corresponding with the addition and subtraction of distant noise sources such as traffic and atmospheric conditions. What makes community noise constantly variable throughout a day, besides the slowly changing background noise, is the addition of short duration single event noise sources (e.g., aircraft flyovers, motor vehicles, sirens), which are readily identifiable to the individual.

These successive additions of sound to the community noise environment varies the community noise level from instant to instant requiring the measurement of noise exposure over a period of time to legitimately characterize a community noise environment and evaluate cumulative noise impacts. This time-varying characteristic of environmental noise is described using statistical noise descriptors. The most frequently used noise descriptors are summarized below:

Leq: The equivalent sound level is used to describe noise over a specified period of time, typically one hour, in terms of a single numerical value. The Leq is the constant sound level which would contain the same acoustic energy as the varying sound level, during the same time period (i.e., the average noise exposure level for the given time period).

Lmax: The instantaneous maximum noise level for a specified period of time.

L50: The noise level that is equaled or exceeded 50 percent of the specified time period. The L50 represents the median sound level.

L90: The noise level that is equaled or exceeded 90 percent of the specified time period. The L90 is sometimes used to represent the background sound level.

Ln: The noise level that is equaled or exceeded N percent of the specified time period. L1 for example is the noise level equaled or exceeded 1 percent of the specified time period.

Ldn: Also termed the DNL, the Ldn is the 24-hour day and night A-weighted noise exposure level which accounts for the greater sensitivity of most people to nighttime noise by weighting noise levels at night (“penalizing” nighttime noises). Noise between 10:00 PM and 7:00 AM is weighted (penalized) by adding 10 dBA to take into account the greater annoyance of nighttime noises.

CNEL: Similar to the Ldn the Community Noise Equivalent Level (CNEL) adds a 5-dBA “penalty” for the evening hours between 7:00 PM and 10:00 PM in addition to a 10-dBA penalty between the hours of 10:00 PM and 7:00 AM

As a general rule, in areas where the noise environment is dominated by traffic, the Leq during the peak-hour is generally equivalent to the Ldn at that location (within +/- 2 dBA) (Caltrans, 1998).

Effects of Noise on People

The effects of noise on people can be placed into three categories:

1. Subjective effects of annoyance, nuisance, dissatisfaction;

2. Interference with activities such as speech, sleep, learning; and
3. Physiological effects such as hearing loss or sudden startling.

Community noise typically produces effects in the first two categories. Workers in industrial plants can experience noise in the third category. There is no completely satisfactory way to measure the subjective effects of noise, or the corresponding reactions of annoyance and dissatisfaction. A wide variation in individual thresholds of annoyance exists, and different tolerances to noise tend to develop based on an individual's past experiences with noise.

Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so called "ambient noise" level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships occur:

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived;
- Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference;
- A change in level of at least 5 dBA is required before any noticeable change in human response would be expected; and
- A 10-dBA change is subjectively heard as approximately a doubling in loudness, and can cause adverse response.

These relationships occur in part because of the logarithmic nature of sound and the decibel system. The human ear perceives sound in a non-linear fashion; hence the decibel scale was developed. Because the decibel scale is based on logarithms, two noise sources do not combine in a simple additive fashion, rather logarithmically. For example, if two identical noise sources produce noise levels of 50 dBA, the combined sound level would be 53 dBA, not 100 dBA.

Noise Attenuation

Stationary point sources of noise, including stationary mobile sources such as idling vehicles, attenuate (lessen) at a rate between 6 dBA for hard sites and 7.5 dBA for soft sites for each doubling of distance from the reference measurement. Hard sites are those with a reflective surface between the source and the receiver such as parking lots or smooth bodies of water. No excess ground attenuation is assumed for hard sites and the changes in noise levels with distance (drop-off rate) is simply the geometric spreading of the noise from the source. Soft sites have an absorptive ground surface such as soft dirt, grass or scattered bushes and trees. In addition to geometric spreading, an excess ground attenuation value of 1.5 dBA (per doubling distance) is normally assumed for soft sites. Line sources (such at traffic noise from vehicles) attenuate at a rate between 3 dBA for hard sites and 4.5 dBA for soft sites for each doubling of distance from the reference measurement (Caltrans, 1998).

Fundamentals of Vibration

As described in the Federal Transit Administration's Transit Noise and Vibration Impact Assessment (FTA, 2006), ground-borne vibration can be a serious concern for nearby neighbors of a transit system route or maintenance facility, causing buildings to shake and rumbling sounds to be heard. In contrast to airborne noise, ground-borne vibration is not a common environmental problem. It is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. Some common sources of ground-borne vibration are trains, buses on rough roads, and construction activities such as blasting, pile-driving and operating heavy earth-moving equipment.

There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe vibration impacts to buildings. Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Sensitive receptors for vibration include structures (especially older masonry structures), people (especially residents, the elderly and sick), and vibration sensitive equipment.

The effects of ground-borne vibration include movement of the building floors, rattling of windows, shaking of items on shelves or hanging on walls, and rumbling sounds. In extreme cases, the vibration can cause damage to buildings. Building damage is not a factor for most projects, with the occasional exception of blasting and pile-driving during construction. Annoyance from vibration often occurs when the vibration exceeds the threshold of perception by only a small margin. A vibration level that causes annoyance will be well below the damage threshold for normal buildings. The FTA measure of the threshold of architectural damage for conventional sensitive structures is 0.2 in/sec PPV (FTA, 2006).

Sensitive Receptors

Some land uses are considered more sensitive to ambient noise levels than others because of the amount of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities typically involved. Residences, hotels, schools, rest homes, and hospitals are generally more sensitive to noise than commercial and industrial land uses.

The nearest sensitive receptor to the proposed project site is the Morro Dunes RV Park located immediately adjacent to the west. An RV could potentially park as close as 15 feet from WWTP facilities. Morro Bay High School is located North of Atascadero Road, approximately 500 feet from the WWTP fenceline. The Morro Strand RV Park is located to the east approximately 600 feet from WWTP fenceline on the other side of the Hanson-Heidelberg Cement Plant.

Existing Noise Environment

The noise environment surrounding the project site is influenced by Hanson-Heidelberg Cement plant, the ocean, current wastewater facility noise, and associated operations and truck and automobile traffic on local roadways and the SR-1 corridor.

3.9.2 Regulatory Setting

Federal

Federal regulations establish noise limits for medium and heavy trucks (more than 4.5 tons, gross vehicle weight rating) under 40 Code of Federal Regulations (CFR), Part 205, Subpart B. The federal truck pass-by noise standard is 80 dBA at 15 meters from the vehicle pathway centerline. These controls are implemented through regulatory controls on truck manufacturers.

State

The State of California establishes noise limits for vehicles licensed to operate on public roads. For heavy trucks, the State pass-by standard is consistent with the federal limit of 80 dB. The State pass-by standard for light trucks and passenger cars (less than 4.5 tons, gross vehicle rating) is also 80 dBA at 15 meters from the centerline. These standards are implemented through controls on vehicle manufacturers and by legal sanction of vehicle operators by state and local law enforcement officials.

Local

Morro Bay Zoning Ordinance

The project site is in the City of Morro Bay in San Luis Obispo County. The following ordinances are applicable to the proposed project:

17.52. 030(A) General Noise Limitations. Any business operation with sustained or intermittent noise levels exceeding 70 dB Ldn as described by the Noise Element including, but not limited to, wood or machine milling, air hammers, generators, and prolonged or excessive truck deliveries, shall not be allowed within 100 feet of residential uses, hospitals, and other noise sensitive uses unless noise levels are mitigated in compliance with this Section.

17.52.030(B) Operational Hours. All commercial and industrial deliveries and loud commercial activities such as loading and unloading, leaf blowers, bands with loudspeakers within 100 feet of a residential use shall be limited to the hours between 7:00 a.m. and 10:00 p.m.

Exemptions. Construction noise is exempt between the hours of 7:00 a.m. and 7:00 p.m. Monday through Friday, and between the hours of 8:00 a.m. and 7:00 p.m. on Saturday or Sunday.

17.52.040 Vibration. No vibration shall be permitted so as to cause a noticeable tremor, measurable without instruments at the lot line.

Noise level performance standards in **Tables 3.9-1** and **3.9-2**, below, are performance standards for noise producing land uses that may affect noise sensitive land uses.

TABLE 3.9-1
MAXIMUM ALLOWABLE NOISE EXPOSURE – TRANSPORTATION

Noise Sources / Land Use	Outdoor Activity Areas[a]	Interior Spaces	
	Ldn/CNEL, dB	Ldn/CNEL, dB	Leq, dB[b]
Residential	60[c]	45	--
Transient Lodging	60[c]	45	--
Hospitals, nursing homes	60[c]	45	--
Theatres, auditoriums, music halls	--	--	35
Churches, meeting halls, office buildings	60[c]	--	45
Schools, libraries, museums	--	--	45
Playgrounds, neighborhood parks	70	--	--

a Where the location of outdoor activity areas is unknown, the exterior noise level standard shall be applied to the property line of the receiving and use.
b As determined for a typical worst-case hour during periods of use.
c Where it is not possible to reduce noise in outdoor activity areas to 60 Ldn/CNEL, dB or less using a practical application of the best available noise reduction measures, an exterior noise level of up to 65 Ldn/CNEL, dB may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.

SOURCE: Morro Bay Zoning Ordinance, Table 17.52.030(1).

TABLE 3.9-2
MAXIMUM ALLOWABLE NOISE EXPOSURE – STATIONARY NOISE[a]

Category	Maximum Exterior Noise Level Standards, dBA		
	Cumulative Duration of Noise Event in Any One-hour Period	Daytime 7 a.m. to 10 p.m.	Nighttime 10 p.m. to 7 a.m.
1	Hourly Leq, db[b]	50	45
2	Maximum Level, dB[b]	70	65
3	Maximum level, dB – Impulsive Noise[c]	65	60

a As determined at the property line of the receiving land use. When determining the effectiveness of noise mitigation measure, the standards may be applied on the receptor side of noise barriers or other property line noise mitigation measures.
b Sound level measurement shall be made with slow meter response.
c Sound level measurements shall be made with fast meter response.

SOURCE: Morro Bay Zoning Ordinance, Table 17.52.030(2).

3.9.3 Impact Assessment

Thresholds of Significance

Consistent with Appendix G of the *CEQA Guidelines*, the proposed project would result in a significant impact on the environment if it would result in:

- Exposure of persons to or generation of noise levels in excess of standards established in any applicable plan or noise ordinance, or applicable standards of other agencies;
- Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels;
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above existing levels existing without the project;
- Exposure of people residing or working in the project area to excessive noise levels, for a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport; or
- Expose people residing or working in the project area to excessive noise levels if the project is located in the vicinity of a private airstrip;

In addition, for the purposes of this EIR, and consistent with noise standards contained in the Morro Bay Zoning Ordinance, the following would constitute a significant impact:

- Noise generated from the project's on-site sources exceed the Zoning Ordinance noise level thresholds, or
- Noise generated from a project's off-site generated traffic would increase noise levels by 3 dBA or more at noise-sensitive receptors.

Unlike noise, there are no quantitative standards set for ground vibration in the Morro Bay Zoning Ordinance. The following standard shall be used to identify potentially significant vibration impacts of the project. The proposed project would result in a significant impact if buildings would be exposed to the FTA's ground-borne vibration threshold level of 0.2 PPV.

Methodology

Analysis of temporary construction noise effects is based on typical construction phases and equipment noise levels and attenuation of those noise levels due to distances, and any barriers between the construction activity and the sensitive receptors near the sources of construction noise. Reference noise levels and attenuation for operational equipment, were used to analyze operational noise impacts

Impacts Discussion

Airport Noise

The proposed project is not located within an airport land use plan, is not located within two miles of a public airport or within the vicinity of a private airstrip. Consequently, no impacts

associated with public or private air facilities would occur, and this issue is not discussed further in this section.

Noise Standards

Impact 3.9-1: Project construction could expose persons to or generate noise levels in excess of standards. (Less than Significant with Mitigation)

Construction activity noise levels at and near the construction areas would fluctuate depending on the particular type, number, and duration of uses of various pieces of construction equipment. Construction-related material haul trips would raise ambient noise levels along haul routes, depending on the number of haul trips made and types of vehicles used. In addition, certain types of construction equipment generate impulsive noises (such as pile driving), which can be particularly annoying. Pile driving may be required during the dewatering of deep excavations for the proposed project. **Table 3.9-3** shows typical noise levels during different construction stages. **Table 3.9-4** shows typical noise levels produced by various types of construction equipment.

TABLE 3.9-3
TYPICAL CONSTRUCTION NOISE LEVELS

Construction Phase	Noise Level (dBA, Leq)[a]
Ground Clearing	84
Excavation	89
Foundations	78
Erection	85
Finishing	89

[a] Average noise levels correspond to a distance of 50 feet from the noisiest piece of equipment associated with a given phase of construction and 200 feet from the rest of the equipment associated with that phase.

SOURCE: U.S. Environmental Protection Agency, 1971.

TABLE 3.9-4
TYPICAL NOISE LEVELS FROM CONSTRUCTION EQUIPMENT

Construction Equipment	Noise Level (dBA, Leq at 50 feet)
Dump Truck	88
Portable Air Compressor	81
Concrete Mixer (Truck)	85
Scraper	88
Jack Hammer	88
Dozer	87
Paver	89
Generator	76
Pile Driver	101
Backhoe	85

SOURCE: Cunniff, 1977.

Noise from construction activities generally attenuates at a rate of 6 to 7.5 dBA per doubling distance. Based on the proposed project site layout and terrain, an attenuation of 6 dBA will be assumed. Morro Bay RV Park is approximately 15 feet from project construction areas. Table 3.9-3 shows that excavation is 89 dBA and pile driving is 101 dBA at 50 feet. Accordingly, attenuated at 15 feet, these residences would experience noise levels of up to 100 dBA Leq during excavation and up to 110 dBA during pile driving, the loudest of construction activities that would occur. Morro Bay High School lies approximately 500 feet from project construction. Outdoor use activities at this location could experience attenuated noise levels of approximately 83 dBA. Morro Strand RV Park lies approximately 600 feet from project construction. Outdoor use activities at this location could experience attenuated noise levels of approximately 80 dBA.

Construction noise at these levels would be substantially greater than existing noise levels at nearby sensitive receptor locations, and exceed the noise standard of 50 dBA. These construction noise levels would be potentially significant. The City of Morro Bay Zoning Ordinance states that construction noise is exempt from noise level performance standards during daytime hours between 7:00 A.M. and 7:00 P.M. Monday through Friday, and between 8:00 A.M. and 7:00 P.M. on Saturday and Sunday. Compliance with this ordinance would make construction noise a less than significant impact. Mitigation Measure 3.9-1 would ensure that project construction occurs during daytime hours to avoid generating noise that violates standards. Mitigation Measure 3.9-2 would further mitigate noise associated with pile driving and other extreme noise-generating construction impacts. Impacts would be less than significant with implementation of Mitigation Measure 3.9-1 and 3.9-2.

Mitigation Measures

Mitigation Measure 3.9-1: MBCSD shall require construction contractors to restrict all construction activities to the hours between 7:00 A.M. and 7:00 P.M, Monday through Friday, and between 8:00 A.M. and 7:00 P.M. on Saturday and Sunday.

Mitigation Measure 3.9-2: To further mitigate pile driving and other extreme noise-generating construction impacts, a set of site-specific noise attenuation measures shall be implemented under the supervision of a qualified acoustical consultant. These attenuation measures shall include, but not be limited to, the following control strategies:

(1) Erect temporary plywood noise barriers around the construction site;

(2) Implement “quiet” pile-driving technology (such as predrilling piles and the use of more than one pile driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions;

(3) Use noise control blankets on building structures to reduce noise emissions from the site; and

(4) Monitor the effectiveness of noise attenuation measures by collecting noise measurements.

Significance after Mitigation: Less than significant.

Groundborne Vibration

Impact 3.9-2: Project construction could result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels. (Less than Significant with Mitigation)

The proposed project would result in a significant impact if buildings would be exposed to the FTA building damage ground-borne vibration threshold level of 0.2 PPV. Construction of the proposed project may require vibratory compaction, but a final determination would be made during final project design. As shown in **Table 3.9-5**, use of a Vibratory Compactor for project construction generates vibration levels of up to 0.210 PPV at a distance of 25 feet. The nearest sensitive receptor (Morro Dunes RV Park) to the WWTP would be approximately 15 feet from heavy equipment activity and could experience vibration levels of approximately 0.45 PPV. These vibration levels would exceed the ground-borne vibration thresholds for building damage, if clientele were to park 25 feet or less from vibratory compaction activity during construction. Although the vibration impacts would only be experienced for a short period of time, impacts would be considered significant during project construction. Implementation of Mitigation Measure 3.9-2 would reduce noise impacts associated with pile driving and other extreme noise-generating construction impacts. Further, implementation of Mitigation Measure 3.9-3 would require crack surveys before and after drilling activity to buildings within 25 feet from vibratory compaction activity to observe potential and any actual vibration damage. Implementation of these mitigation measures would reduce vibration impacts to a less than significant level.

TABLE 3.9-5
VIBRATION VELOCITIES FOR CONSTRUCTION EQUIPMENT

Equipment Activity	PPV at 25 Feet (inches/second)[a]
Large Bulldozer	0.089
Loaded Trucks	0.076
Jackhammer	0.035
Vibratory Compactor	0.210

[a] Buildings can be exposed to ground-borne vibration levels of 0.2 PPV without experiencing structural damage.

SOURCE: Federal Transit Administration, May 2006.

Other sensitive receptors in the project vicinity would be exposed to vibration levels at incrementally lower levels. Morro Bay High School lies approximately 500 feet from the project area and would experience vibration levels of approximately 0.002 PPV. Morro Strand RV Park lies approximately 600 feet from the project area and would experience vibration levels of approximately 0.002 PPV. Vibration levels at these receptors would not exceed the potential building damage threshold of 0.2 PPV and would be considered less than significant.

Mitigation Measures

Implement Mitigation Measure 3.9-2

Mitigation Measure 3.9-3: If a vibratory compactor is used within 25 feet of any structure, the construction contractor shall conduct crack surveys before drilling to prevent potential architectural damage to nearby structures. The surveys shall be done by photographs, video tape, or visual inventory, and shall include inside as well as outside locations. All existing cracks in walls, floors, and driveways shall be documented with sufficient detail for comparison after construction to determine whether actual vibration damage occurred. A post-construction survey shall be conducted to document the condition of the surrounding buildings after the construction is complete.

Significance after Mitigation: Less than Significant.

Ambient Noise Impacts

Impact 3.9-3: Project operations could result in substantial increases in ambient noise levels in the project vicinity above levels existing without the project. (Less than Significant)

The proposed project would construct new stationary noise sources in replacement of existing stationary noise sources at the WWTP. The proposed changes to ambient noise levels would be indistinguishable from current ambient conditions in the project vicinity, including noise sources from the WWTP, the ocean, the Hanson-Heidelberg Cement plant, and traffic noise from Atascadero Road and SR-1. Therefore, operation of the upgraded WWTP would not increase ambient noise levels from stationary noise sources in the project vicinity and be less than significant without mitigation.

The increase in operational traffic generated by project operation would be minimal. Up to 12 truck trips per week would be anticipated for hauling sludge, screenings, and grit from the WWTP under average conditions and up to 18 truck trips per week would be anticipated for hauling sludge, screenings, and grit from the WWTP during PSDWF conditions (July – August). Operation of the proposed project would introduce onsite storage of a new substance, approximately 800 gallons of polymer used for thickening of WAS prior to anaerobic digestion. Approximately one truck trip per month would be required to deliver the polymer to the WWTP. The proposed project also assumes two to ten water trucks per week would fill up with recycled water at the utility water station. Where the ambient noise environment is dominated by roadway noise, a significant increase is usually defined as an increase of at least 3 dBA; an increase in noise of 3 dBA requires a doubling of traffic (a 100 percent increase) (Caltrans, 1998). The increase in operational vehicle trip increases would not double traffic on local roadways; average daily trips on Astascadero Road exceeds 8,000 (see Chapter 3.11, Traffic and Transportation). Therefore the project would not generate a substantial increase in noise along local roadways, and would be less than significant without mitigation.

Mitigation Measures

None required.

Significance after Mitigation: Less than significant.

Mitigation Measure Summary Table

Table 3.9-6 presents the impacts and mitigation summary for Noise and Vibration.

TABLE 3.9-6
NOISE IMPACTS AND MITIGATION SUMMARY

Proposed Project Impact	Mitigation Measure	Significance after Mitigation
Noise Standards: Project construction could expose persons to or generate noise levels in excess of standards.	Mitigation Measure 3.9-1 and 3.9-2	Less than significant
Groundborne Vibration: Project construction could result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.	Mitigation Measure 3.9-2 and 3.9-3.	Less than significant
Ambient Noise Levels: Project operations could result in substantial increases in ambient noise levels in the project vicinity above levels existing without the project.	None	Less than significant

References – Noise and Vibration

Caltrans, Technical Noise Supplement, 1998.

Cunniff, Patrick, *Environmental Noise Pollution*, 1977.

Doris, Dan, Chief Building Inspector, Phone Conversation, 12/09/08.

Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, 2006.

Morro Bay, City of Morro Bay Zoning Ordinance, July 2005.

U.S. Environmental Protection Agency, Bolt, Beranek, and Newman, *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances*, 1971.

3.10 Public Services and Utilities

This section provides an overview of the regulatory framework, existing public service and utility setting, and analysis of potential impacts to the services that would result from implementation of the proposed project. Public utilities and utility systems in the project area include water, wastewater, storm water, solid waste, electrical, telecommunications, and natural gas conveyance facilities. Public services include schools, hospitals, police, and fire protection.

3.10.1 Environmental Setting

Law Enforcement Services

Police services may be required at the construction site in the event of an emergency. The City of Morro Bay Police Department provides law enforcement services to the project area. The Morro Bay Police Station, located at 850 Morro Bay Boulevard in Morro Bay, is approximately 1.6 miles from the WWTP (Morro Bay, 2008).

Fire Protection

Fire protection and paramedic services are provided to the project area by the City of Morro Bay Fire Department. The Morro Bay Fire Station is located at 715 Harbor Street, approximately two miles from the WWTP (Morro Bay, 2008).

Public Schools

Del Mar Elementary and Morro Bay High School are located within the City of Morro Bay and are part of the San Luis Coastal Unified School District. Del Mar Elementary is located at 501 Sequoia Street, approximately 1.5 miles away from the WWTP and Morro Bay High School is located at 235 Atascadero Road, directly across the street from the northern side of the WWTP (SLCUSD, 2008).

Hospitals

Sierra Vista Regional Medical Center is located at 1010 Murray Avenue in San Luis Obispo and is 12 miles away from the WWTP. French Hospital Medical Center is located at 1911 Johnson Avenue in San Luis Obispo and is over 14 miles away from the WWTP.

Wastewater Collection

Wastewater services are provided to the area by the City of Morro Bay and the Cayucos Sanitary District. The City and the Cayucos Sanitary District jointly operate the WWTP located at 160 Atascadero Road in Morro Bay. The WWTP is rated for an average dry weather flow of 2.06 million gallons per day (Carollo, 2007).

Water Facilities

The City typically meets the bulk of its customer demand for potable water with water imported from the SWP via the Coastal Branch. MBCSD also is able to receive water from groundwater and the Morro Bay Desalination Plant. Prior to SWP deliveries, the City received its entire water supply from the Morro and Chorro Groundwater Basins (Boyle Engineering, 2006). The San Luis Obispo Flood Control and Water Conservation District (SLOFCWCD) is the water wholesaler with SWP entitlements for San Luis Obispo County. The City of Morro Bay has two contracts with SLOFCWCD for receipt of SWP water. The City has an entitlement to 1,313 afy plus an additional 174 percent drought buffer of approximately 2,290 afy (Boyle Engineering, 2006).

Currently, there are no recycled water uses in the project area. With implementation of the proposed project, the City of Morro Bay could become a recycled water purveyor. Recycled water end uses would include, but not be limited to, treatment process applications onsite at the WWTP, offsite M&I applications such as soil compaction, concrete mixing, dust control, roadway cleaning, and flushing sewers; municipal landscape irrigation including around the perimeter of the WWTP, and agricultural irrigation. Offsite beneficial end uses of recycled water would be facilitated using the truck filling station. At this time the City does not expect to build a recycled water pipeline distribution system.

Storm Water

The City of Morro Bay lies within several watersheds including Chorro Creek Basin watershed, Morro Creek Basin watershed, Toro Creek watershed, Alva Paul Creek watershed, and Noname Creek watershed. The storm drain conveyance system in Morro Bay connects to local creeks, all of which eventually drain to Estero Bay or the Pacific Ocean. The City of Morro Bay has been issued a storm water discharge permit that is applicable to the project area. The City completed its latest NPDES Phase II Stormwater Management Plan in 2009 (Morro Bay, 2009).

Solid Waste Management

The San Luis Obispo County Integrated Waste Management Authority (IWMA) is the waste agency for the region. The two landfills closest to the project site that accept construction materials are the Paso Robles Landfill and the Chicago Grade Landfill. The Paso Robles Landfill is located in the City of Paso Robles and is a municipal solid waste landfill. It is owned by the City of Paso Robles and operated by Pacific Waste Services (Paso Robles, 2008). The Chicago Grade Landfill is located at 2290 Homestead Road in the City of Templeton. It is a Class III Waste Management facility and is operated by Chicago Landfill, Inc. Currently, the landfill can accept as much as 500 tons of solid waste each day (Chicago Grade, 2008).

The majority of solid waste generated at the WWTP is in the form of biosolids. Biosolids are treated sewage sludge, which is the byproduct of municipal wastewater treatment. Biosolids management options include application to land as a soil amendment, alternative daily cover for landfills, disposal in landfills, surface disposal, and incineration. Currently, biosolids generated at the WWTP are either composted onsite or hauled away by San Joaquin Composting to Kern County. The biosolids

are then composted by San Joaquin Composting and land applied at McCarthy Farms in Kings County. Kings County allows unrestricted land applications of EQ USEPA Class A composted biosolids (Carollo, 2007). The total production of biosolids at the WWTP has ranged between approximately 165 and 226 dry metric tons between 2004 and 2007 (**Table 3.10-1**). The portion of biosolids composted onsite has ranged between 19 and 52 percent. Currently, biosolids produced at the WWTP are hauled away once a year. Since 2004, approximately three to seven truck trips have been required each year to dispose of biosolids offsite.

TABLE 3.10-1
FATE OF BIOSOLIDS PRODUCED AT WWTP
(dry metric tons)

		Biosolids Hauled by SJC			Biosolids in Storage		Biosolids Composted	
Year	Total Production	Total	% Total	No. Trucks	Total	% Total	Total	% Total
2004	178.8	131.2	73%	7	13.9	8%	33.7	19%
2005	225.8	164.2	73%	8	0	0%	61.6	27%
2006	210.5	113.2	54%	6	35.9	17%	61.3	29%
2007	164.7	39.9	24%	3	39.9	24%	84.9	52%

Other Utilities

Electricity is provided to the City of Morro Bay and the community of Cayucos by the Pacific Gas and Electric Company (PG&E). Construction activities may require the use of electric powered construction equipment that would result in a temporary increase in demand on the power grid. Contractor field offices and electric power tools would place demands on local energy supplies. Energy consumption at the existing WWTP is approximately 0.9 million kilowatt hours (kWH) per year for the current annual average measured daily flow of 1.25 mgd. At the same annual average measured daily flow of 1.25 mgd, the proposed project would require approximately 1.6 million kWH per year. At build-out, when operation of the upgraded WWTP would reach rated capacity of 1.5 mgd, the proposed project would require approximately 1.9 million kWH per year. The proposed project also would include a standby generator for use in the event of a power outage.

Cable service and telephone services to Morro Bay would be provided by Charter Communications.

3.10.2 Regulatory Framework

Federal

Title 40 of the Code of Federal Regulations Part 503

The federal biosolids regulations are contained in Title 40 of the Code of Federal Regulations Part 503 (40 CFR Part 503) as Standards for the Use or Disposal of Sewage Sludge. Known as

the Part 503 Rule, or Part 503, these regulations govern the use and disposal of biosolids. Biosolids can be reused as fertilizer for crops (land application) or disposed either in a surface landfill or biosolids incinerator (USEPA, 1994). Part 503 permits are issued by the USEPA and are required for all biosolids generators. Part 503 requirements can be incorporated into the National Pollutant Discharge Elimination System (NPDES) permits that also are issued to publicly-owned treatment works, such as the WWTP.

Part 503 classifies biosolids by pathogen concentration levels as either Class A, Class B, or sub-Class B biosolids. Class A biosolids have pathogen levels that have been reduced to below detectable limits. Class B biosolids meet adequate pathogen reduction requirements but still contain detectible levels of pathogens. Sub-class B biosolids do not meet adequate pathogen reduction requirements. Biosolids that are to be land applied must contain metal concentrations that are below the Part 503 Table 1 ceiling limits. Biosolids are classified as exceptional quality (EQ) biosolids if metal concentrations are below the Part 503 Table 3 ceiling limits, a lower set of thresholds. Part 503 allows for EQ biosolids to be applied to land without regard to annual or cumulative loading limits.

State

Protection of Underground Infrastructure

California Government Code Section 4216-4216.9, Protection of Underground Infrastructure, requires an excavator to contact a regional notification center (e.g., Underground Services Alert or Dig Alert) at least two days prior to excavation of any subsurface installations. Any utility provider seeking to begin a project that could damage underground infrastructure can call Underground Service Alert, the regional notification center for southern California. Underground Service Alert will notify the utilities that may have buried lines within 1,000 feet of the project. Representatives of the utilities are then notified and are required to mark the specific location of their facilities within the work area prior to the start of project activities in the area.

California Energy Action Plan II

The California Energy Action Plan II is the state's principal energy planning and policy document (California Energy Commission, 2005, 2008). The plan identifies state-wide energy goals, describes a coordinated implementation plan for state energy policies, and identifies specific action areas to ensure that California's energy is adequate, affordable, technologically advanced, and environmentally sound. In accordance with this plan, the first priority actions to address California's increasing energy demands are energy efficiency and demand response (i.e., reduction of customer energy usage during peak periods in order to address system reliability and support the best use of energy infrastructure). Additional priorities include the use of renewable sources of power and distributed generation (i.e., the use of relatively small power plants near or at centers of high demand). To the extent that these actions are unable to satisfy increasing energy and capacity needs, clean and efficient fossil-fired generation is supported.

California Integrated Waste Management Act of 1989

The California Integrated Waste Management Act of 1989 (Public Resources Code [PRC], Division 30), enacted through Assembly Bill (AB) 939 and modified by subsequent legislation, required all California cities and counties to implement programs to reduce, recycle, and compost at least 50 percent of wastes by the year 2000 (PRC Section 41780). The state determines compliance with this mandate to divert 50 percent of generated waste (which includes both disposed and diverted waste) through a complex formula. This formula requires cities and counties to conduct empirical studies to establish a "base year" waste generation rate against which future diversion is measured.

State Water Resources Control Board Waste Discharge Requirements

In California, the application or beneficial reuse of biosolids must comply with the California Water Code (Section 13274) in addition to meeting the requirements specified in Part 503. To satisfy the CWC requirements, in July 2004, the SWRCB adopted Water Quality Order No. 2004-0012-DWQ (General Order) for general waste discharge requirements (WDRs) for the discharge of biosolids to land for use in agriculture, silviculture, horticulture, and reclamation activities. The General Order is intended to streamline the process for issuing WDRs for land application sites. The General Order applies to both the biosolids generators and appliers (SWRCB, 2008).

The General Order incorporates the minimum standards established by Part 503 and expands upon them to fulfill obligations to the California Water Code. The General Order includes additional provisions and requirements such as the following: threshold concentrations and loading limits for molybdenum; annual monitoring for pesticides, PCBs, and semi-VOCs; maximum moisture content of at least 50 percent for land applied biosolids; and requirements for incorporation of biosolids into the soil within 24 hours in arid areas.

Compliance with the General Order does not constitute compliance with Part 503 because the SWRCB is not delegated as a local authority for the Federal Biosolids Program. In addition, the General Order does not preclude local agencies from further prohibiting, restricting, or controlling the use of biosolids within their jurisdiction, as allowed by law (SWRCB, 2008).

The biosolids material covered under the General Order includes Class A biosolids, Class B biosolids, and large-scale application of EQ biosolids. The EQ composted biosolids currently produced at the WWTP are not subject to the General Order because they are less than 50 percent biosolids by dry weight and are land applied in small batches (less than 20 dry-tons per acre per year to plots less than 20 acres) in the local community. The onsite composting operation would be discontinued as a result of the proposed project. The biosolids produced at the WWTP and transferred to San Joaquin Composting are covered under the General Order.

Local

San Luis Obispo County Recycling Ordinance

The ordinance requires that 50 percent of construction waste be recycled. Waste includes anything discarded from the construction site including wood scraps, cardboard, drywall, paint, tools, concrete, asphalt, and plastic bags (SLO County, 2008).

Kings County Sewage Sludge Ordinance

The biosolids produced at the WWTP and currently being transferred to San Joaquin Composting are later composted and then land applied at McCarthy Farms in Kings County The Kings County Code, Chapter 14B Regulation of the Land Application of Sewage Sludge, Section 14B-1 governs the land application of sewage sludge in unincorporated areas of the county, including both Class A and Class B biosolids. The regulation only allows Class A biosolids to be land applied. The regulation does not restrict the land application of EQ Class A composted biosolids (Kings County, 2008).

3.10.3 Impact Assessment

Thresholds of Significance

The criteria used to determine the significance of impacts related to aesthetic resources are based on Appendix G of the *CEQA Guidelines*. The proposed project would result in a significant impact if it would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:
  - Fire protection
  - Police protection
  - Schools
  - Other public facilities
- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Require new or expanded water supply resources or entitlements;

- Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the projects projected demand in addition to the provider's existing commitments;
- Be served by a landfill with insufficient permitted capacity to accommodate the project solid waste disposal needs;
- Not comply with federal, state, and local statutes and regulations related to solid waste; or
- Effect local and regional energy supplies such that additional electrical capacity is required.

Impacts Discussion

The following sections discuss the potential effects of the proposed project to public services and utilities according to the key issue areas identified in Appendix G of the *CEQA Guidelines* and corresponding to the significance criteria identified above.

Public Services

The proposed project would not impair local fire, police, or other emergency access as construction would take place on the WWTP and neighboring properties and would not result in roadway closures. There would be no increases in demand for police and fire services associated with the proposed project. The proposed project would also not result in substantial adverse physical impacts to any local schools, parks, or other public facilities because the project is not a direct population generator, such as residential housing, which would result in impacts to these and other public facilities. These issues are not discussed further as there would be no impact.

Water and Wastewater Treatment

The proposed project would not exceed the receiving water limitations of the Central Coast RWQCB. The proposed project would upgrade the treatment facilities at the WWTP to exceed the secondary treatment standards contained in 40CFR Part 133 by providing full secondary treatment with tertiary filtration. The project would also phase out the need for a modified 301(h) discharge permit to meet the Central Coast RWQCB's effluent discharge requirements. The impacts of the proposed upgrade are evaluated in this EIR.

Solid Waste Disposal: Landfills

Impact 3.10-1: Construction activities associated with the proposed project would generate solid waste that could increase the demand for landfill capacity. (Less than Significant with Mitigation)

Site clearing activities and construction activities would generate some solid waste materials such as asphalt, concrete, sand, soils, and piping (e.g., PVC). Excavation activities would generate approximately 31,290 cy of material, including excavated soils. Some of the soils removed during excavation would be stockpiled and reused for site grading. The remaining soils would be exported offsite to a nearby landfill.. Demolition of the existing WWTP would generate

approximately 1500 cy of concrete and 500 cy of asphalt paving, which would be hauled offsite to be recycled.

The proposed project would be subject to the County of San Luis Obispo's Recycling Ordinance requiring 50 percent diversion from all construction projects. Non-recyclable construction waste for the proposed project would be exported to a local landfill for disposal. Implementation of Mitigation Measures 3.10-1 and 3.10-2 would reduce the amount of solid waste expected to be generated. With implementation of these mitigation measures, the project construction waste generation would be considered less than significant, and the proposed project would comply with all federal, state, and local statutes related to solid waste..

Mitigation Measures

Mitigation Measure 3.10-1: Project facility design and construction methods that produce less waste, or that produce waste that could more readily be recycled or reused shall be encouraged.

Mitigation Measure 3.10-2: MBCSD shall require the construction contractor to describe plans for recovering, reusing, and recycling wastes produced through construction, demolition, and excavation activities. Submittal of these plans shall be required in construction specifications.

Significance after Mitigation: Less than significant.

Solid Waste Disposal: Biosolids

Impact 3.10-2: Implementation of the proposed project could increase the demand for disposal capacity of biosolids. (Less than Significant)

Between 2004 and 2007, the WWTP produced between approximately 165 and 226 dry metric tons of USEPA Class B biosolids (80 percent solids). Operation of the new treatment facilities would generate approximately 2,800 to 3,500 wet tons (18 percent solids) of unclassified sludge per year at build-out. With the discontinuation of the onsite composting program, 100 percent of sludge produced at the new facility would be hauled offsite for composting or disposal otherwise in accordance with 40 CFR Part 503.

MBCSD expects to continue using San Joaquin Composting to haul away all sludge from the proposed new WWTP. San Joaquin Composting has adequate capacity at its Composting Facility in Kern County to accommodate the volume of sludge to be produced at the new WWTP. The Class A composted biosolids produced at the San Joaquin Composting Facility would be land applied at McCarthy Farms in Kings County, in accordance with 40 CFR Part 503 and the Kings County Sewage Sludge Ordinance. Therefore, the proposed project would have a less than significant impact on solid waste facilities and disposal of biosolids. The proposed project also would comply with federal and local statues related to solid waste.

Mitigation Measures

None required.

Utility Services

Impact 3.10-3: Construction of the proposed project could result in temporarily, planned or accidental disruption to utility services. (Less than Significant with Mitigation)

Utility services could be disrupted as a result of project construction. During excavation phases, utility disruptions could occur in areas where proposed project components run parallel to, cross under or over, or are situated adjacent to existing utility service lines. In most cases, impacts to local utilities and services involve a temporary disruption that would not exceed one day. All utility lines and cables that could be disrupted during excavation activities would be identified during preliminary design. The excavator would be required to contact a regional notification center (e.g., Underground Services Alert or Dig Alert) at least two days prior to excavation of any subsurface installations. Implementation of Mitigation Measure 3.10-3 would minimize any accidental disruption to utility services to less than significant levels.

It is not anticipated that the proposed project would affect daily operations at the WWTP. The new treatment facilities would be constructed and connected before the existing WWTP is retired and demolished. No temporary service disruptions are anticipated. However, any temporary disruption in service would be sustained for the minimum amount of time required to make the new connection. Impacts would be less than significant.

Mitigation Measures

Mitigation Measure 3.10-3: MBCSD shall require the construction contractor to contact a regional notification center (e.g., Underground Services Alert or Dig Alert) at least two days prior to initiating any construction activities.

Significance after Mitigation: Less than significant.

Storm Water

Impact 3.10-4: The proposed project could require construction of new storm water drainage facilities, the construction of which would not result in significant environmental effects. (Less than Significant)

The WWTP's existing storm drain system discharges to multiple locations: Morro Creek, the storm drain outfall on the beach, and the WWTP headworks where storm water is treated and then discharged through the ocean outfall. As part of the proposed project, the existing WWTP would be demolished, and the vacant area would be graded to create a flood flow pathway. Also,

as part of the proposed project, storm water runoff from outdoor process or chemical areas, or areas adjacent to sludge and residuals loading areas, would be contained with walls, curbing, and floor slab and drained to the proposed Influent Pump Station for treatment at the new WWTP and discharge to the ocean. Areas of the proposed new WWTP that do not require onsite capture of storm water runoff would drain by gravity to the old WWTP location. Runoff would continue to be moved offsite through existing storm drain facilities, including the drains to Morro Creek and the beach, overflow to Atascadero Road, or through in-situ percolation, depending on the surfacing in the flood flow pathway. No new offsite storm water drainage facilities would need to be constructed as a result of the proposed project. Impacts would be considered less than significant.

Mitigation Measures

None required.

Energy Demand

Impact 3.10-5: Implementation of the proposed project could affect local and regional energy supplies such that additional electrical capacity is required. (Less than Significant)

Operation of the proposed project would result in an increase in energy consumption at the WWTP. Energy consumption at the existing WWTP is approximately 0.9 million kWH per year for the current annual average measured daily flow of 1.25 mgd. At the same annual average measured daily flow of 1.25 mgd, the proposed project would require approximately 1.6 million kWH per year. At build-out, when operation of the upgraded WWTP would reach rated capacity of 1.5 mgd, the proposed project would require approximately 1.9 million kWH per year.

Similar to existing conditions, electricity would be provided to the project site by PG&E. No off-site improvements would be necessary to provide the additional energy to operate the proposed new WWTP at full capacity. The facility would be connected to the existing grid infrastructure connected to the project site. The proposed project would result in a less than significant impact to energy use.

Mitigation Measures

None required.

Mitigation Measure Summary Table

Table 3.10-2 presents the impacts and mitigation summary for Public Services and Utilities.

TABLE 3.10-2
PUBLIC SERVICES AND UTILITIES IMPACTS AND MITIGATION SUMMARY

Proposed Project Impact	Mitigation Measure	Significance after Mitigation
Solid Waste: Construction activities associated with the proposed project would generate solid waste that could increase the demand for landfill capacity.	Mitigation Measures 3.10-1 and 3.10-2	Less than significant
Biosolids Disposal: Implementation of the proposed project could increase the demand for disposal capacity of biosolids.	None required	Less than significant
Utility Services: Construction of the proposed project could result in temporarily, planned or accidental disruption to utility services.	Mitigation Measures 3.10-3	Less than significant
Storm Water: The proposed project could require construction of new storm water drainage facilities, the construction of which would not result in significant environmental effects.	None required	Less than significant
Energy Demand: Implementation of the proposed project could affect local and regional energy supplies such that additional electrical capacity is required.	None required	Less than significant

References – Public Services and Utilities

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3.11 Transportation and Traffic

This section addresses potential traffic and circulation impacts on the basis of information supplied by the City of Morro Bay, the County of San Luis Obispo, and the California Department of Transportation (Caltrans).

The following were considered in the assessment of potential impacts:

- Review and evaluation of documents, plans and aerial photographs to determine the characteristics of roads that are proposed to accommodate construction-generated vehicle trips. Characteristics include the number of vehicle lanes, traffic control, on-street parking (permitted or prohibited), bicycle routes, transit service (including bus stops), and land uses served by the affected roads (e.g., sensitive uses like fire stations, schools, etc.)
- Estimated highest number of vehicle trips that project-related activities would generate, on both a daily and peak hour basis.

3.11.1 Environmental Setting

The proposed project is located at 160 Atascadero Road in the City of Morro Bay in San Luis Obispo County. The transportation system in Morro Bay is comprised of an interconnected network of roadways, local transit systems, and pedestrian and bicycle facilities. Six miles of State Route 1 (SR-1) – a State Scenic Highway – bisect Morro Bay and connect it to the neighboring cities of San Luis Obispo to the south and Cayucos to the north. State Route 41 (SR-41) intersects SR-1 and provides regional access to and from Atascadero and Highway 101. The major arterial roads within the city are Main Street and Morro Bay Boulevard which connect to a network of adjacent collector roads linking neighboring land uses. The closest airport or airstrip to the project site is San Luis Obispo County Airport, located over 15 miles southeast near the City of San Luis Obispo.

Existing Traffic Circulation Network

Most of the transportation facilities within the City operate at good service levels. SR-1 and SR-41 would be used to transport construction materials, equipment, and workers to and throughout the project area. **Figure 3.11-1** depicts major roads in the project vicinity.

Regional Roadways

State Route 1 (SR-1) is designated as a State Scenic Highway and an All American Byway. The highway contains 4 lanes within Morro Bay and carries between 19,000 and 24,000 daily vehicles within the City (City of Morro Bay, 2004).

SOURCE: GlobeXplorer; ESA, 2010

Figure 3.11-1
Major Roads in the Project Vicinity

State Route 41 (SR-41) contains 2 lanes within Morro Bay and provides regional access to and from Atascadero and Highway 101. The highway carries about 8,400 average daily trips (Caltrans, 2006)

Local Roadways

Main Street extends southbound from Yerba Buena Street as a two-lane arterial through Morro Bay leading into State Park Road.

Morro Bay Boulevard is a two-lane roadway extending west from the Cabrillo Highway intersection through central downtown Morro Bay and served commercial properties along the route.

Atascadero Road begins at the termination of SR-41. It contains two lanes and extends .4 miles west until it becomes Embarcadero Road. The road carries about 8,800 average daily trips (City of Morro Bay, 2004).

Traffic Volumes and Level of Service

The City of Morro Bay provides information relating to intersection and roadway operation as well as Average Daily Trips (ADT) throughout the city. Level of Service (LOS) measurements are utilized to describe traffic operations with a scale ranging from LOS A to LOS F. LOS A indicates very good, free flow traffic conditions where LOS F indicates very poor, forced flow conditions. Within the project vicinity, the Cabrillo Highway southbound / State Route 41 intersection has LOS A conditions, the Cabrillo Highway northbound / State Route 41 intersection has LOS B conditions, the Main Street / State Route 41 intersection has LOS D conditions, and the Main Street / State Route 1 southbound intersection has LOS A conditions (**Table 3.11-1**)(City of Morro Bay, 2004).[1] Further, SR-1 has an ADT of 20,000 with 3 percent trucks and operates between LOS A-B; SR-41 has an ADT of 8,400 with 4 percent trucks and operates at LOS C; Atascadero Road has an ADT of 8,800; Main Street north of Highway 41 has an ADT of 8,300 and operates at LOS A; and Main Street south of Highway 41 has an ADT of 9,900 and operates at LOS A (Caltrans, 2006, 2007).

Public Transportation

Public transit bus service on roads in the project area is provided by the San Luis Obispo Regional Transit Authority (RTA). The nearest bus service is provided by route 12 B with stops along Main Street at Errol Street and Bonita Street (RTA, 2008).

Bicycle and Pedestrian Transportation

Existing bikeways within the vicinity of the project site are located along Atascadero Road, Embarcadero Road, and bordering SR-1 to the east of Morro Bay High School. The bikeway

[1] Although the City of Morro Bay's draft General Plan/Local Coastal Plan (2004) has not yet been certified by the California Coastal Commission, the draft includes updated information related to existing traffic conditions in the City of Morro Bay. Therefore, data from the draft General Plan is used in this analysis of transportation and circulation.

TABLE 3.11-1
INTERSECTION AND ROADWAY SERVICE LEVELS

Intersection	Control	LOS
Cabrillo Highway SB / State Route 41	1-Way Stop	LOS A
Cabrillo Highway NB / State Route 41	1-Way Stop	LOS B
Main / State Route 41	4-Way Stop	LOS D
Main / Cabrillo Highway SB	1-Way Stop	LOS A
Roadway	**ADT**	
State Route 1	24,000	LOS A-B
State Route 41	8,400	LOS C
Atascadero Road	8,800	(no LOS data provided)
Main n/ o State Route 41	8,300	LOS A
Main s/ o State Route 41	9,900	LOS A

SOURCE: City of Morro Bay General Plan/Local Coastal Plan, 2004.

along Atascadero Road and Embarcadero Road is categorized as Class II, and the bikeway running parallel to SR-1 east of Morro Bay High School is considered Class I.[2] The City of Morro Bay is planning on building a Class I bikeway that will begin where Embarcadero Road is split by Morro Creek and continues across the creek south along the southern portion of Embarcadero Road to connect with Coleman Drive at Morro Bay Harbor (City of Morro Bay, 1997). The proposed date of this expansion has yet to be determined.

Pedestrian facilities within the project area are limited to sidewalks along Atascadero Road and Embarcadero Road and the class I bikeway running parallel to SR-1 and east of Morro Bay High School. The proposed class I bikeway connecting the project area to the Morro Bay Harbor will provide increased pedestrian access in the future.

WWTP Hauling Operations

With the implementation of the proposed project, the practice of partial onsite composting of biosolids would be discontinued. The proposed new treatment facilities would be constructed in the area currently used for onsite composting at the existing WWTP, and all of the dewatered sludge would be hauled away for offsite composting or disposal. All sludge produced at the WWTP would be mechanically dewatered to 15 to 18 percent solids rather than solar dried to 80 percent solids. The sludge would be unclassified. Depending on the time of year, up to 18 truck trips per week would be required for offsite disposal of all screenings, grit and sludge produced at the new WWTP.

Operation of the proposed project involves the continued use of sodium hypochlorite and sodium bisulfite, which are considered hazardous substances by the State of California. The rate and

[2] Class I bikeways are physically separated from other vehicular traffic and are for the exclusive use of bicycles and pedestrians. Class II bikeways (bike lanes) are for the preferential use of bicycles within the paved areas of roadways (City of Morro Bay, 1997)

quantity of use of these materials is not expected to change as a result of the proposed project. As a result, the number of delivery trips to replenish these materials also is not expected to change. However, the proposed project would introduce onsite storage of a new substance, approximately 800 gallons of polymer used for thickening of WAS prior to dewatering. The polymer is not a hazardous or regulated material. Approximately twelve truck trips per year (one every month) would be required to deliver the polymer to the WWTP. In addition, the proposed project assumes two to ten water trucks per week would fill up with recycled water at the utility water station.

3.11.2 Regulatory Framework

The development and regulation of the transportation network in the vicinity of the proposed project primarily involves state and local jurisdictions. All roads within the project area are under the jurisdiction of state and local agencies. Applicable state and local laws and regulations related to traffic and transportation issues are discussed below.

State

California Department of Transportation (Caltrans)

Caltrans manages interregional transportation, including management and construction of the California highway system. In addition, Caltrans is responsible for permitting and regulation of the use of state roadways. The project area includes two roadways that fall under Caltrans' jurisdiction.

Caltrans' construction practices require temporary traffic control planning "during any time the normal function of a roadway is suspended" (FHWA, 2003). In addition, Caltrans requires that permits be obtained for transportation of oversized loads and transportation of certain materials, and for construction-related traffic disturbance. Caltrans regulations would apply to construction of the WWTP Upgrade immediately adjacent to roadways, as well as the transportation of construction crews and construction equipment throughout the project area (Caltrans, 2004).

Local

The City of Morro Bay General Plan (1988) and Coastal Land Use Plan (1982)

The certified 1988 Morro Bay General Plan addresses transportation and traffic in the Circulation Element. The following General Plan policy and programs, which include those incorporated from the Morro Bay Coastal Land Use Plan, are relevant to the proposed project:

> **Policy C-13**: The City will strive to implement the street system plan within its fiscal and legal limitations.
>
> **Policy C-19:** The City will, when possible and where necessary, reduce traffic congestion and circulation problems that may be caused by trucks making deliveries in high-activity commercial areas.

3.11.3 Impact Assessment

Thresholds of Significance

For the purposes of this EIR and consistent with Appendix G of the *CEQA Guidelines*, the proposed project would have a significant impact on transportation and traffic if it would:

- Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths and mass transit;
- Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads and highways;
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;
- Substantially increase hazards due to a design feature or incompatible uses;
- Result in inadequate emergency access; or
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

Impacts Discussion

The proposed project would result in an increase of up to 18 truck trips per week to dispose of screenings, grit and sludge and one truck trip per month to deliver polymer to the WWTP. The proposed project would result in an increase in the production of sludge and additional truck trips are attributed to the larger volume of sludge to haul away. Dewatered solids would be approximately 15 to 18 percent solids versus 80 percent solids. In addition, the proposed project assumes two to ten water trucks per week would fill up with recycled water at the utility water station. Overall, the impact to traffic and roadway capacity would affect primarily Atascadero Road, SR-1 and SR-41. Atascadero Road has an ADT of 8,800. SR-1 and SR-41 have ADTs of 24,000 and 8,400 and LOS of A-B and C, respectively. Overall, depending on the day and time of year, the proposed project would add no more than 30 truck trips per week, or no more than 6 trucks per day on average (assuming weekdays only), to these roadways, which would be a minimal increase relative to existing ADTs. This minimal increase would not cause any long-term traffic effects or affect LOS on local or regional roadways. Once completed, the upgraded facility would not employ additional workers and would not need to expand its current parking facilities. Further, maintenance activities to service the project would be similar to those that occur under existing conditions. Therefore, the potential significant impacts to traffic would be limited to the period of time needed to construct the project. Mitigation measures for traffic-related impacts identified in this EIR focus on reducing the short-term construction effects.

Air Traffic

The closest airport to the project site is San Luis Obispo County Airport, located over 15 miles to the southeast. The construction and operation of the proposed project would not affect air traffic patterns, levels, or locations. There would be no impact.

Alternative Transportation

There are no bus stops located immediately adjacent to the project site. The Class II bikeway running along Atascadero Road would not be affected by direct project construction onsite at the WWTP. The bikeway is a bike lane located within the paved roadway, and construction of the proposed project would not result in any street or lane closures. Staging areas potentially located within the right-of-way along Atascadero Road would not encroach on the paved roadway and would not decrease the performance and safety of such transportation facilities. Therefore, the proposed project would not conflict with any plans or policies supporting alternative transportation. There would be no impact.

Circulation System, Incompatible Uses, and Emergency Access

Impact 3.11.-1: Construction and demolition activities may result in short-term increases in vehicle trips by construction workers and construction vehicles that could potentially cause an increase in traffic on roads within the project vicinity. (Less than Significant with Mitigation)

The construction and demolition of structures associated with the WWTP upgrade would result in temporary disruption of traffic resulting from truck movements to and from the project area. Construction-related traffic would cause a temporary and intermittent lessening of the capacities of the streets along haul routes that provide access to the project site (e.g., Atascadero Road) because of the slower movements and turning radii of construction trucks compared to personal vehicles. Construction activities could also introduce construction equipment and oversized vehicles on roadways in and around the WWTP potentially increasing hazards to passing motorists and constricting emergency access to the WWTP and neighboring properties. No road closures are expected to be required for construction of the proposed project.

Construction activities are anticipated to generate anywhere from zero to 40 trips per day on local and regional roadways. Approximately 1.5 acres of staging areas would be required in order to accommodate equipment storage and worker parking. Approximately 0.5 to 1.0 acre would be available for equipment set-down and parking onsite at the WWTP. An additional 0.5 to 1.0 acre would be established offsite in areas near the construction zone that are open and accessible, such as the City's neighboring Corporation Yard, a small lease site behind the cement plant, the Atascadero Road right-of-way across from the WWTP where green waste is currently stockpiled, and a vacant lot on the corner of Atascadero Road and SR-1 (Figure 2-1). As a result, workers driving construction equipment between the project site and offsite staging areas may potentially increase traffic and roadway hazards in the project vicinity, particularly in the morning and afternoon when students are being dropped-off and picked-up at the neighboring Morro Bay High School.

Although construction activity would generate a maximum of 40 truck trips per day, the additional traffic created would not be substantial relative to existing background conditions. Intersections and roadways adjacent to the project site generally operate at high LOS levels with the exception of the Main/SR-41 intersection and SR-41. Construction-related traffic occurring on these roadways and intersections during peak hourly traffic would have the greatest potential to impede traffic flow. With the implementation of the Traffic Control/Traffic Management Plan described in Mitigation Measure 3.11-1, impacts to traffic would be less than significant. The Traffic Control Plan would include measures to lessen roadway hazards for passing motorists, require the City to coordinate with San Luis Coastal Unified School District to minimize traffic impacts during peak circulation periods near Morro Bay High School, and require the City to coordinate with local emergency service providers to ensure emergency access to properties in the project vicinity are maintained.

Mitigation Measures

Mitigation Measure 3.11-1: MBCSD shall require the construction contractor to prepare and implement a Traffic Control/Traffic Management Plan to minimize impacts during project construction. The Traffic Control/Traffic Management Plan shall include, but not be limited to, the following measures:

- The City of Morro Bay shall maintain access for local land uses including public properties, recreational properties, beachfront access, and commercial properties during construction activities.
- Emergency services access to local land uses will be maintained for the duration of construction activities. Local emergency service providers will be informed of lane closures and detours.
- The City of Morro Bay shall post advanced warning of construction activities to allow motorists to select alternative routes in advance.
- The City of Morro Bay shall arrange for a telephone resource to address public questions and complaints during project construction.
- The City of Morro Bay shall comply with roadside safety protocols, so as to reduce the risk of accident.
- For roadways requiring lane closures, the City of Morro Bay (and the construction contractor) shall develop circulation plans to minimize impacts to local street circulation. This would include the use of signing to guide vehicles around the construction zone.
- Include a plan to coordinate all construction activities with the San Luis Coastal Unified School District at least two months in advance. The San Luis Coastal Unified School District shall be notified of the timing, location, and duration of construction activities. The implementing agencies shall require its contractor to maintain vehicle, pedestrian, and school bus service during construction through inclusion of such provisions in the construction contract. The assignment of temporary crossing guards at designated intersections may be needed to enhance pedestrian safety during project construction. Also, the following provisions shall be met:
  - A minimum of two months prior to project construction, the implementing agencies shall coordinate with the San Luis Coastal Unified School District to identify peak circulation periods at the Morro Bay High School (i.e., the arrival and

departure of students), and require their contractor to avoid lane closures during these periods.

– A minimum of two months prior to project construction, the implementing agencies shall coordinate with the San Luis Coastal Unified School District to identify alternatives to their safe routes to school program, alternatives for the school bussing routes and stop locations, and other circulation provisions, as part of the Traffic Control/ Traffic Management Plan.

Significance after Mitigation: Less than significant.

Mitigation Measure Summary Table

Table 3.11-2 presents the impacts and mitigation summary for Traffic and Transportation.

TABLE 3.11-2
TRANSPORTATION AND TRAFFIC IMPACTS AND MITIGATION SUMMARY

Proposed Project Impact	Mitigation Measure	Significance after Mitigation
Traffic Load, Incompatible Uses, and Emergency Access: Construction and demolition activities may result in short-term increases in vehicle trips by construction workers and construction vehicles that could potentially cause an increase in traffic on roads within the project vicinity.	Mitigation Measure 3.11-1	Less than significant

References – Transportation and Traffic

Amtrak, Pacific Surfliner – San Luis Obispo – San Diego, http://www.amtrak.com, 2008

California Department of Transportation (Caltrans), 2006 Traffic Volumes on California State Highways, available at www.dot.ca.gov/hq/traffops/saferesr/trafdata/index.htm, 2007

California Department of Transportation (Caltrans), 2005 Annual Average Daily Truck Traffic on California State Highways, available at www.dot.ca.gov/hq/traffops/saferesr/ trafdata/index.htm, 2006

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City of Morro Bay, Coastal Land Use Plan, October 1982.

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City of Morro Bay, *General Plan*, 1988.

City of Morro Bay, *Bikeway Planning Study*, April, 1997.

San Luis Obispo Regional Transportation Authority (RTA), *Route 12 B Schedule*, Accessed December, 2008.

Federal Highway Administration (FHWA), *Manual on Uniform Traffic Control Devices (MUTCD) for Streets and Highways*, U.S. Department of Transportation, Office of Highway Safety, November 2003.

3.12 Environmental Justice

This section discusses environmental justice issues pertaining to the proposed project. This section evaluates the potential for the proposed project to disproportionately affect minority and low-income populations. The proposed project construction would occur within the City of Morro Bay and would not have long-term effects on any one community. Data presented in this section were obtained from the U.S. Census Bureau, 2000 census files.

3.12.1 Environmental Setting

Population

San Luis Obispo County has a population of 246,681 and the City of Morro Bay has a population of 10,308. The proposed project is located within the coastal City of Morro Bay and within census tract 105.

Demographic

In San Luis Obispo County and the City of Morro Bay, the largest category of race/ethnicity is White; followed by Black/African American and Asian (**Table 3.12-1**). The City of Morro Bay and census tract 105 have a greater percentage of people categorized as White (89 and 90 percent) relative to all of San Luis Obispo County (84 percent).

TABLE 3.12-1
RACE/ETHNICITY BY CENSUS TRACT
(Percent of Total Population)

Census Tract	White	Black or African American	Asian	Other
San Luis Obispo County	84%	2%	3%	11%
City of Morro Bay	89%	1%	1%	9%
Census Tract 105	90%	1%	1%	8%

SOURCE: U.S. Census Bureau, 2000 Census Files

Income

In San Luis Obispo County, the median household income is $42,429 (**Table 3.12-2**). The City of Morro Bay's median household income is slightly lower than that of the entire county, and the census tract directly related to the project location is similar to that of the city at $33,730. The percent of the population below the poverty level differs at most by three percent between the County, City and census tract.

TABLE 3.12-2
HOUSEHOLD INCOME AND POVERTY STATUS BY CITY, COUNTY, AND CENSUS TRACT

Census Tract	Population	Median Household Income	Income below Poverty Level (percent of total population)
San Luis Obispo County	246,681	$42,428	12%
City of Morro Bay	10,308	$34,379	13%
Census Tract 105	5,110	$33,730	15%

SOURCE: U.S. Census Bureau, 2000 Census Files.

3.12.2 Regulatory Framework

Federal

CEQA-Plus procedures outlined in the State Revolving Fund (SRF) financing guidelines include compliance with Executive Order 12898, which outlines federal actions to address environmental justice in minority populations and low-income populations.

Executive Order 12898 states that agencies shall identify and address disproportionately high and adverse human health or environmental effects on minority and low income populations. A newly created working group was created to develop strategies for programs and policies, regarding minority and low-income populations, to promote enforcement of all health and environmental statutes, improve research and data collection in relation to health and environment, identify different patterns of consumption of natural resources, and ensure greater public participation.

3.12.3 Impact Assessment

Thresholds of Significance

For the purposes of this EIR and consistency with CEQA-Plus guidelines, applicable local plans, and agency and professional standards, the proposed project would be considered to have a significant effect on environmental justice if it would:

- Affect the health or environment of minority or low income populations disproportionately.

Impacts Discussion

Construction of the new treatment facilities would be built largely within the footprint of the existing sludge drying beds at the WWTP and small portions of the adjacent Corporation Yard and cement plant. The treatment plant was constructed originally in 1954 and has been in operation ever since. The treatment plant is the only source of wastewater treatment for the City of Morro Bay and community of Cayucos, and the upgrade would improve the quality of the water discharged into the ocean. The proposed project was intended as a benefit to the area and

was not based on socio-economic characteristic of communities, such as income level or race/ethnicity.

San Luis Obispo County, the City of Morro Bay and census tract 105 all have a very similar demographic distribution. Therefore, the ethnographic data demonstrate that minority neighborhoods would not be disproportionately affected by the proposed project.

The poverty level of residents within San Luis Obispo County, the City or Morro Bay and census tract 105 varies only by three percent, demonstrating that the proposed project is not correlated to low income areas within San Luis Obispo County. The median household income for San Luis Obispo County is higher than that for the City or Morro Bay, but census tract 105 and the City of Morro Bay median household income show no difference. Therefore, the income and poverty data demonstrate that low-income neighborhoods would not be disproportionately affected by the proposed project.

Based on all census data presented herein, the proposed project would not have a disproportionate affect on minority or low income populations. There would be no impact.

References – Environmental Justice

U.S. Census Bureau, 2000 Census Files.

CHAPTER 4
Cumulative Impacts

4.1 Introduction

CEQA Analysis Requirements

CEQA requires that an EIR assess the cumulative impacts of a project with respect to past, current, and probable future projects within the region. *CEQA Guidelines* (Section 15355) define cumulative effects as "two or more individual effects that, when considered together, are considerable or which compound or increase other environmental impacts. The cumulative impact from several projects result from the incremental impacts of the proposed project when added to other closely related, and reasonably foreseeable, future projects." Pertinent guidance for cumulative impact analysis is given in Section 15130 of the *CEQA Guidelines*:

- An EIR shall discuss cumulative impacts of a project when the project's incremental effect is "cumulatively considerable", (i.e., the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of current projects, and the effects of probable future projects, including those outside the control of the lead agency, if necessary).
- An EIR should not discuss impacts that do not result in part from the project evaluated in the EIR.
- A project's contribution is less than cumulatively considerable, and thus not significant, if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact.
- The discussion of impact severity and likelihood of occurrence need not be as detailed as for effects attributable to the project alone.

The analysis of cumulative effects in this EIR focuses on the effects of concurrent construction and operation of the proposed project with other spatially and temporally proximate projects as described below. As such, this cumulative analysis relies on a list of related projects that have the potential to contribute to cumulative impacts in the project area.

4.2 Related Projects

4.2.1 Geographic Scope

Cumulative impacts are assessed for related projects within a similar geographic area. This geographic area may vary, depending upon the issue area discussed and the geographic extent of the potential impact. For example the geographic area associated with construction noise impacts is limited to areas directly adjacent to construction sites, whereas the geographic area that is affected by construction-related air emissions may include the larger air basin. Construction impacts associated with increased noise, dust, erosion, and access limitations tend to be localized but could be exacerbated if other development or improvement projects are occurring within the same or adjacent locations as the proposed project.

Geographically, the proposed project is located in the City of Morro Bay in western San Luis Obispo County. For the purposes of this analysis, projects in and around Estero Bay, in the City of Morro Bay and the unincorporated areas of Cayucos and Los Osos are considered when evaluating potential cumulative impacts due to construction and operation of the proposed project. These projects are listed in **Table 4-1**.

4.2.2 Project Timing

In addition to the geographic scope, cumulative impacts also take into consideration the timing of related projects relative to the proposed project. The implementation schedule is particularly important for construction-related impacts; for a group of projects to generate cumulative construction impacts, they must be temporally as well as spatially proximate. The related projects listed in Table 4-1 may or may not occur simultaneously with the proposed project. However, this analysis assumes these projects would be implemented concurrently with construction of the MBCSD WWTP Upgrade project, between 2012 and 2014.

4.2.3 Type of Projects Considered

As described in Chapter 3 of this EIR, the impacts associated with implementation of the proposed project include both short-term, construction-related impacts and long-term impacts related to project operation.

Cumulative Construction Impacts

Cumulative effects could result when considering the effects of the proposed project in combination with the effects of other construction projects in the area. For this analysis, other past, present, and reasonably-foreseeable future construction projects in the area have been identified. Table 4-1 lists the major capital improvement projects and water resources management projects in the project vicinity that are included in the analysis of cumulative construction-related impacts. In addition, the analysis of cumulative construction impacts

TABLE 4-1
MORRO BAY RELATED PROJECTS

Project Name	Project Type	Project Sponsor	Project Implementation
Water/Wastewater Projects			
Los Osos Community Wastewater Project	New treatment plant	San Luis Obispo County	In progress
California Men's Colony Wastewater Treatment Plant Upgrade	New treatment plant	California Department of Corrections	Complete
Morro Bay NPDES Illicit Discharge Detection and Elimination Ordinance	New ordinance regulating non-storm discharges	City of Morro Bay	In progress
Morro Bay Brackish Water Reverse Osmosis Project	Treatment upgrade	City of Morro Bay	Complete (2009)
Coastal Zone Development Projects			
Morro Bay Harbor Entrance Dredging	Offshore dredging	USACE	Ongoing
Morro Bay Corporation Yard Master Plan	Municipal operations	City of Morro Bay	Ongoing
Morro Bay State Park Marina Renovation and Enhancement Project	Public recreation, marina expansion	City of Morro Bay	Subject to funding
Morro Bay Conference Center	New conference center, retail, public plaza	City of Morro Bay	To Be Determined
Morro Bay Waterfront Boardwalk and Circulation Modernization	Waterfront improvements, boardwalk, bike paths	City of Morro Bay	Complete (2009)
Morro Bay Power Plant Project	Gas-fired power plant	Duke Energy	Ongoing
Roadway Projects			
Roundabout Revised Signing and Striping Plan	Roadway improvements	City of Morro Bay	Complete (2009)
North Main Bike Lanes and Overlay	Roadway improvements	City of Morro Bay	Ongoing

SOURCES: SLOCFCWCD, 2007; Michael Brandman Associates, 2008, 2009; California Energy Commission, 2004; City of Morro Bay, 2010.

assumes that in the Estero Bay communities, planned future development projects will be on-going simultaneously with the proposed project, including residential construction, small-scale construction projects, and projects that have not yet been identified.

Cumulative Operational Impacts

Cumulative effects could result when considering the effects of the proposed project in combination with the effects of operating other water resource management projects in and around Estero Bay. These projects are listed in Table 4-1 and are summarized below.

4.3 Description of Select Related Projects

4.3.1 Los Osos Community Wastewater Project

The Los Osos Community Wastewater Project has been identified as the highest-priority project by the San Luis Obispo County Flood Control and Water Conservation District (SLOCFCWCD) and the Water Resources Advisory Committee in the *San Luis Obispo County Integrated Regional Water Management Program* (IRWMP) (SLOCFCWCD, 2007). This project would construct wastewater treatment facilities in the Los Osos community to replace existing septic tanks that are leaking and impacting local groundwater and the Morro Bay National Estuary. The project would provide secondary treatment for wastewater effluent in accordance with waste discharge requirements issued by the RWQCB (Michael Brandman Associates, 2009). The effluent produced at the new treatment facilities could be used for groundwater management and wetland restoration, and in the future for reuse if recycled water infrastructure is built (Michael Brandman Associates, 2009). The project would result in water quality improvements in Morro Bay, sensitive habitats, impaired waters, and the groundwater basin, and provide the potential for a reliable, supplemental water supply to the region in the form of recycled water.

4.3.2 Morro Bay BWRO Project

The City of Morro Bay has used a Sea Water Reverse Osmosis (SWRO) system to treat Morro Basin groundwater sources for the removal of nitrates for the last several years. Treating otherwise potable groundwater for nitrates has precluded the use of the treatment system for its designed purpose of converting sea water into fresh water.

The project will install Brackish Water Reverse Osmosis (BWRO) treatment trains. These trains operate at about 500 psi less pressure than the SWRO treatment trains and use much less energy per unit of water produced. The treatment will have sufficient capacity to replace the contaminated well water in a reliable fashion.

4.3.3 Morro Bay Corporation Yard Master Plan

The City of Morro Bay Corporation Yard Master Plan (RRM Design Group, 2007) was prepared in order to assess the condition of existing facilities in the Corporation Yard and to make recommendations for future site building improvements to meet current and future demands. The Corporation Yard is located on Atascadero Road between the WWTP and a trailer storage facility. The Corporation Yard is 2.22 acres and houses the City's parks storage building, desalination plant, vehicle maintenance bays and underground fueling facility, water storage buildings, street sign shop, offices, and parking structures. The Master Plan recommends that the collections building be replaced as soon as possible and that all of the buildings be extensively renovated to meet current standards and operational and safety goals.

4.3.4 California Men's Colony WWTP Upgrade

The State of California upgraded the California Men's Colony WWTP in 2007 to comply with waste discharge requirements and correct inflow and infiltration problems that have led to treatment plant overflows. The upgrade added oxidation ditches, filtration and disinfectant. The upgraded WWTP provides a high quality tertiary treated effluent which is used by the County of San Luis Obispo to irrigate Dairy Creek Golf Course, used by the California State Polytechnic Institute to irrigate fodder crops, and discharged at a minimum continuous flow of 0.75 cfs to Chorro Creek (SLOCFCWCD, 2007). The project is intended to enhance the ecosystem of Chorro Creek, support TMDL and storm water programs, and protect source water and groundwater quality.

4.3.5 Morro Bay Power Plant Project

The Morro Bay Power Plant Project is a major modernization of the existing Morro Bay Power Plant (MBPP). Duke Energy Morro Bay LLC proposes to remove the existing facility and replace it with a new combined-cycle power plant just north of the existing MBPP. The existing MBPP consists of four natural gas-fired generating units, employing 1950s and 1960s technology. Generating capacity of the existing plant is 1002 MW. This project would have two modern combined-cycle units; aach new unit would consist of two natural gas-fired turbines, a heat recovery steam generator and one steam turbine. Generating capacity of the project would be 1200 MW. Natural gas would continue to be delivered from an existing PG&E pipeline. The Project would continue to interconnect with the electrical grid at the existing PG&E switchyard, which is located on the eastern portion of the plant site.

4.4 Impacts and Mitigation Measures

4.4.1 Project Construction

Construction of the proposed project is expected to occur between 2012 and 2014. The construction schedule for the proposed facilities depends on funding and permitting. For the purposes of this analysis, the related projects identified in Table 4-1 are all presumed to be implemented concurrently within the 2012 to 2014 timeframe. These related projects, which include water/wastewater projects, coastal zone development and offshore projects, capital improvement projects and residential development projects in the Estero Bay area, may contribute to certain types of cumulative construction impacts to air quality, noise, water quality and traffic, as described below. There would be no cumulative impacts to aesthetics; biological resources; cultural resources; geology and soils; hazards and hazardous materials; land use, agriculture and recreation; or public services and utilities. Due to the nature of these resources as geographically confined and/or distinct, any impacts to these resources can be mitigated for individual projects and collectively do not compound to create cumulatively considerable impacts.

Impact 4-1: Concurrent construction of several projects in the project area could result in cumulative short-term impacts to air quality, hydrology and water quality, noise, and traffic and transportation. (Less than Significant with Mitigation)

Air Quality

Construction of the proposed project together with the identified cumulative projects located in the Estero Bay area would contribute additional emissions to existing conditions in the South Central Coast Air Basin (SCCAB). Construction of the proposed project would not exceed the SLOCAPCD's thresholds, and therefore would not be expected to be cumulatively considerable. There might be emission increases for certain air pollutants for nearby past, present and/or foreseeable projects (either overlapping construction periods or on-going operation) that are expected to exceed the SLOCAPCD's emission thresholds. Per *CEQA Guidelines* Section 15064(h)(4), the mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulatively considerable. As such, construction of the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant.

Hydrology and Water Quality

Concurrent construction of the proposed project with the identified cumulative projects located in the Estero Bay area and Morro Creek Watershed could result in temporary impacts to hydrology and water quality in the project area. Concurrent construction activities could result in increased erosion and subsequent sedimentation, with impacts to local drainages and/or storm drain capacity. Additionally, surface water quality could be affected by construction activities that result in the release of fuels or other hazardous materials to stream channels or storm drains, or discharge from excavation dewatering activities. Other projects in the watershed that could impact hydrology and water quality during construction activities include the Morro Bay Desalination Energy Recovery Project, the Morro Bay Corporation Yard Master Plan, the coastal zone development projects listed in Table 4-1, and residential development projects.

As described in Chapter 3.7, Hydrology and Water Quality, MBCSD would develop and implement a SWPPP in compliance with the SWRCB General Construction Permit for construction storm water runoff and comply with SWRCB Low-Threat General WDRs for discharge of construction dewatering, including development of a discharge monitoring plan (DMP). The SWPPP, General WDRs, and DMP would include BMPs to reduce the impact of construction of the proposed project to surface water and groundwater quality to less than significant levels (see Mitigation Measure 3.7-1). Similarly, other related projects would be required to acquire and comply with the terms conditions of similar permits to mitigate the effects of construction activities to surface water and groundwater. In addition, the proposed project and all other development project in Morro Bay would be subject to the BMPs contained in the City's Storm Water Management Plan (2009). As such, the contribution of the proposed project to short-term hydrology and water quality impacts is not cumulatively considerable.

Noise

Construction of the proposed project, together with the identified related projects in the Estero Bay communities, could generate noise and vibration that would affect existing ambient noise conditions in the region. Construction noise and vibration would be localized, affecting areas in the immediate vicinity of the construction sites. Some of the identified related projects could be constructed simultaneously in areas proximate to, or overlapping geographically with, the proposed project, such as the Morro Bay Desalination Energy Recovery Project and Morro Bay Corporation Yard Master Plan. This could result in a cumulative impact to local ambient noise conditions.

As described in Section 3.9, Noise, daytime construction noise is exempt from maximum noise thresholds identified in local noise ordinances. The City of Morro Bay Zoning Ordinance states that construction noise is exempt from noise level performance standards during daytime hours between 7:00 A.M. and 7:00 P.M. Monday through Friday, and between 8:00 A.M. and 7:00 P.M. on Saturday and Sunday. Therefore, noise associated with daytime construction activities would not violate noise ordinances. For the proposed project, implementation of Mitigation Measure 3.9-1 would ensure that project construction occurs during daytime hours to avoid generating noise that violates standards. With implementation of the mitigation measures, impacts to noise would not be cumulatively considerable and would be considered less than significant.

Traffic and Transportation

Construction of the proposed project, together with the identified related projects in the Estero Bay area (Table 4-1), could affect traffic and circulation in the region. The effects of construction activities on traffic are due to an increase in the number of vehicles on local roadways (due to delivery of materials and worker commutes) and physical constraints on roadways if lane or street closures are required. The project site is largely constrained to the existing WWTP, Corporation Yard and cement plant on Atascadero Road, with additional staging areas located potentially onsite at the Corporation Yard and cement plant, along the Atascadero Road right-of-way across from the WWTP, and at a vacant lot on the corner of Atascadero Road and SR-1 (Figure 2-1). The WWTP is adjacent to Morro Dunes RV Park, the City of Morro Bay Corporation Yard, Morro Bay High School, and Morro Bay State Beach, all of which utilize Atascadero Road for access. Some of the identified related projects could be constructed simultaneously in areas proximate to, or overlapping geographically with, the proposed project, such as the Morro Bay Desalination Energy Recovery Project and Morro Bay Corporation Yard Master Plan.

As described in Section 3.11, Transportation and Traffic, MBCSD would be required to implement a Traffic Control/Traffic Management Plan (Mitigation Measure 3.11-1) to reduce construction-related effects of the proposed project to less than significant levels. The Traffic Control/Traffic Management Plan also requires MBCSD to coordinate construction activities with the San Luis Coastal Unified School District and to maintain access to neighboring driveways at all times to the extent feasible during project construction (Mitigation Measure 3.11-1). The Traffic Control/Traffic Management Plan should also take into consideration the effects of other

construction activities occurring simultaneously in the same geographic area. Mitigation Measure 4-1 requires MBCSD to coordinate construction of the proposed project with other City agencies to ensure cumulative impacts to traffic and circulation are reduced to less than significant levels. With implementation of these mitigation measures, impacts to traffic and circulation would not be cumulatively considerable and would be considered less than significant.

Mitigation Measures

Implement Mitigation Measures 3.7-1, 3.9-1 and 3.11-1.

Mitigation Measure 4-1: MBCSD shall communicate and coordinate project construction activities with other City agencies. Phasing of project construction shall be coordinated to minimize cumulative impacts to traffic and circulation.

Significance after Mitigation: Less than significant.

4.4.2 Project Operation

Operation of the proposed project involves the discharge of tertiary-treated wastewater to Estero Bay and operation of the new WWTP treatment facility. The existing onsite composting program would be discontinued and all sludge would be hauled offsite for disposal or further processing. When considered together with other projects listed in Table 4-1, operation of the proposed project would not result in cumulatively considerable impacts to the resources evaluated in Chapter 3 of this EIR. The resources potentially affected by operation of the proposed project together with related projects are discussed below.

Impact 4-2: The proposed project and related projects could result in long-term cumulative impacts to biological resources, storm water, and traffic and transportation. (Less than Significant)

Biological Resources

Operation of the proposed project, together with the identified related projects in the Estero Bay communities, would improve the quality of water discharged to Estero Bay. In addition to the proposed project, the Los Osos Community Wastewater Project and the California Men's Colony WWTP Upgrade would construct and upgrade other wastewater treatment facilities in the region to secondary and tertiary treatment. In addition to discharges from the upgraded WWTP, additional discharges of secondary and tertiary effluent to surface waters (e.g., Chorro Creek) that lead to Morro Bay and Estero Bay would provide additional cumulative benefit to the quality of water discharged to the ocean and to surface waters in the greater Estero Bay watershed. The proposed project would not have a cumulatively considerable impact to biological resources located in freshwater and marine environments.

Storm Water

Implementation of related projects in the vicinity of the WWTP, such as the Desalination Energy Recovery Project, Corporation Yard Master Plan, and Power Plant Project, would introduce additional structures into the floodplain. The proposed project, when considered together with these related projects, could have a cumulative impact on storm flows and flood elevations. However, as described in Section 3.7, Hydrology and Water Quality, the proposed project would remove the proposed new treatment facilities from the 100-year flood plain and demolish the existing facilities to maximize the available space for the floodway. The proposed project would not affect storm flows or flood elevations on neighboring properties. Therefore, the effect of the proposed project to storm water flows or flood elevations would not be cumulatively considerable.

Traffic and Transportation

As described in Section 3.11, Transportation and Traffic, the proposed project would discontinue the onsite composting program and all of the dewatered sludge would be hauled away for offsite disposal or composting. All sludge produced at the new WWTP would be mechanically dewatered to 15 to 18 percent solids rather than solar dried to 80 percent solids. As a result the volume of sludge produced at the new WWTP would be greater than the existing WWTP. The proposed project would generate between 2,800 and 3,500 wet tons (18 percent solids) of sludge per year at build-out. Up to 18 truck trips per week would be required for offsite disposal of all screenings, grit and sludge produced at the new WWTP. In addition, delivery of polymer associated with operation of the proposed project would result in twelve more additional truck trips per year to replenish the polymer (one delivery every month). And, the proposed project assumes two to ten water trucks per week would fill up with recycled water at the utility water station. The existing deliveries of sodium hypochlorite and sodium bisulfite would continue unchanged.

Implementation of the related projects listed in Table 4-1 could result in additional daily vehicle trips on local roadways associated with operation and maintenance of water and wastewater projects, public use of coastal zone developments, and new residential developments. Given the number of vehicles currently utilizing local roadways on a daily basis (e.g., 8,800 ADT on Atascadero Road), the increase in traffic associated with operation of the WWTP—up to six additional truck trips per day—would not be cumulatively considerable when considered together with the related projects. Impacts would be less than significant.

Mitigation Measures

None required.

4.4.3 Greenhouse Gas Emissions

Greenhouse gas impacts are considered to be exclusively cumulative impacts; there are no non-cumulative greenhouse gas emission impacts from a climate change perspective (CAPCOA, 2008). Greenhouse gas emissions are discussed in Chapter 3.2, Air Quality. The proposed project would not have cumulatively considerable impact on greenhouse gas emissions or global climate change and would not conflict with the State's ability to meet AB 32 goals. See Chapter 3.2 for a detailed discussion of impacts.

4.4.4. Mitigation Measure Summary Table

Table 4-2 presents the summary of cumulative impacts and mitigation measures.

TABLE 4-2
CUMULATIVE IMPACTS AND MITIGATION SUMMARY

Proposed Project Impact	Mitigation Measure	Significance after Mitigation
Project Construction		
Air Quality: Construction of the proposed project would not exceed the SLOCAPCD's thresholds, and therefore are not expected to be cumulatively considerable.	None required	Less than Significant
Hydrology and Water Quality: Concurrent construction activities could result in increased erosion and subsequent sedimentation, with impacts to local drainages and/or storm drain capacity. Additionally, surface water quality could be affected by construction activities that result in the release of fuels or other hazardous materials to stream channels or storm drains, or discharge from excavation dewatering activities.	Mitigation Measure 3.7-1	Less than Significant
Noise: Construction of the proposed project, together with the identified related projects in the Estero Bay communities, could generate noise and vibration that would affect existing ambient noise conditions in the region.	Mitigation Measure 3.9-1	Less than Significant
Traffic and Transportation: Construction of the proposed project, together with the identified related projects in the Estero Bay, could affect traffic and circulation in the region.	Mitigation Measures 3.11-1 and 4.1	Less than Significant
Project Operation		
Biological Resources: Operation of the proposed project, together with the identified related projects in the Estero Bay communities, would improve the quality of water discharged to Estero Bay and would not have a cumulatively considerable impact to biological resources located in freshwater and marine environments.	None required	Less than Significant
Storm Water: The proposed project would introduce into the flood plain new structures that could affect storm flows and associated flood elevations both onsite at the WWTP and on neighboring properties.	None required	Less than Significant
Traffic and Transportation: The increase in traffic associated with operation of the WWTP would not be cumulatively considerable when considered together with the related projects.	None required	Less than Significant

References – Cumulative Analysis

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CHAPTER 5
Growth Inducement

5.1 Introduction

The *California Environmental Quality Act (CEQA) Guidelines* (§15126.2(d)) require that an Environmental Impact Report (EIR) evaluate the growth inducing impacts of a proposed action. Section 15126.2(d) calls for the EIR to:

> *Discuss the way 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 projects which would remove obstacles to population growth (a major expansion of a wastewater treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.*

A project can have direct and/or indirect growth inducement potential. Direct growth would result if a project involved construction of new housing. A project can have indirect growth inducement if it would establish substantial new permanent employment opportunities (e.g., commercial, industrial or governmental enterprises) or if it would involve a substantial construction effort with substantial short-term employment opportunities and indirectly stimulate the need for additional housing and services to support the new employment demand. A project would also have an indirect growth inducement effect if it would remove an obstacle to additional growth and development, such as removing a constraint on a required public service, or involve construction of new infrastructure.

5.2 Methodology

Growth inducement may result in adverse impacts if the growth is not consistent with the land use plans and growth management plans and policies for the area affected. Local land use plans provide for land use development patterns and growth policies that allow for the orderly expansion of urban development supported by adequate urban public services, such as water supply, roadway infrastructure, sewer service and solid waste service. This development may have environmental impacts, as identified in CEQA documents prepared for adoption of local land use plans. A project that would induce “disorderly” growth that is in conflict with local land

use plans could indirectly cause additional adverse environmental impacts and impacts to other public services. Thus, it is important to assess the degree to which the growth accommodated by a project would or would not be consistent with applicable land use plans.

To determine direct growth inducement potential, the proposed project is evaluated to verify whether an increase in population or employment, or the construction of new housing would occur as a direct result of the project. If either of these scenarios occurs, the proposed project could result in direct growth-inducement within the City of Morro Bay and the community of Cayucos.

To determine indirect growth inducement potential, this section assesses whether the proposed project would remove an obstacle to additional growth and development, such as removing a constraint on a required public service. In order to assess this, the proposed project is reviewed in relation to population projections developed by the San Luis Obispo Council of Governments (SLOCOG) and the City of Morro Bay, discussed in more detail below. In addition, the proposed project is reviewed in relation to water supply and demand projections developed by the City of Morro Bay. While growth may be consistent with local planning policies, it may still promote secondary effects to the local environment.

5.3 Population Projections

5.3.1 Measure F

In 1984, the City of Morro Bay passed Measure F, a voter initiative that limited residential building permits to 70 permits a year and set a population limit of 12,200. Under the measure, development was subject to availability of water resources both in quantity and quality, through the adoption of an Urban Water Management Plan (UWMP). If water and wastewater treatment capacities become available, the measure allowed for population increases beyond 12,200, subject to a vote. The measure was passed under the belief that the population limit would be reached by the year 2000. However, the 2000 U.S. Census revealed that the City's population only reached 10,350. The census results also showed that the occupancy rate and the development rate were lower than expected. **Table 5-1** shows historic population data for the City.

TABLE 5-1
HISTORIC POPULATION IN MORRO BAY

Year	1985	1990	1995	2000	2005
Population	9,747	9,664	9,518	10,350	10,270

SOURCE: Morro Bay 2005 UWMP.

5.3.2 San Luis Obispo Council of Governments Population Projections

The SLOCOG is a joint powers authority tasked with facilitating cooperative subregional and regional planning, coordination, and technical assistance on issues of mutual concern for the seven incorporated cities and unincorporated areas in SLO County. As part of the published *Long Range Socio-Economic Projects*, SLOCOG analyzes demographic data and makes population projections (ERA, 2006). These projections are based on historic trends and projected changes within the region. **Table 5-2** presents three alternative growth scenarios (low, medium, and high) for the City of Morro Bay in five-year increments through 2030. For Morro Bay, annual growth rate projections for the period between 2005 and 2030 range from 0.58 to 0.80 percent.

TABLE 5-2
SLOCOG CITY OF MORRO BAY PROJECTIONS 2006

Year	Scenario 1: Low[a]	Scenario 2: Medium[b]	Scenario 3: High[c]
2010	10,660	10,710	10,760
2015	10,910	11,010	11,260
2020	11,210	11,310	11,710
2025	11,560	11,660	12,060
2030	11,910	12,100	12,610

[a] Population projection based on SLOCOG Low Population Projection.
[b] Population projection based on SLOCOG Medium Population Projection.
[c] Population projection based on SLOCOG High Population Projection.

SOURCES: SLOCOG Long Range Socio-Economic Projections (Year 2030); ERA, 2006.

Population projections for Cayucos are not available in the SLOCOG report. The U.S. Census reported a population of 2,943 in 1990 and 2,960 in 2000.

5.3.3 Morro Bay Urban Water Management Plan Population Projections and Water Demand

The City of Morro Bay's 2005 UWMP contains population projections that are used to calculate the City's future water needs. The projections are made under the assumption that the City's population would continue to grow at an average rate of 61 residential units per year, based on the average number of Equivalent Development Units allocated between 2000 and 2004. The 2005 occupancy rate for housing units is 80 percent for Morro Bay and 91 percent for SLO County. The population projections are then calculated using the 2005 occupancy rate, the residential development rate, and the 2000 U.S. Census population of 10,350. **Table 5-3** shows the population projections using both Morro Bay and SLO County occupancy rates.

In 2025, the projected population of Morro Bay is expected to be between 12,300 and 12,500 people. The projected water demand by this population is 2,000 acre-feet per year (afy)

TABLE 5-3
PROJECT POPULATION IN MORRO BAY FOR ESTIMATION OF WATER NEEDS

Year	At Current Morro Bay Occupancy Rate (80%)	At Current SLO County Occupancy Rate (91%)
2010	10,800	10,800
2015	11,300	11,400
2020	11,800	12,000
2025	12,300	12,500

SOURCE: Morro Bay 2005 UWMP, 2006.

underlying Morro Basin and Chorro Basin as long as surface flows of 1.4 cfs are available in during a dry year (Boyle Engineering, 2006). The City's existing water supplies are currently provided almost entirely by imported water through the State Water Project. The City is contracted for 1,313 afy of SWP water from the County of San Luis Obispo. In addition, during a normal year the City has water rights to pump up to 1723 afy of groundwater from the Chorro Creek downstream of the City's wells. During dry years, the City can pump up to 1,150 afy. The City also operates a desalination plant during periods of drought as a supplemental supply of water. The existing desalination plan can produce 645 afy but does not operate regularly. Considering all sources, the City has total existing water supplies of 3,108 afy during a dry year. In 2005, the City imported 1,007 afy through the SWP and pumped 354 afy from the underlying groundwater basins, for a total supply of 1,361 afy (Boyle Engineering, 2006).

5.3.4 San Luis Obispo County Growth Management Ordinance (Title 26)

Title 26 of the San Luis Obispo County Code is known as the County Growth Management Ordinance. Title 26 establishes annual growth rates for unincorporated areas of the county (including the community of Cayucos) that are in accordance with the ability of community resources to support such growth and conform to the County General Plan. Title 26 establishes a system for allocating annual residential construction permits in accordance with the annual growth rates set by the County Board of Supervisors. Title 26 limits the maximum number of new dwelling units to an amount equal to 2.3 percent of total existing dwelling units in unincorporated county areas, subject to approval by the Board of Supervisors, with the exception of certain areas such as the Nipomo Mesa Area and the Woodlands Specific Plan Area. In general, 35 percent of the maximum annual allocation for new dwelling units is reserved for multi-family projects.

5.4 Growth Inducement Potential

The proposed project would build new treatment facilities to achieve full secondary treatment of all effluent discharged through the ocean outfall, and to provide tertiary filtration capacity equivalent to the PSDWF of 1.5 mgd. The tertiary filtered water would meet Title 22 standards

for disinfected secondary-23 recycled water and could be used for limited beneficial use (see Table 1-1 in Chapter 1). The proposed project would also accommodate future improvements to produce disinfected tertiary recycled water for use in accordance with Title 22 standards. Recycled water uses include, but are not limited to, treatment process applications onsite at the WWTP, offsite M&I applications such as soil compaction, concrete mixing, dust control, roadway cleaning, and flushing sewers; municipal landscape irrigation such as around the perimeter of the WWTP, and agricultural irrigation.

The proposed project is limited to new wastewater treatment infrastructure and reclaimed water facilities. The proposed project would not involve construction of housing or commercial development that would directly affect the number of residents or employees within the area. The proposed project would not directly contribute to the creation of additional housing or jobs within Morro Bay and Cayucos and thus would not result in direct growth inducement.

To determine indirect growth inducement potential, the proposed project has been reviewed to ascertain whether it would remove an obstacle to additional growth and development, such as removing a constraint on a required public service (i.e. wastewater treatment capacity). The proposed project would upgrade the WWTP to full secondary treatment plus tertiary filtration. The existing WWTP is rated for an average PSDWF of 2.36 mgd; the proposed project would build new WWTP facilities that would provide tertiary treatment to a reduced PSDWF capacity of up to 1.5 mgd. This reduction in treatment capacity is sufficient to treat the expected future effluent flows associated with the minimal planned growth in the City of Morro Bay and the community of Cayucos. Therefore, the proposed project would not indirectly induce growth or remove an obstacle to growth, since the capacity of the WWTP and the ocean outfall/diffuser would not increase. Population growth would occur in any case based on the approved buildout and growth control policies in the City of Morro Bay and the unincorporated community of Cayucos. The upgraded WWTP would have sufficient capacity to treat future effluent flows from these communities.

In addition, the proposed project includes limited beneficial use of disinfected secondary-23 recycled water and in the future unrestricted beneficial use of up to 0.4 mgd of disinfected tertiary recycled water. In 2005, the City imported 1,007 afy through the SWP and pumped 354 afy from the underlying groundwater basins, for a total supply of 1,361 afy (Boyle Engineering, 2006). In 2025, demand is estimated to be approximately 2,000 afy (Boyle Engineering, 2006). The City's current water supplies of 3,108 during a dry year exceed this estimated demand. The proposed project would produce up to 0.4 mgd or approximately 448 afy of reclaimed water. This water would be used to offset the need to import water, pump groundwater, and/or operate the desalination plant. The use of reclaimed water produced at the new WWTP would not remove an obstacle to growth because the City already has sufficient water supplies to meet demand in 2025. Water supply is currently not considered an obstacle to growth in the City of Morro Bay. There would be no impact.

References – Growth Inducement

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CHAPTER 6
Alternatives Analysis

6.1 Introduction

6.1.1 CEQA Requirements

According to the *CEQA Guidelines*, an EIR must describe a reasonable range of alternatives to a proposed project that could feasibly attain most of the basic project objectives, and would avoid or substantially lessen any of the proposed project's significant environmental effects. This alternatives analysis summarizes the alternatives screening process conducted to identify feasible alternatives. Information to identify the "environmentally superior alternative" is also provided in this chapter.

Section 15126.6(f) of the *CEQA Guidelines* provides direction on the required alternatives analysis:

> *The range of alternatives required in an EIR is governed by a "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project. The range of feasible alternatives shall be selected and discussed in a manner to foster meaningful public participation and informed decision making.*

An EIR need not consider every conceivable alternative to a project. Rather, the alternatives must be limited to ones that meet the project objectives, are feasible, and would avoid or substantially lessen at least one of the significant environmental 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. Section 15126.6(b) of the *CEQA Guidelines* states that an EIR:

> *...must identify ways to mitigate or avoid the significant effects that a project may have on the environment, the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or could be more costly.*

Section 15126.6 (d) of the *CEQA Guidelines* provides further guidance on the extent of alternatives analysis required:

> *The EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. A matrix displaying the major characteristics and significant environmental effects of each alternative may be used to summarize the comparison. If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed.*

The EIR must briefly describe the rationale for selection and rejection of alternatives and the information the lead agency relied on when making the selection. It also should identify any alternatives considered, but rejected as infeasible by the lead agency during the scoping process and briefly explain the reasons for the exclusion. Alternatives may be eliminated from detailed consideration in the EIR if they fail to meet most of the project objectives, are infeasible, or do not avoid any significant environmental effects.

Section 15126.6(e)(1) of the *CEQA Guidelines* also requires that the No Project Alternative be addressed in this analysis. The purpose of evaluating the No Project Alternative is to allow decision-makers to compare the potential consequences of the proposed project with the consequences that would occur without implementation of the proposed project.

Finally, an EIR must identify the environmentally superior alternative. The No Project Alternative may be the environmentally superior to the proposed project based on the minimization or avoidance of physical environmental impacts. However, the No Project Alternative must also achieve the project objectives in order to be selected as the environmentally superior alternative. *CEQA Guidelines* (Section 15126.6(e)(2)) require that if the environmentally superior alternative is the No Project Alternative, the EIR shall identify an environmentally superior alternative among other alternatives.

6.1.2 Review of Proposed Project Objectives

The WWTP is operated under a National Pollutant Discharge Elimination System (NPDES) Permit (No. CA0047881) issued by the USEPA and the Central Coast RWQCB. The current NPDES permit allows for the discharge of a blend of primary and secondary treated effluent to the ocean through the existing 27-inch diameter outfall pipeline. This discharge is in accordance with Section 301(h) of the federal Clean Water Act that modifies the requirement for full secondary treatment in certain cases. MBCSD has made a commitment to the Central Coast RWQCB to phase out the need for the 301(h) modified discharge permit by upgrading the WWTP to at least full secondary treatment by 2014. The proposed project would construct facilities to provide full secondary treatment for all effluent discharged through its ocean outfall and to provide enhanced treatment with tertiary filtration capacity equivalent to the PSDWF of 1.5 mgd.

The objectives of the proposed project are as follows:

- Comply with the secondary treatment standards contained in 40 CFR Part 133;[1]
- Phase out the need for a 301(h) modified discharge permit;
- Minimize flooding impacts onsite at the WWTP and adjoining properties; and
- Accommodate future installation of reclamation capability to meet Title 22 requirements for disinfected tertiary recycled water for unrestricted use.

6.1.3 Review of Significant Environmental Impacts

As discussed in Section 6.1.1 above, the range of alternatives required to be evaluated in an EIR is limited to those alternatives that would avoid or substantially lessen any significant effects of the proposed project and could feasibly attain most of the project objectives. Implementation of the proposed project would not result in any significant and unavoidable impacts. All impacts associated with the proposed project would be less than significant with or without implementation of mitigation measures identified in Chapters 3 and 4 of this EIR.

6.2 Alternatives Analysis

6.2.1 No Project Alternative

Pursuant to Section 15126.6(e)(2) of the *CEQA Guidelines*, the No Project Alternative shall:

> *…discuss the existing conditions at the time the notice of preparation is published, or if no notice of preparation is published, at the time the environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services.*

Under the No Project Alternative, no new facilities would be constructed at the WWTP. Operation of the existing WWTP would continue under a 301(h) modified NPDES permit. Under the No Project Alternative, the secondary treatment facilities would continue to be constrained to the current secondary treatment capacity of 0.97 mgd. Flows that exceed 0.97 mgd would continue to receive only primary treatment and disinfection after blending with secondary treated effluent. Currently, the effluent load at the WWTP does not frequently exceed 0.97 mgd. In 2009, the WWTP treated an average measured daily flow of 1.092 mgd. Thus, most of the effluent receives secondary treatment during most of the year.

However, the WWTP has an average dry weather flow (ADWF) capacity of 2.06 mgd and a peak seasonal dry weather flow (PSDWF) capacity of 2.36 mgd. Under the No Project Alternative, future growth could result in an increase in the effluent load to the WWTP, resulting in an

[1] 2002 Code of Federal Regulations (CFR) Title 40, Protection of the Environment, Chapter 1, Environmental Protection Agency, Part 133, Secondary Treatment Regulation.

increase in the volume of effluent that receives only primary treatment. Also, under the No Project Alternative, the existing practice of partial onsite composting of biosolids would continue.

Ability to Meet Project Objectives

The No Project Alternative would not meet three of the four project objectives. The No Project Alternative would maintain existing operations at the WWTP and would not result in any upgraded facilities to comply with renewed waste discharge requirements established by the Central Coast RWQCB or allow MBCSD to phase out the 301(h) modified discharge permit. MBCSD has entered into a legal agreement with the Central Coast RWQCB to phase out the need for the 301(h) modified discharge permit by upgrading the WWTP to at least full secondary treatment. The No Project Alternative would violate the terms of the Settlement Agreement made with the RWQCB, and therefore is not considered to be a feasible alternative.

The No Project Alternative would not result in the installation of treatment facilities to produce reclaimed water that meets Title 22 standards for beneficial reuse. There would be no recycled water produced or used in the vicinity of the WWTP. The only project objective that the No Project Alternative would meet is to not alter the flood impacts on adjoining properties. No changes would be made to the WWTP and therefore no changes to storm flows or flood elevations would occur.

Impact Analysis

Under the No Project Alternative, the impacts identified in Chapters 3 and 4 that are associated with construction and operation of the proposed project would be avoided. In addition, however, under the No Project Alternative, the potential improvement to effluent water quality would not be realized because the proposed upgrade to full secondary treatment with tertiary filtration would not be implemented. The quality of effluent discharged through the WWTP ocean outfall would remain unchanged.

6.2.2 Alternative 1: Full Secondary Treatment

Alternative 1 is similar to the proposed project, except the tertiary filter modules would not be installed. Under Alternative 1, all wastewater entering the WWTP would receive full secondary treatment and all discharges through the ocean outfall would meet full secondary treatment requirements. Effluent discharged from the WWTP would comply with future NPDES permit requirements.

Ability to Meet Project Objectives

Alternative 1 would meet three of the four project objectives. Alternative 1 would upgrade the WWTP to full secondary treatment to comply with renewed waste discharge requirements established by the Central Coast RWQCB and allow MBCSD to phase out the 301(h) modified discharge permit. Alternative 1 would minimize flooding impacts on adjoining properties by

building a new WWTP that is removed from the 100-year flood plain and demolishing the existing WWTP, similar to the proposed project. However, Alternative 1 would not include accommodations for future treatment facilities that produce disinfected tertiary recycled water for unrestricted use in accordance with Title 22.

Impact Analysis

Under Alternative 1, the impacts would be similar to those described in Chapters 3 and 4, with the exception of air quality and water quality.

Air Quality and Greenhouse Gas Emissions

Under Alternative 1, the WWTP upgrade would not include installation of tertiary filter modules. As a result, relative to the proposed project, Alternative 1 would use approximately five percent less energy to operate the upgraded facilities. As such, air emissions, including GHG emissions, associated with the electricity produced to run the upgraded WWTP would also be reduced under Alternative 1.

As described in Chapter 3.2, Air Quality, the proposed project would not conflict with implementation of State goals for reducing greenhouse gas emissions and would not have a negative effect on Global Climate Change. GHG emissions associated with project construction would be approximately 888 metric tons/year of CO_2e and project operations would be approximately 694 metric tons/year of CO_2e (indirect emissions from the use of electricity). The proposed project would not be classified as a major source of GHG emissions. Operational emissions would be about 2.9 percent of the lower reporting limit, which is 25,000 metric tons/year of CO_2e, and would be 0.0004 percent of the State goal to reduce GHG emissions by 169 million metric tons of CO_2e. Alternative 1 would result in slightly less GHG emissions than the proposed project. However, the impacts associated with the proposed project due to GHG emissions are considered less than significant, and therefore Alternative 1 would not lessen or avoid any significant and unavoidable impacts to air quality.

Water Quality

Under Alternative 1, the WWTP would be upgraded to full secondary treatment rather than secondary treatment with tertiary filtration. Under Alternative 1, the quality of effluent discharged from the WWTP to the Pacific Ocean would be of a lower quality than the proposed project. Tertiary filtration provides more consistent and reliable effluent water quality relative to secondary treatment due to the physical barrier associated with the tertiary filters. Tertiary treatment also provides greater annual solids removal than secondary treatment with respect to BOD_5 and TSS. The proposed project would reduce the loading of BOD_5 solids to approximately 12,000 lbs per year (99.1 percent removal) and reduce the BOD_5 concentration to 3 mg/L, from the current loading of 198,000 lbs per year (83.8 percent removal) and concentration of 45 mg/L (Carollo, 2007). Alternative 1 would reduce BOD_5 loading to approximately 20,000 lbs per year (98.5 percent removal) and reduce the BOD_5 concentration to 5 mg/L (Carollo, 2007). Both the proposed project and Alternative 1 would exceed the new RWQCB permit requirements for

$BOD_{5,}$ which require annual loading of 119,000 lbs per year (91.2 percent removal) and a concentration of 30 mg/L.

The proposed project would reduce TSS loading to approximately 8,000 lbs per year (99.4 percent removal) and reduce the concentration to 2 mg/L, from the current TSS loading of 95,000 lbs per year (93.2 percent removal) and concentration of 21 mg/L (Carollo, 2007). Alternative 1 would reduce TSS loading to approximately 20,000 lbs per year (98.6 percent removal) and reduce the TSS concentration to 5 mg/L (Carollo, 2007). Both the proposed project and Alternative 1 would exceed the new RWQCB permit requirements for TSS, which require annual loading of 119,000 lbs per year (91.7 percent removal) and a concentration of 30 mg/L.

Other than BOD_5 and TSS, there is no detectable difference in constituent concentrations in secondary treated effluent when compared to tertiary filtered effluent. Both the proposed project and Alternative 1 would improve the quality of effluent currently discharged from the WWTP.

6.2.3 Alternative 2: Membrane Bioreactor (MBR)

Alternative 2 includes the construction of a new MBR facility at the WWTP and facilities for direct hauling of sludge and demolition of the existing WWTP, similar to the proposed project. Following the upgrade, the WWTP would have the ability to treat the full design PSDWF of 1.5 mgd. The total effluent flow would receive secondary treatment, membrane filtration, and disinfection before being discharged into the ocean. The effluent quality produced by the MBR is higher than the proposed project and would comply with future NPDES permit requirements. All treated effluent at the new MBR facility would meet the standards for disinfected tertiary recycled water as defined by Title 22. The proposed project would produce disinfected secondary-23 recycled water with provisions for future improvements to produce 0.4 mgd of disinfected tertiary recycled water..

Ability to Meet Project Objectives

Alternative 2 would meet all of the project objectives. Alternative 2 would upgrade the WWTP to tertiary treatment, exceeding renewed waste discharge requirements established by the Central Coast RWQCB and allowing MBCSD to phase out the 301(h) modified discharge permit. Alternative 2 would minimize flooding impacts on adjoining properties by building a new WWTP that is removed from the 100-year flood plain and demolishing the existing WWTP, similar to the proposed project. Alternative 2 would include treatment facilities that produce disinfected tertiary recycled water for unrestricted use in accordance with Title 22.

Impact Analysis

Under Alternative 2, the impacts would be similar to those described in Chapters 3 and 4, with the exception of air quality and water quality.

Air Quality and Greenhouse Gas Emissions

Under Alternative 2, the WWTP upgrade would produce disinfected tertiary recycled water and as a result, relative to the proposed project, Alternative 2 would use more energy to operate the upgraded facilities. As such, air emissions, including GHGs associated with the electricity produced to run the upgraded WWTP, would also increase under Alternative 2.

As described above for Alternative 1 and in Chapter 3.2, Air Quality, the proposed project would not conflict with implementation of State goals for reducing greenhouse gas emissions and would not have a negative effect on Global Climate Change. Alternative 2 would result in slightly more GHG emissions than the proposed project, however the incremental increase is not likely to be great enough to affect the State's goals to reduce GHGs. Similar to the proposed project, Alternative 2 would not have a negative effect on Global Climate Change.

Water Quality

Under Alternative 2, the WWTP upgrade would produce disinfected tertiary recycled water. Under Alternative 2, the quality of effluent discharged from the WWTP to the Pacific Ocean would be of a higher quality than the proposed project. However, the proposed project would meet and exceed the new RWQCB permit requirements for BOD_5 and TSS of 119,000 lbs per year and 30 mg/L. Alternative 2 also would meet and exceed the RWQCB permit requirements. Both the proposed project and Alternative 2 would improve the quality of effluent currently discharged from the WWTP. Alternative 2 would not lessen or avoid impacts to water quality associated with the proposed project.

6.2.4 Alternative 3: Chorro Valley Location

Under Alternative 3, the City of Morro Bay would construct additional wastewater treatment facilities in a new location separate from the existing WWTP. Cannon Associates prepared a feasibility study for the City of Morro Bay to examine potential fatal flaws for developing a new stand-alone wastewater treatment plant (Cannon Associates, 2007). The feasibility study identified the preferred potential location for a stand-alone treatment plant, which was at the eastern edge of the City, adjacent to Seashell Communities on Teresa Road, adjacent to SR-1 and near the intersection of Quintana Road and South Bay Boulevard (Cannon Associates, 2007). The new treatment plant would divert 49 to 92 percent of raw wastewater from the existing WWTP, depending on the potential diversion point. The new treatment plant would provide tertiary treatment followed by reverse osmosis (RO) processes. Effluent would be discharged into San Bernardo Creek, a tributary to Chorro Creek. The new facility would not include onsite biosolids treatment or composting. The new facility would also require the installation of various new pipelines, including new gravity sewer mains, a brine return line to the existing WWTP, and a new force main. The alignments for these pipelines mostly would be within roadway right-of-ways, likely along Main Street, Atascadero Road, and Quintana Road.

Under Alternative 3, depending on the diversion point to the new upstream treatment plant and the associated flow volume diversion, the City of Morro Bay's ADWF into the existing WWTP

would be reduced from approximately 0.84 mgd to between 0.43 and 0.08 mgd. As a result, the combined ADWF from both the City and Cayucos Sanitary District (CSD) into the existing WWTP would be between 0.72 mgd and 0.37 mgd depending on the upstream diversion point. The current CSD ADWF into the existing WWTP is 0.29 mgd (Cannon Associates, 2007). Under Alternative 3, all wastewater entering the existing WWTP would receive full secondary treatment and all discharges through the ocean outfall would meet full secondary requirements. In addition, most of the facilities at the existing WWTP also would require rehabilitation or replacement under Alternative 3 for continued operation.

Ability to Meet Project Objectives

Alternative 3 would meet all of the project objectives. Alternative 3 would construct a new wastewater treatment plant in another location that would provide tertiary treatment followed by RO processes for 49 to 92 percent of the wastewater generated within the City of Morro Bay. Under Alternative 3, the new treatment plant would divert effluent from the existing WWTP, thus reducing the volume of effluent treated at the existing WWTP. As a result, the combined ADWF from both the City and CSD into the existing WWTP would be between 0.72 mgd and 0.37 mgd. This volume of effluent would receive fully secondary treatment because the existing WWTP can provide fully secondary treatment to up to 0.97 mgd. Therefore, Alternative 3 would allow the existing WWTP to comply with full secondary standards and phase out the 301(h) modified permit.

Alternative 3 would minimize flood impacts on adjoining properties because significant portions of the existing WWTP could be demolished and therefore would reduce storm flows and flood elevations. Alternative 3 would include treatment facilities that produce disinfected tertiary recycled water for unrestricted use in accordance with Title 22.

Impact Analysis

Alternative 3 would have impacts similar to those described in Chapters 3 and 4 for the proposed project, with the exception of the resources described below.

Aesthetics

Under Alternative 3, the parcel considered for location of the new treatment plant is currently undeveloped and adjacent to Seashell Communities and open space lands. Construction of the new treatment plant could introduce a negative aesthetic element into the visual landscape, visible from a scenic highway (SR-1), and would alter the visual character of the new plant site. In addition, a new treatment plant could introduce new sources of light or glare due to the introduction of nighttime security lighting. The proposed project would construction replacement treatment facilities and would not create additional aesthetic impacts or introduce new sources of light or glare.

Construction Impacts: Air Quality, Noise, Traffic

Under Alternative 3, construction of a new wastewater treatment plant would result in greater impacts to air quality, noise, and traffic than those associated with the proposed project to upgrade the existing WWTP. Air quality, noise, and traffic impacts would be greater due to prolonged construction activities associated with a new treatment plant facility and construction of pipelines that otherwise are not required for the proposed project. The new treatment facility would be adjacent to sensitive receptors (residential areas) that could result in significant impacts associated with construction noise or vibration. Under Alternative 3, construction of new pipelines within roadway right-of-ways could result in impacts to traffic and circulation due to lane or road closures that otherwise would not occur under the proposed project.

Odor

Alternative 3 would introduce a new treatment plant into a location adjacent to sensitive receptors and would introduce a new source of nuisance odor from wastewater treatment processes. Under the proposed project, existing facilities associated with sources of odor are being eliminated and new facilities are being designed to reduce potential odor impacts relative to existing conditions.

Biological Resources

Under Alternative 3, the new treatment plant would discharge tertiary-treated RO effluent to Bernardo Creek, a tributary to Chorro Creek, which eventually drains to Morro Bay. Chorro Creek is considered an impaired water body per Section 303(d) of the Clean Water Act and has Total Maximum Daily Loads (TMDLs) established to regulate nutrient loading from all sources in the Chorro Creek watershed. These TMDLs include maximum limits on nitrogen, nitrates, phosphorus and sediment, and limits to minimize impact on dissolved oxygen and temperature (Cannon Associates, 2007). As a result, the discharges from the new treatment plant would be subject to these TMDLs, and the treatment process at the new treatment plant would likely require advanced membrane filtration in addition to RO in order to meet expected effluent restrictions on TDS and nitrogen for discharges from the plant into the creek (Cannon Associates, 2007). Under Alternative 3, the biological resources in Chorro Creek could be positively affected by effluent discharges due to potential creek enhancement. Similarly under the proposed project, there would be no direct adverse impacts to biological resources because the WWTP site is an existing disturbed site, and the upgrade to full secondary with tertiary filtration would improve the quality of effluent discharged to Estero Bay through the outfall pipe.

Hazards and Hazardous Materials

Alternative 3 would introduce new hazardous materials to the project vicinity in the form of chemicals delivered, stored, and used onsite at the new treatment plant. Under the proposed project, the chemicals currently used and stored at the existing WWTP would continue to be used at the replacement WWTP. The proposed project would introduce a new polymer for use during the solids dewatering process. The polymer is not considered a hazardous material.

Hydrology and Water Quality

Under Alternative 3, the new treatment plant would include a membrane bioreactor (MBR) in order to achieve adequate treatment and effluent water quality for discharge into Chorro Creek. As described above, Chorro Creek is considered an impaired water body per Section 303(d) of the Clean Water Act and has Total Maximum Daily Loads (TMDLs) established to regulate nutrient loading from all sources in the Chorro Creek watershed. Alternative 3 could benefit the water quality of Chorro Creek as effluent would be intended for creek enhancement purposes. In addition, Alternative 3 could benefit groundwater levels due to potential groundwater replenishment through the Chorro Creek bottom. If Alternative 3 could discharge 1.4 cfs of additional flow into Chorro Creek, this would be sufficient to supplement the potable water system and allow existing Chorro Valley groundwater wells to be used. Operation of the treatment processes associated with Alternative 3 would benefit water quality of receiving waters. Similarly under the proposed project, there would be no direct adverse impacts to water quality because the upgrade to full secondary treatment with tertiary filtration would improve the quality of effluent discharged to Estero Bay through the outfall pipe.

Land Use, Agriculture, Forestry, and Recreation

Under Alternative 3, the new treatment plant would be located in an area designated as residential land use under the Morro Bay General Plan/LCP. This would result in a potential conflict with the General Plan/LCP.

6.2.5 Summary of Alternatives Analysis

As required by CEQA, this alternatives analysis evaluates the effects of the No Project Alternative and Alternatives 1, 2, and 3 relative to the proposed project. As provided in Section 15126.6(d) of the *CEQA Guidelines*, the significant effects of the alternatives are identified in less detail than the proposed project. **Table 6-1** compares the ability for the No Project Alternative and Alternatives 1, 2, and 3 to meet the project objectives. **Table 6-2** compares the environmental impacts of the No Project Alternative and Alternatives 1, 2, and 3 relative to the proposed project.

TABLE 6-1
ABILITY OF PROJECT ALTERNATIVE TO MEET PROJECT OBJECTIVES

Project Objectives	Proposed Project	No Project Alternative	Alt 1	Alt 2	Alt 3
Comply with secondary treatment standards	Yes	No	Yes	Yes	Yes
Phase out 301(h) modified discharge permit	Yes	No	Yes	Yes	Yes
Minimize flooding impacts on the WWTP and adjoining properties	Yes	Yes	Yes	Yes	Yes
Accommodate future installation of reclamation capacity	Yes	No	No	Yes	Yes

SOURCE: ESA, 2010.

TABLE 6-2
SUMMARY COMPARISON OF PROJECT ALTERNATIVE IMPACTS

Potential Project Impacts	Proposed Project	No Project Alternative	Alt 1	Alt 2	Alt 3
Aesthetics	LSM	None	0	0	+
Air Quality/Greenhouse Gas Emissions	LSM	None	-	+	+
Odor	LTS	None	0	0	+
Biological Resources	LSM	None	0	0	0
Cultural Resources	LSM	None	0	0	0
Geology, Soils, and Mineral Resources	LSM	None	0	0	0
Hazards and Hazardous Materials	LSM	None	0	0	+
Hydrology and Water Quality	LSM	None	0	0	0
Land Use, Agriculture, Forestry, Recreation	NI	None	0	0	+
Noise/Vibration	LSM	None	0	0	+
Public Services and Utilities	LSM	None	0	0	0
Traffic and Transportation	LSM	None	0	0	+
Environmental Justice	NI	None	0	0	0

LTS = Less than significant impact
LSM = Less than significant impact with mitigation
NI = No Impact
(—) = lesser impact
(+) = greater impact
(0) = no difference

SOURCE: ESA, 2010.

6.3 Environmentally Superior Alternative

CEQA requires that an EIR identify the environmentally superior alternative of a project other than the No Project Alternative (*CEQA Guidelines* Section 15126.6(e)(2)). Table 6-2 compares the impacts of the No Project Alternative and Alternatives 1, 2, and 3 to the proposed project. The No Project Alternative would avoid all construction and operational impacts associated with the proposed project, but the No Project Alternative would only meet one out of four project objectives. Alternative 1 would meet three out of four project objectives and would slightly reduce emissions of GHGs. Alternative 2 would meet all of the project objectives and would slightly increase emissions of GHGs. Alternative 3 would meet all of the project objectives but would increase impacts to many resources (Table 6-2).

The No Project Alternative appears to be the environmentally superior alternative but would not meet any of the project objectives and is therefore rejected. Alternative 1 would have slightly fewer environmental impacts than the proposed project but would not meet all of the project objectives and therefore is also rejected as environmentally superior to the proposed project.

Alternative 3 would meet all the project objectives but would increase impacts to many resources and therefore is rejected as the environmentally superior alternative.

Alternative 2 would meet all of the project objectives. Although there would be slightly greater GHG emissions under Alternative 2, neither Alternative 2 nor the proposed project is considered environmentally superior to the other. Relative to the proposed project, Alternative 2 represents a tradeoff between the provision of recycled water and the energy required to produce such recycled water. Selection of the proposed project or Alternative 2 results in tradeoffs in impacts to GHG emissions and effluent water quality that are not considered significant with respect to environmental impacts. Therefore, Alternative 2 and the proposed project are considered environmentally equivalent alternatives. The JPA voted to proceed with the proposed project as the preferred alternative, upgrading the WWTP to full secondary treatment with tertiary filtration with the intention to make future improvements to provide disinfected tertiary recycled water for unrestricted use.

References – Alternatives Analysis

Carollo Engineers, *Morro Bay Cayucos Sanitary District, Wastewater Treatment Plant Facility Master Plan Report*, September 2007.

Carollo Engineers, *Morro Bay Cayucos Sanitary District, Facility Master Plan, Amendment No. 1 Draft Report*, August 2009.

Cannon Associates, *City of Morro Bay Wastewater Treatment Plant Study*. Prepared for Morro Bay Cayucos Sanitary District, May 24, 2007.

MWH, *Wastewater Treatment Plant Upgrade Project, Facility Master Plan Draft Amendment No. 2*, July 2010.

CHAPTER 7
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CHAPTER 8
Acronyms

AB	Assembly Bill
ADWF	Average Annual Dry Weather Flow
ADT	Average Daily Traffic
af	Acre-Feet
afy	Acre-Feet Per Year
AGR	Agricultural Water Supply
amsl	Above Mean Sea Level
APE	Area of Potential Effects
AQMDs	Air Quality Management Districts
AQUA	Aquaculture
ASBS	Areas of Special Biological Significance
ASCE	American Society of Civil Engineers
AST	Above-Ground Storage Tanks
BIOL	Preservation of Biological Habitats of Special Significance
BMP	Best Management Practice
BOD	Biochemical Oxygen Demand
BWRO	Brackish Water Reverse Osmosis
CalARP	California Accidental Release Prevention
Cal-EPA	California Environmental Protection Agency
Cal-Sites	California Department of Toxic Substances Control
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBC	California Building Code
CCAA	California Clean Air Act
CCC	California Coastal Commission
CCIC	Central Coast Information Center
CCR	California Code of Regulations
CCRWQCB	Central Coast Regional Water Quality Control Board

CCWB	Central Coast Water Board
CDP	Coastal Development Permit
CDFG	California Department of Fish and Game
CDP	Coastal Development Permit
CDTSC	California Department of Toxic Substances Control
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
cfs	Cubic Feet Per Second
CGS	California Geological Survey
CH_4	Methane
CIWMB	California Integrated Waste Management Board
CMP	Congestion Management Program
CNDDB	California Natural Diversity Data Base
CNEL	Community Noise Equivalent Level
CO_2	Carbon Dioxide
CO_2E	Carbon Dioxide Equivalents
COLD	Cold Freshwater Habitat
COMM	Commercial and Sport Fishing
Corps	U.S. Army Corps of Engineers
CRHR	California Register of Historical Resources
CRO	Cultural Resources Officer
CSD	Cayucos Sanitary District
CUPA	Certified Unified Program Agency
CVS	Visitor Serving Commercial
CWA	Clean Water Act
cy	Cubic Yards
dB	Decibel
dBA	A-weighted decibels
DMP	Discharge Management Plan
DPR	California Department of Parks and Recreation
Draft EIR	Draft Environmental Impact Report
DTSC	Department of Toxic Substances Control

EASS	Extended Aeration Activated Sludge Process
EIR	Environmental Impact Report
EOP	Emergency Operations Plan
EQ	Exceptional Quality
ERP	Emergency Response Plan
EST	Estuarine Habitat
FAA	Federal Aviation Administration
FCAA	Federal Clean Air Act
FCAAA	Federal Clean Air Act Amendments
$FeCl_2$	Ferrous Chloride
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FIP	Federal Implementation Plan
FMMP	Farmland Mapping and Monitoring Program
FRSH	Freshwater Replenishment
FSZ	Farmland Security Zone
ft^2	Square Feet
g	Gravity
GBT	Gravity Belt Thickener
GHG	Greenhouse Gas
gpm	Gallons Per Minute
GWP	Global Warming Potential
GWR	Groundwater Recharge
HAPs	Hazardous Air Pollutants
H_2O	Water
HFCs	Hydrofluorocarbons
HMBP	Hazardous Materials Business Plan
HWCL	Hazardous Waste Control Law
Hz	Hertz
I	Interim Open Space Overlay
IBC	International Building Code
IND	Industrial Service Supply
IRWMP	Integrated Regional Water Management Program
IWMA	Integrated Waste Management Authority
kWH	Kilowatt Hours
LCFS	Low Carbon Fuel Standard

LCP	Local Coastal Plan
LCP	Local Coastal Program
LOMR	Letter of Map Revision
LOS	Level of Service
LUST	Leaking Underground Storage Tank
M	Richter Magnitude
M-1	Light Industrial
M&I	Municipal and Industrial
MAR	Marine Habitat
MBCSD	City of Morro Bay and the Cayucos Sanitary District
MBPP	Morro Bay Power Plant
MBR	Membrane Bioreactor
mgd	Million Gallons Per Day
MIGR	Migration of Aquatic Organisms
MMRP	Mitigation Monitoring and Reporting Plan
Mmax	Maximum Moment Magnitude
MRZ	Mineral Resource Zones
MS4s	Municipal Separate Storm Sewer Systems
msl	Mean Sea Level
MTBE	Methyl Tertiary Butyl Ether
MUN	Municipal and Domestic Water Supply
MUP	Minor Use Permit
Mw	Moment Magnitude
NAHC	Native American Heritage Commission
$NaHSO_3$	Sodium Bisulfite
NaOCl	Sodium Hypochlorite
N_2O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NAV	Navigation
NESHAPs	National Emissions Standards for Hazardous Air Pollutants
NFIP	National Flood Insurance Program
NOC	Notice of Completion
NOP	Notice of Preparation
NOx	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List

NRHP	National Register of Historic Places
OHP	Office of Historic Preservation
OIMP	Odor Impact Minimization Plan
OPR	Office of Planning and Research
OSHA	Occupational Safety and Health Administration
PCB	Polychlorinated Biphenyls
PD	Planned Development
PF	Public Facilities
PFCs	Perfluorocarbons
PGA	Peak Ground Acceleration
PHF	Peak Hour Flow
ppm	Parts per Million
PRC	Public Resources Code
PPV	Peak Particle Velocity
PSDWF	Peak Seasonal Dry Weather Flow
PUC	Public Utilities Code
RAS	Return Activated Sludge
RARE	Preservation of Rare and Endangered Species
RCRA	Resource Conservation and Recovery Act
REC1	Water Contact Recreation
REC2	Non-Contact Water Recreation
RMP	Risk Management Plan
RMS	Root Mean Square
RO	Reverse Osmosis
ROG	Reactive Organic Gases
RTA	Regional Transit Authority
RWQCB	Regional Water Quality Control Board
SCCAB	South Central Coast Air Basin
SDC	Seismic Design Category
sf	Square Feet
SF6	Sulfur Hexafluoride
SHELL	Shellfish Harvesting
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SJC	San Joaquin Composting
SLF	Sacred Lands File

SLOCAPCD	San Luis Obispo County Air Pollution Control District
SLOCOG	San Luis Obispo Council of Governments
SLOFCWCD	San Luis Obispo Flood Control and Water Conservation District
SMBRP	Site Mitigation and Brownfields Reuse Program
SPWN	Spawning, Reproduction, and/or Early Development
SR-1	State Route 1
SR-41	State Route 41
SRF	State Revolving Fund
SVP	Society for Vertebrate Paleontology
SWF/LS	Integrated Waste Board
SWLF	Solid Waste Landfill
SWP	State Water Project
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
SWRO	Sea Water Reverse Osmosis
TACs	Toxic Air Contaminants
TMDL	Total Maximum Daily Load
TSCA	Toxic Substances Control Act
TSS	Total Suspended Solids
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Services
USGS	U.S. Geological Survey
UST	Underground Storage Tank
UWMP	Urban Water Management Plan
Vdb	Decibel Notation
VMT	Vehicle Miles Travelled
VOCs	Volatile Organic Compounds
WAS	Waste Activated Sludge
WARM	Warm Freshwater Aquatic Habitat
WDRs	Waste Discharge Requirements
WILD	Wildlife Habitat
WWTP	Wastewater Treatment Plant

Appendix A
Scoping Report

Appendix A-1
Original Notice of Preparation

ESA

ESA

707 Wilshire Boulevard
Suite 1450
Los Angeles, CA 90017
213.599.4300 phone
213.599.4301 fax

www.esassoc.com

Scoping Report

date November 30, 2008

to Bruce Ambo

from Jennifer Jacobus

subject MBCSD Wastewater Treatment Plant Upgrade Project Scoping Report

MORRO BAY-CAYUCOS SANITARY DISTRICT WASTEWATER TREATMENT PLANT UPGRADE PROJECT

Scoping Report

Introduction

The City of Morro Bay is the Lead Agency for the proposed Morro Bay-Cayucos Sanitary District (MBCSD) Wastewater Treatment Plant (WWTP) Upgrade Project (proposed project). The proposed project would upgrade the WWTP to tertiary treatment and enable it to discharge an average of 1.5 mgd of tertiary treated effluent to the ocean. The existing onsite composting program at the WWTP would remain unchanged as a result of the proposed project. The existing MBCSD WWTP is located at 160 Atascadero Road within the City of Morro Bay in San Luis Obispo County, California. The project is being proposed to phase out the need for the 301(h) modified discharge permit by upgrading the WWTP to at least full secondary treatment.

Notice of Preparation and Notice of Availability

The Notice of Preparation (NOP) was prepared by Environmental Science Associates (ESA) pursuant to the California Environmental Quality Act (CEQA), to notify interested parties that the City of Morro Bay will be preparing an Environmental Impact Report (EIR) to evaluate potential environmental impacts of the MBCSD WWTP Upgrade Project (see Attachment 1).

The NOP was mailed on October 28, 2008 to approximately 70 interested parties, including local, state, and federal agencies; news publications; and other groups or individuals who had previously expressed interest in the project. A Notice of Completion (NOC) was also prepared by the City of Morro Bay and sent to the State Clearinghouse (see Attachment 2). Copies of the NOP were made available for public review at local libraries, the City's Public Services Department, the WWTP, Cayucos Sanitary District, and at the following websites: www.morro-bay.ca.us/water/water.htm, www.cayucossd.org.

Scoping Period

The 30-day project scoping period, which began with the distribution of the NOP on October 28, 2009, remained open through November 26, 2008. During the scoping period, the City of Morro Bay held a scoping meeting. The meeting was held on November 18, 2008, 5:00 P.M. at Veterans Memorial Hall (209 Surf Street, Morro Bay, CA). The City placed public notices of the scoping meetings in the San Luis Obispo Tribune newspaper on October 29 and 30, 2008.

At the scoping meeting, the City staff and ESA consultants gave a presentation on the City's proposed action (see Attachment 3). Following these presentations, meeting participants were invited to talk to staff regarding any issues they would like. Participant questions and comments were recorded on a whiteboard and videotape, and comment cards were also available for participants to fill out at the meeting or to send in at a later date. The sign-in sheet from the public scoping meeting can be found in Attachment 4.

Comments

During the scoping period, the City received seven (7) comment letters on the proposed project via mail, e-mail or facsimile (see Attachment 5). The city also received comments during the scoping meeting; multiple comments were recorded (see Attachment 6).

The next formal opportunity for public comments will be associated with the release of the Draft Environmental Impact Report, expected to be available for public review Winter 2009.

Contents of this Report

This Scoping Report contains documents pertinent to the scoping process. The following items are included:

Attachment 1: Notice of Preparation
Attachment 2: Notice of Completion
Attachment 3: Scoping Meeting Presentation
Attachment 4: Scoping Meeting Sign-in Sheet
Attachment 5: Comment Letters Received by the City
Attachment 6: Scoping Meeting Comments

NOTICE OF PREPARATION

To: California Office of Planning and Research Responsible and Trustee Agencies Other Interested Parties

Subject: Notice of Preparation of an Environmental Impact Report

Project: Morro Bay–Cayucos Wastewater Treatment Plant Upgrade

Lead Agency: City of Morro Bay and the Cayucos Sanitary District

Date: October 28, 2008

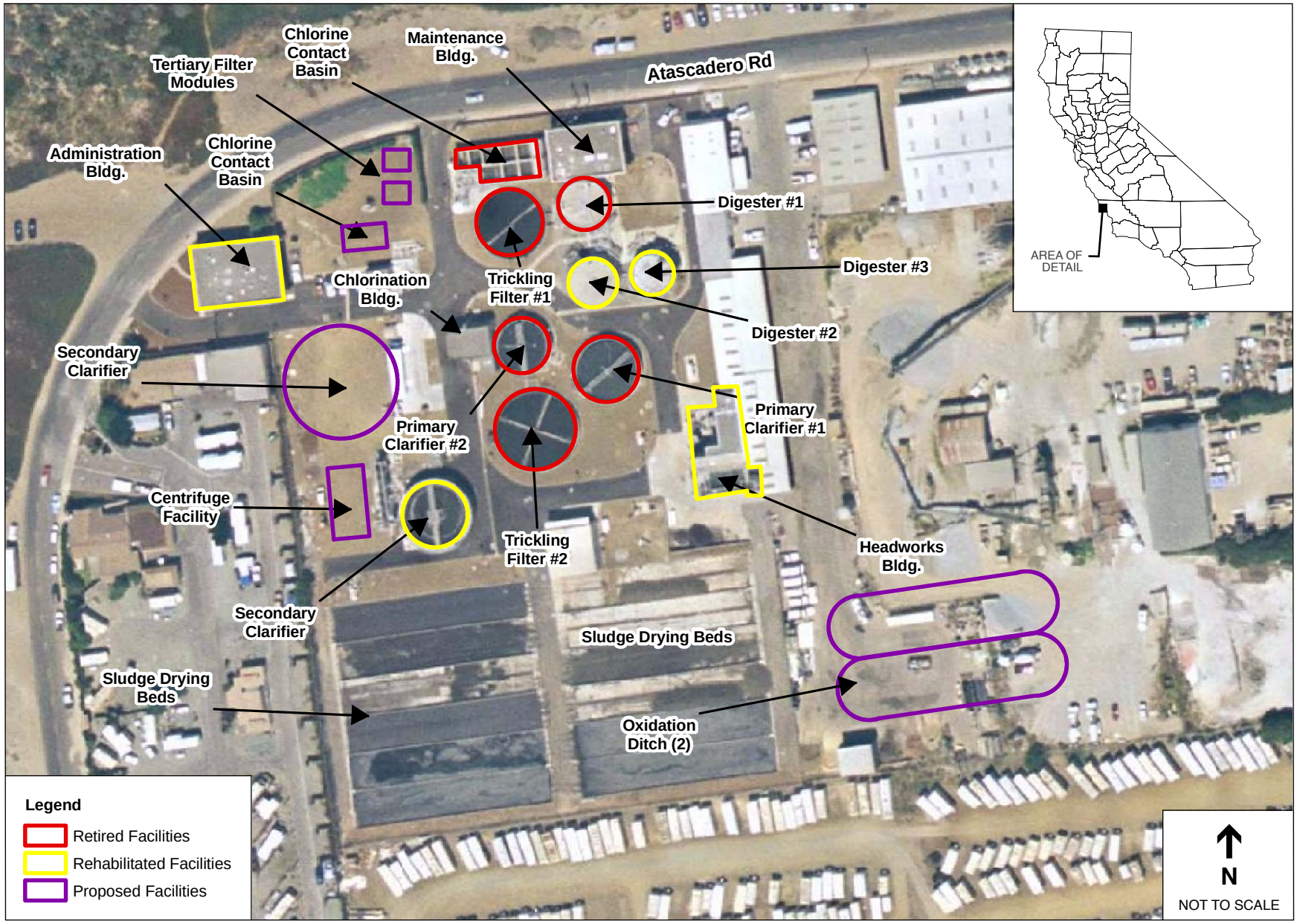
Public Review Period: October 28, 2008 through November 26, 2008

This Notice of Preparation (NOP) has been prepared to notify agencies and interested parties that the City of Morro Bay as the Lead Agency is beginning preparation of an Environmental Impact Report (EIR) pursuant to the California Environmental Quality Act (CEQA) for the proposed Morro Bay–Cayucos Wastewater Treatment Plant Upgrade Project (proposed project). The proposed project would be implemented in conjunction with the Cayucos Sanitary District, which shall serve as a Responsible Agency under CEQA. The proposed project is located at 160 Atascadero Road in the City of Morro Bay. The wastewater treatment plant would be upgraded to tertiary treatment, which would require construction of new facilities as well as rehabilitation and demolition of existing facilities. **Figure 1** (attached) provides a site plan of the proposed project.

The City of Morro Bay is soliciting the views of responsible agencies and interested persons as to the scope and content of the environmental resources and topics to be studied in the EIR. In accordance with CEQA, agencies are requested to review the project description provided in this NOP and provide comments on environmental issues related to the statutory responsibilities of the agency. The EIR will be used by the City of Morro Bay and Cayucos Sanitary District when considering approval of the proposed project.

In accordance with the time limits mandated by CEQA, comments to the NOP must be received by the City of Morro Bay no later than 30 days after publication of this notice. We request that comments to this NOP be received no later than November 26, 2008. Please send your comments to the Mr. Bruce Ambo at the address shown below. Please include a return address and contact name with your comments. Mr. Ambo is also available during normal business hours to answer questions or provide additional information concerning the project and the planned work program for environmental review.

Bruce Ambo, Director
City of Morro Bay, Public Services Department
955 Shasta Avenue
Morro Bay, CA 93442
(805) 772-6211 Phone
(805) 772-6268 Fax
bambo@morro-bay.ca.us



SOURCE: Carollo, 2008.

Morro Bay Cayucos Wastewater Treatment Plant NOP . 208013

Figure 1
Proposed Site Plan

PUBLIC MEETING

One public meeting will be held to receive public comments and suggestions regarding the proposed project and issues to be included in the EIR. The scoping meeting will include a brief presentation providing an overview of the proposed project. After the presentation, oral comments will be accepted. Written comment forms will be supplied for those who wish to submit comments in writing at the scoping meeting; written comments may also be submitted anytime during the NOP review period. The NOP is herby released on October 28, 2008 and will be available for public review through November 26, 2008.

Copies of the NOP and project documents are available on the City Web Site (www.morro-bay.ca.us/water/water.htm); at the Morro Bay Public Library (625 Harbor Street, Morro Bay); at City Hall (595 Harbor Street, Morro Bay); in the Public Services Department (955 Shasta Avenue, Morro Bay); and at the Wastewater Treatment office (160 Atascadero Road, Morro Bay). Copies are also available at the Cayucos Library (248 S. Ocean Avenue, Cayucos); Cayucos Sanitary District (200 Ash Street, Cayucos); and CSD Web Site (www.cayucossd.org). The scoping meeting will be held as follows:

DATE:	**November 18, 2008**
TIME:	**5:00 p.m.**
LOCATION:	**Veterans Memorial Hall** **209 Surf Street** **Morro Bay, CA**

PROJECT LOCATION

The existing Morro Bay-Cayucos Wastewater Treatment Plant (WWTP) is located at 160 Atascadero Road within the City of Morro Bay in San Luis Obispo County, California.

EXISTING FACILITIES

The WWTP is owned 60 percent by the City of Morro Bay and 40 percent by the Cayucos Sanitary District (CSD). The WWTP is run through a Joint Powers Agreement (JPA) Board, which is comprised of members from the City Council and the CSD Board. The WWTP is rated for an average dry weather flow of 2.06 million gallons per day (mgd), a peak seasonal dry weather flow of 2.36 mgd, and a peak wet weather flow of 6.6 mgd. The secondary treatment facilities have a design capacity of 0.97 mgd. Flows in excess of 0.97 mgd receive primary treatment only and the primary effluent is blended with the secondary effluent. The effluent blend is disinfected by chlorination and then dechlorinated before it is discharged to the Pacific Ocean via an outfall pipe that extends 2900 feet offshore into Estero Bay. In 2007, the WWTP treated an average measured daily flow of 1.09 mgd.

PROJECT NEED

The Federal Water Pollution Control Act Amendments of 1972, or Clean Water Act (CWA) required that publicly-owned wastewater treatment works (POTWs) achieve secondary treatment capability by 1977. Section 402 of the CWA established the National Pollutant Discharge Elimination System (NPDES) permit program to implement this requirement by regulating point source discharges, such as discharges from POTWs, into waters of the U.S. An NPDES permit sets specific limits for pollutants in point source discharges and establishes monitoring and reporting requirements.

Section 301(h) was added to the CWA in 1977 to allow POTWs that discharge into marine waters to apply for a variance from secondary treatment requirements if they could meet specific discharge criteria. It was determined that secondary treatment might not be necessary for ocean discharges due to greater dilution and dispersal potential relative to discharges into freshwater systems. Section 301(h) allowed the U.S. Environmental Protection Agency (EPA) to review and grant variances from secondary treatment requirements on a case-by-case basis.

The WWTP currently operates under a 301(h) modified discharge permit, which allows the disinfected blend of primary and secondary treated effluent to be discharged through its ocean outfall. In accordance with Sections 301(h) and 402 of the CWA, the WWTP is operated under a modified NPDES Permit No. CA0047881 issued by the U.S. EPA and the Central Coast Regional Water Quality Control Board (RWQCB). The City and CSD ("MBCSD" collectively) have made a commitment to the Central Coast RWQCB to phase out the need for the 301(h) modified discharge permit by upgrading the WWTP to at least full secondary treatment.

With implementation of the proposed project, operation of the WWTP would meet future NPDES permit requirements as determined by the Central Coast RWQCB. The proposed project also would protect all beneficial uses and water quality objectives for Estero Bay as defined by the California Ocean Plan.

PROJECT DESCRIPTION

The proposed project would upgrade the WWTP to tertiary treatment and enable it to discharge an average of 1.5 mgd of tertiary treated effluent to the ocean. The existing onsite composting program at the WWTP would remain unchanged as a result of the proposed project. The physical improvements associated with the proposed project include the following:

- Retiring the existing chlorine contact basin, solids contact basin, trickling filters, primary clarifiers, and Digester No. 1;
- Rehabilitating the headworks, Digesters No. 2 and 3, and the secondary clarifier, and making and improvements to existing electrical facilities; and
- Constructing new oxidation ditches, cloth-media disk filters, a secondary clarifier, centrifuge facility, gravity belt thickener, and chlorine contact basin.

Pending completion of all environmental compliance, permitting, and final design documentation, construction of the proposed project is expected to begin in January 2012 and be completed by January 2014.

ISSUES TO BE ADDRESSED IN THE EIR

The EIR will assess the physical changes to the environment that would likely result from construction and operation of the proposed project, including direct, indirect and cumulative impacts. The EIR also will discuss alternatives to the proposed project including the No Project Alternative and discuss potential growth inducing effects of the proposed project. Potential impacts of the proposed project are summarized below. The EIR will identify mitigation measures if necessary to minimize potentially significant impacts of the proposed project.

Aesthetics

Local aesthetics may be temporarily impacted during construction due to the presence of construction equipment adjacent to coastal recreational land uses. However, the proposed project involves upgrades to the existing WWTP and is not expected to permanently affect the scenic character of the area or public view corridors. The EIR will evaluate the project impacts

to aesthetic resources, including consistency of the project with the City of Morro Bay General Plan, local ordinances and state regulations.

Air Quality and Greenhouse Gas Emissions

The proposed project is located within the Central Coast Air Basin. Construction activities generate emissions and greenhouse gases from equipment exhaust, earth movement, construction workers' commute, and material hauling. The proposed project's construction emissions could adversely affect air quality in the regional air basin. The EIR will estimate construction emissions based on detailed construction activities by project phasing to assess the impacts to air quality and global warming. The EIR will identify sensitive receptors within the project area that could be adversely affected by the project construction. If necessary, measures to mitigate impacts to minimize their significance will be developed. Project operation could result in the release of objectionable odors. The EIR will identify potential impacts to neighboring land uses due to odors associated with the new proposed facilities.

Biological Resources

Construction of the proposed project would not occur in areas with natural habitats. Operation of the proposed project would increase the quality of the effluent discharged to the ocean, resulting in a beneficial impact to the marine environment. The EIR will evaluate potential impacts of the project to habitats and species, both terrestrial and marine.

Cultural Resources

During the excavation phase of construction for the proposed project, previously unknown archaeological or paleontological resources could be encountered. The EIR will evaluate the potential impacts of the project on cultural resources. The EIR will identify mitigation measures if necessary to avoid or minimize impacts to cultural resources.

Geology and Soils

The WWTP is located on sandy soil that has required subsoil stabilization in the past. Subsoil stabilization has been required during previous WWTP upgrades in and around areas where new structures were built. The EIR will evaluate the geologic characteristics of soils at the project site and will identify mitigation measures, as necessary, to minimize impacts. The project area is located within a seismically active region of California. Seismic activity could cause considerable ground shaking in the project area. The EIR will evaluate the potential seismic hazards associated with the project and will identify mitigation measures to minimize impacts, if necessary.

Hazards and Hazardous Materials

Contaminated soils and groundwater could be encountered during construction of the proposed project. Demolition of existing structures could result in potential exposure to asbestos-containing materials and lead-based paint. The EIR will assess the potential for encountering contaminated soils and groundwater and other hazardous materials and will develop measures to ensure that any hazards encountered during construction would be handled in accordance with applicable regulations. The EIR will identify mitigation measures, as necessary, to minimize impacts. Operation of the proposed project involves the continued use of sodium hypochlorite (NaOCl) and sodium bisulfite ($NaHSO_3$), which are considered hazardous substances by the state of California. The rate and quantity of use of these materials is not expected to change as a result of the proposed project.

Hydrology, Groundwater and Water Quality

The proposed project could affect local surface water resources and alter the local flood plain. The EIR will include the results of a hydrology report describing the project's effects to existing local drainage patterns. Excavation and construction activities could affect storm water quality if sediment or spills run off the project construction site. The EIR will identify storm water quality protection measures required during construction activities such as sediment fencing and spill prevention and containment. Operation of the proposed project would result in an increase in the quality of the effluent discharged to the ocean, resulting in a beneficial impact to ocean water quality. The EIR will describe the general waste discharge requirements for the WWTP and summarize the water quality benefits provided by the proposed advanced treatment.

Land Use and Recreation

The WWTP is located in the Coastal Zone as defined by the California Coastal Commission. The EIR will identify the project's potential effects on land uses and will evaluate the project's consistency with the General Plan and Local Coastal Program for the City of Morro Bay. The EIR will evaluate the proposed project's compatibility with neighboring land uses (e.g., industrial, recreational, public, open space) and will identify mitigation measures, as necessary, to minimize any significant land use impacts.

Noise and Light

Construction activities associated with the project would generate short-term noise that could affect neighboring land uses and sensitive receptors. Construction activity would be required to comply with local noise ordinances. The EIR will evaluate the effects of noise-generating activities associated with construction on nearby sensitive receptors. The EIR will identify mitigation measures, as necessary, to minimize impacts. Once constructed, the proposed project would not result in increased noise or light sources.

Traffic and Transportation

Construction activities could temporarily increase traffic on roadways, due to worker commute and material deliveries. Operation of the upgraded WWTP could increase biosolids production and thus increase truck trips to haul biosolids offsite. The EIR will describe the duration and extent of impacts on the roadways affected by the proposed project and will identify mitigation measures if necessary to minimize potential adverse effects.

Utilities and Public Services

Excavation activities associated with project construction could encounter underground utilities. As part of the project, MBCSD will require construction contractors to identify and avoid impacts to existing utilities. Construction of the proposed project will be phased and coordinated such that no service interruptions at the WWTP would be necessary. The proposed project includes the retirement and demolition of some existing facilities, thus requiring disposal of construction debris at an off-site landfill. The EIR will evaluate landfill capacity to accommodate the project's solid waste disposal needs and compliance with federal, state, and local regulations related to solid waste. The EIR also will include an assessment of energy requirements for the proposed project and the potential effects to the existing energy grid.

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P. O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH # _____

Project Title: Morro Bay-Cayucos Wastewater Treatment Plant Upgrade

Lead Agency: City of Morro Bay Contact Person: Mike Prater

Mailing Address: 955 Shasta Ave Phone: (805) 772-6211

City: Morro Bay Zip: CA County: San Luis Obispo

Project Location: County: San Luis Obispo City/Nearest Community: Morro Bay

Cross Streets: Atascadero Road and Embarcadero Zip Code: 93442

Lat. / Long.: 35° 22′ 45″ N/ 120° 51′ 42″ W Total Acres: _____

Assessor's Parcel No.: _____ Section: _____ Twp.: _____ Range: _____ Base: _____

Within 2 Miles: State Hwy #: 1, 41 Waterways: Morro Creek, Toro Creek, Estero Bay, Morro Bay

Airports: _____ Railways: _____ Schools: Morro Bay High School

Document Type:

CEQA:
- ☒ NOP
- ☐ Early Cons
- ☐ Neg Dec
- ☐ Mit Neg Dec
- ☐ Draft EIR
- ☐ Supplement/Subsequent EIR (Prior SCH No.) _____
- Other _____

NEPA:
- ☐ NOI
- ☐ EA
- ☐ Draft EIS
- ☐ FONSI

Other:
- ☐ Joint Document
- ☐ Final Document
- ☐ Other _____

Local Action Type:

- ☐ General Plan Update
- ☐ General Plan Amendment
- ☐ General Plan Element
- ☐ Community Plan
- ☐ Specific Plan
- ☐ Master Plan
- ☐ Planned Unit Development
- ☐ Site Plan
- ☐ Rezone
- ☐ Prezone
- ☐ Use Permit
- ☐ Land Division (Subdivision, etc.)
- ☐ Annexation
- ☐ Redevelopment
- ☒ Coastal Permit
- ☐ Other _____

Development Type:

- ☐ Residential: Units _____ Acres _____
- ☐ Office: Sq.ft. _____ Acres _____ Employees _____
- ☐ Commercial: Sq.ft. _____ Acres _____ Employees _____
- ☐ Industrial: Sq.ft. _____ Acres _____ Employees _____
- ☐ Educational _____
- ☐ Recreational _____
- ☒ Water Facilities: Type Wastewater MGD 1.5
- ☐ Transportation: Type _____
- ☐ Mining: Mineral _____
- ☐ Power: Type _____ MW _____
- ☐ Waste Treatment: Type _____ MGD _____
- ☐ Hazardous Waste: Type _____
- ☐ Other: _____

Project Issues Discussed in Document:

- ☒ Aesthetic/Visual
- ☐ Agricultural Land
- ☒ Air Quality
- ☒ Archeological/Historical
- ☒ Biological Resources
- ☒ Coastal Zone
- ☒ Drainage/Absorption
- ☐ Economic/Jobs
- ☐ Fiscal
- ☒ Flood Plain/Flooding
- ☐ Forest Land/Fire Hazard
- ☒ Geologic/Seismic
- ☐ Minerals
- ☒ Noise
- ☒ Population/Housing Balance
- ☒ Public Services/Facilities
- ☒ Recreation/Parks
- ☒ Schools/Universities
- ☐ Septic Systems
- ☒ Sewer Capacity
- ☒ Soil Erosion/Compaction/Grading
- ☒ Solid Waste
- ☒ Toxic/Hazardous
- ☒ Traffic/Circulation
- ☐ Vegetation
- ☒ Water Quality
- ☐ Water Supply/Groundwater
- ☐ Wetland/Riparian
- ☐ Wildlife
- ☒ Growth Inducing
- ☒ Land Use
- ☒ Cumulative Effects
- ☐ Other _____

Present Land Use/Zoning/General Plan Designation:

General (Light) Industrial

Project Description: *(please use a separate page if necessary)*

The proposed project would upgrade the Morro Bay-Cayucos Wastewater Treatment Plant (WWTP) to tertiary treatment and would enable it to discharge 1.5 mgd of tertiary treated effluent to the ocean. The upgrade involves the construction of new oxidation ditches, cloth-media disk filters, a secondary clarifier, centrifuges, a gravity belt thickener, and a chlorine contact basin; full rehabilitation of Digester No. 1 and 2; and improvements to other support facilities. In addition, the following structures would be retired: the existing chlorine contact basin, trickling filters, solids contact basin, Digester No. 1, and primary clarifiers. The existing onsite composting program at the WWTP would remain unchanged as a result of the proposed project.

Note: The state Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with and "**X**".
If you have already sent your document to the agency please denote that with an "**S**".

x Air Resources Board
__ Boating & Waterways, Department of
__ California Highway Patrol
__ CalFire
x Caltrans District # 5
__ Caltrans Division of Aeronautics
__ Caltrans Planning (Headquarters)
__ Central Valley Flood Protection Board
__ Coachella Valley Mountains Conservancy
S Coastal Commission
__ Colorado River Board
x Conservation, Department of
__ Corrections, Department of
__ Delta Protection Commission
__ Education, Department of
__ Energy Commission
x Fish & Game Region # 4
__ Food & Agriculture, Department of
__ General Services, Department of
x Health Services, Department of
__ Housing & Community Development
S Integrated Waste Management Board
x Native American Heritage Commission

x Office of Emergency Services
x Office of Historic Preservation
__ Office of Public School Construction
x Parks & Recreation
__ Pesticide Regulation, Department of
x Public Utilities Commission
S Regional WQCB # 3
x Resources Agency
__ S.F. Bay Conservation & Development Commission
__ San Gabriel & Lower L.A. Rivers and Mtns Conservancy
__ San Joaquin River Conservancy
__ Santa Monica Mountains Conservancy
x State Lands Commission
__ SWRCB: Clean Water Grants
x SWRCB: Water Quality
__ SWRCB: Water Rights
__ Tahoe Regional Planning Agency
x Toxic Substances Control, Department of
x Water Resources, Department of

__ Other _____
__ Other _____

Local Public Review Period (to be filled in by lead agency)

Starting Date _____ Ending Date _____

Lead Agency (Complete if applicable):

Consulting Firm: ESA
Address: 707 Wilshire Blvd, Suite 1450
City/State/Zip: Los Angeles, CA 90017
Contact: Jennifer Jacobus
Phone: 213-599-4300

Applicant: _____
Address: _____
City/State/Zip: _____
Phone: _____

Signature of Lead Agency Representative: _____ **Date:** _____

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.

ESA

Morro Bay – Cayucos Wastewater Treatment Plant Upgrade

Program Environmental Impact Report (PEIR)

Scoping Meeting
November 18, 2008

ESA

Scoping Meeting Agenda

- California Environmental Quality Act (CEQA) Overview
- Description of Morro Bay Cayucos Sanitation District Treatment Plant
- Project Description
- Potential Environmental Impacts
- Schedule
- Public Comments

ESA

California Environmental Quality Act (CEQA)

- Identifies potential impacts
- Informs the public about potential impacts
- Identifies strategies to avoid or reduce potential impacts

ESA

Overview of the CEQA Process

- Notice of Preparation/Initial Study
  - 30 day public review period began October 28th and ends November 26th
  - Public scoping meeting November 18th
- Draft Environmental Impact Report (EIR)
  - 45 day public review period at end of 2008 to early 2009
  - Public hearing
- Response to Comments/Final EIR
- Certify EIR
  - Spring 2009

ESA

Morro Bay – Cayucos Wastewater Treatment Plant

- The current WWTP is rated for an average dry weather flow of 2.06 mgd and a peak wet weather flow of 6.6 mgd
- The secondary treatment facilities have a design capacity of .97 mgd. Flows in excess receive primary treatment only and the primary effluent is blended with the secondary effluent
- The effluent blend is disinfected by chlorination and then dechlorinated before being discharged via an outfall pipe extending 2900 feet offshore into Estero Bay
- In 2007, the WWTP treated an average daily flow of 1.09 mgd

ESA

Location

Morro Bay – Cayucos Wastewater Treatment Plant Need

- The federal Clean Water Act (CWA) amendments of 1972 require that publicly-owned wastewater treatment works achieve secondary treatment capability by 1977
- The existing Morro Bay –Cayucos WWTP operates under a CWA 301 (h) modified discharge permit, allowing the disinfected blend of primary / secondary effluent to be discharge into its ocean outfall
- With implementation of the proposed project, operation of the WWTP would meet future NPDES permit requirements as determined by the Central Coast RWQCB

Morro Bay – Cayucos Wastewater Treatment Plant Upgrade Description

- The project will upgrade the existing WWTP to allow for tertiary treatment and enable it to discharge an average of 1.5 mgd of tertiary treated effluent into the ocean
- Goals
  - Meet the waste discharge requirements established by the SWRCB;
  - Phase out the need for a 301 (h) Modified Discharge Permit;
  - Provide a sustainable management program for biosolids disposal

Physical Improvements

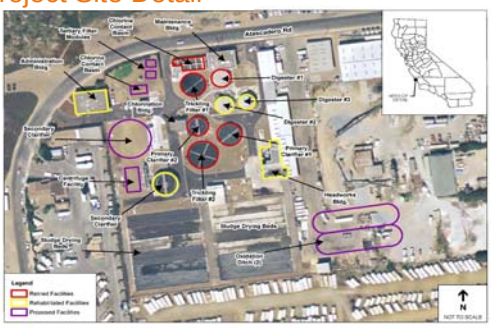
Construction	Rehabilitation	Demolition
1) Secondary Clarifier	1) Headworks Building	1) Trickling Filter No.2
2) Oxidation Ditch	2) Administration Building	2) Primary Clarifiers No. 1 and 2
3) Chlorine Contact Basin	3) Electrical Improvements	3) Trickling Filter No. 1
4) Centrifuge Facility	4) Secondary Clarifier	4) Digester No. 1
5) Tertiary Filter Modules	5) Digester No. 2 and No. 3	5) Chlorine Contact Basin

Construction

Facility
1) Secondary Clarifier
2) Oxidation Ditch
3) Chlorine Contact Basin
4) Centrifuge Facility
5) Tertiary Filter Modules

Each new facility would require site clearing, soil stabilization, excavation, dewatering, facility construction, and reconnection

Project Site Detail



SOURCE: Carollo, 2006

Morro Bay Cayucos Wastewater Treatment Plant NOP . 206013
Figure 1
Proposed Site Plan

Scope of PEIR Analysis

Provides Project-Level Analysis for the following environmental resources:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Recreation
- Noise
- Traffic and Transportation
- Utilities and Public Services

Key Issues

- Effluent water quality
  - The WWTP upgrade would increase the quality of the effluent discharged into the ocean, resulting in a beneficial impact to the marine environment
- Geology and Soils
  - The WWTP is located on sandy soil that has required subsoil stabilization in the past
  - The project area is located within in a seismically active region of California

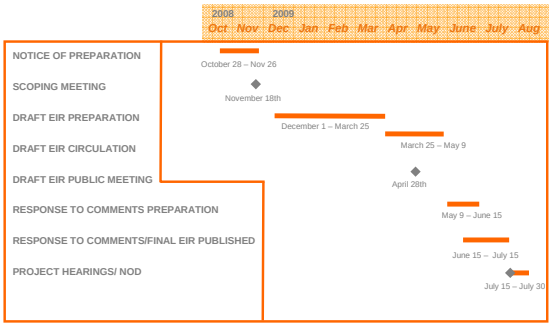
Key Issues

- Hydrology, Groundwater, and Water Quality
  - The WWTP upgrade may affect local surface water resources and alter the local flood plain
- Solid Waste
  - Increased biosolids production
- Coastal Development Permit
  - The WWTP will need to acquire a Coastal Development Permit in order to begin new construction

Other CEQA Requirements

- Alternatives Analysis
- Cumulative Impact Assessment
- Growth Inducement Analysis

EIR Project Schedule



PUBLIC COMMENTS

Morro Bay – Cayucos Wastewater Treatment Plant Upgrade
Scoping Meeting

Meeting Location: Veterans Memorial Hall
209 Surf Street, Morro Bay, CA

Date/Time: Tuesday, November 18, 2008 at 5:00 p.m.

Name	Affiliation	Address	E mail address
Doug Claasses	Morro Dunes RV Park	1700 Embarcadero MB	morrodunes@sbcglobal.net
Steve Shimek	The Otter Project	New! 475 Washington St. Ste A Monterey CA 93940	exec@otterproject.org
Dorothy Fones		440 Stuart Ave Cayucos, CA 93430	hdfones@sbcglobal.net
DANA PUTNAM	SURFRIDER	P.O. BOX 181 MORRO BAY, CA 93443	surfdoc@charter.net
Noah Smukler	City Council MB	2970 Elm Ave Morro Bay, CA 93442	NSmukler@yahoo.com
John Diodati	Resident	175 Capri Morro Bay, CA 93442	jgdiodati@co.slo.ca.us
Tim Carmel	CSD	1410 Marsh St SLO, CA 93401	TCarmel@carmacllaw.com

STATE OF CALIFORNIA Arnold Schwarzenegger, *Governor*

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-4082
(916) 657-5390 - Fax

November 4, 2008

Mike Prater
City of Morro Bay
955 Shasta Avenue
Morro Bay, CA 93442

RE: SCH#2008101138 Morro Bay-Cayucos Wastewater Treatment Plant Upgrade; San Luis Obispo County.

Dear Mr. Prater;

The Native American Heritage Commission (NAHC) has reviewed the Notice of Completion (NOC) referenced above. The California Environmental Quality Act (CEQA) states that any project that causes a substantial adverse change in the significance of an historical resource, which includes archeological resources, is a significant effect requiring the preparation of an EIR (CEQA Guidelines 15064(b)). To comply with this provision the lead agency is required to assess whether the project will have an adverse impact on historical resources within the area of project effect (APE), and if so to mitigate that effect. To adequately assess and mitigate project-related impacts to archaeological resources, the NAHC recommends the following actions:

- ✓ Contact the appropriate regional archaeological Information Center for a record search. The record search will determine:
  - If a part or all of the area of project effect (APE) has been previously surveyed for cultural resources.
  - If any known cultural resources have already been recorded on or adjacent to the APE.
  - If the probability is low, moderate, or high that cultural resources are located in the APE.
  - If a survey is required to determine whether previously unrecorded cultural resources are present.
- ✓ If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
  - The final report containing site forms, site significance, and mitigation measurers should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for pubic disclosure.
  - The final written report should be submitted within 3 months after work has been completed to the appropriate regional archaeological Information Center.
- ✓ Contact the Native American Heritage Commission for:
  - A Sacred Lands File Check. **USGS 7.5 minute quadrangle name, township, range and section required.**
  - A list of appropriate Native American contacts for consultation concerning the project site and to assist in the mitigation measures. **Native American Contacts List attached.**
- ✓ Lack of surface evidence of archeological resources does not preclude their subsurface existence.
  - Lead agencies should include in their mitigation plan provisions for the identification and evaluation of accidentally discovered archeological resources, per California Environmental Quality Act (CEQA) §15064.5(f). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American, with knowledge in cultural resources, should monitor all ground-disturbing activities.
  - Lead agencies should include in their mitigation plan provisions for the disposition of recovered artifacts, in consultation with culturally affiliated Native Americans.
  - Lead agencies should include provisions for discovery of Native American human remains in their mitigation plan. Health and Safety Code §7050.5, CEQA §15064.5(e), and Public Resources Code §5097.98 mandates the process to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery.

Sincerely,

Katy Sanchez

Katy Sanchez
Program Analyst

CC: State Clearinghouse

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NOV 10 2008
City of Morro Bay
Public Services Department

Native American Contact
San Luis Obispo County
November 3, 2008

Beverly Salazar Folkes
1931 Shadybrook Drive
Thousand Oaks , CA 91362
805 492-7255
(805) 558-1154 - cell
folkes9@msn.com

Chumash
Tataviam
Fe†rnandeño

Lei Lynn Odom
1339 24th Street
Oceano , CA 93445
(805) 489-5390

Chumash

Santa Ynez Band of Mission Indians
Vincent Armenta, Chairperson
P.O. Box 517
Santa Ynez , CA 93460
varmenta@santaynezchumash.org
(805) 688-7997
(805) 686-9578 Fax

Chumash

Judith Bomar Grindstaff
63161 Argyle Road
King City , CA 93930
(831) 385-3759-home

Salinan

Puilulaw Khus
2001 San Bernardo Creek
Morro Bay , CA 93442

Chumash

San Luis Obispo County Chumash Council
Chief Mark Steven Vigil
1030 Ritchie Road
Grover Beach , CA 93433
cheifmvigil@fix.net
(805) 481-2461
(805) 474-4729 - Fax

Chumash

Julie Lynn Tumamait
365 North Poli Ave
Ojai , CA 93023
jtumamait@sbcglobal.net
(805) 646-6214

Chumash

Diane Napoleone and Associates
Diane Napoleone
6997 Vista del Rincon
La Conchita , CA 93001
dnaassociates@sbcglobal.net

Chumash

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed sCH# 2008101138 Morro Bay-Cayucos Wastewater Treatment Plant Upgrade; San Luis Obispo County.

Native American Contact
San Luis Obispo County
November 3, 2008

Salinan Tribe of Monterey, San Luis Obispo and San Benito Counties
John W. Burch, Traditional Chairperson
8315 Morro Rd, #202 Salinan
Atascadero , CA 93422
salinantribe@aol.com
805-460-9202
805 235-2730 Cell
805-460-9204

Salinan Nation Cultural Preservation Association
Doug Alger, Cultural Resources Coordinator
PO Box 56 Salinan
Lockwood , CA 93932
fabbq2000@earthlink.net
(831) 262-9829 - cell
(831) 385-3450

Santa Ynez Tribal Elders Council
Adelina Alva-Padilla, Chair Woman
P.O. Box 365 Chumash
Santa Ynez , CA 93460
elders@santaynezchumash.org
(805) 688-8446
(805) 693-1768 FAX

Salinan Nation Cultural Preservation Association
Robert Duckworth, Environmental Coordinator
Drawer 2447 Salinan
Greenfield , CA 93927
dirobduck@thegrid.net
(831) 385-1882
(831) 674-5019

Randy Guzman - Folkes
4577 Alamo Street, Unit C
Simi Valley , CA 93063
ndnrandy@hotmail.com
(805) 905-1675 - cell

Chumash
Fernandeño
Tataviam
Shoshone Paiute
Yaqui

Salinan Nation Cultural Preservation Association
Jose Freeman, President
15200 County Road, 96B Salinan
Woodland , CA 95695
josefree@ccio1.com
(530) 662-5316

Xolon Salinan Tribe
Donna Haro
110 Jefferson Street Salinan
Bay Point , CA 94565
(925) 709-6714
(925) 458-0341 FAX

Coastal Band of the Chumash Nation
Janet Garcia,Chairperson
P.O. Box 4464 Chumash
Santa Barbara , CA 93140
805-964-3447

This list is current only as of the date of this document.

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This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed sCH# 2008101138 Morro Bay-Cayucos Wastewater Treatment Plant Upgrade; San Luis Obispo County.

CC: ~~Eax~~
Brady K.
Dylan W.
Bill C.

MORRO DUNES

TRAVEL TRAILER PARK & RESORT CAMPGROUND
www.morrodunes.com
(805) 772-2722 ☐ 1700 EMBARCADERO ☐ MORRO BAY, CA 93442

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NOV 13 2008
City of Morro Bay
Public Services Department

November 12, 2008

Bruce Ambo
Director, City of Morro Bay
Public Services Dept.
955 Shasta Ave.
Morro Bay, CA 93442

Mr. Ambo

My name is Doug Claassen. I'm manager, owner and President of Morro Dunes R. V. Park, which borders the treatment plant on the west and south sides.

I'm writing this letter to talk about the odor, which comes from the treatment plant. For almost Forty-Two years, we've been neighbors with the plant. As long as the wind blows off the ocean, we're ok. When the wind blows from the East, the smell gets worse. When there are no winds, the smell is very offensive.

When the plant was worked on, in the late 70's early 80's, some progress was made, but very little. Now, with the drying beds and the processing units being changed, I hope that something will be done, to rid the plant of it's offensive odor.

Through the years, we've refunded money back to our campers because of the smell. At one point, both digesters were down, and the plant workers had to restart the bacteria. That incident affected our business badly.

Again, with the new upgrade, I hope something will be done with the odors emitting from the plant.

Thank You,

Doug Claassen
President, Morro Dunes R.V. Park
1700 Embarcadero
Morro Bay, CA 93442
772-2722 - office
748-7183 - cell

SAN LUIS OBISPO COUNTY

DEPARTMENT OF PLANNING AND BUILDING

VICTOR HOLANDA, AICP
DIRECTOR

November 21, 2008

Bruce Ambo, Director
City of Morro Bay, Public Services Department
955 Shasta Avenue
Morro Bay, CA 93442

Subject: Notice of Preparation (NOP) for Morro Bay – Cayucos WWTP Upgrades

Dear Mr. Ambo:

The County of San Luis Obispo Planning and Building Department, in consultation with the Public Works Department, has reviewed the Notice of Preparation (NOP) for the above referenced project. The County has no substantial comments on the proposed project as described in the NOP dated October 28, 2008. If the project description changes and substantial new issues arise, the County may have comments at that time.

Thank you for the opportunity to review the NOP for the Morro Bay – Cayucos Wastewater Treatment Plant Upgrade. The County would like to receive a copy of the draft EIR, final EIR and notice for any public hearings related to this project.

If you have any questions, I can be contacted at (805) 788-2352.

Sincerely,

Murry Wilson
Environmental Resource Specialist

G:\Environmental\Office Administration\STAFF\Murry\Morro Bay-Cayucos WWTP\NOP comments_FIN.doc

COUNTY GOVERNMENT CENTER • SAN LUIS OBISPO • CALIFORNIA 93408 • (805)781-5600
EMAIL: planning @co.slo.ca.us • FAX: (805) 781-1242• WEBSITE: http://www.sloplanning.org

November 26, 2008

Bruce Ambo, Director
City of Morro Bay, Public Service Department
955 Shasta Avenue
Morro Bay, CA 93442

RE: Notice of Preparation of an EIR for the Morro Bay-Cayucos Wastewater Treatment Plant Upgrade

Via electronic mail

Dear Mr. Ambo,

I am writing on behalf of the Surfrider Foundation, San Luis Bay Chapter in regards to the Notice of Preparation ("NOP") of an EIR for the Morro Bay-Cayucos Wastewater Treatment Plant Upgrade. The Surfrider Foundation is a grassroots organization dedicated to the protection and enjoyment of our coasts and oceans by all people.

The Surfrider Foundation, San Luis Bay Chapter ("Chapter") is pleased that the upgrade for the plant is moving forward. The Chapter has been involved in advocating for the upgrade of the Morro Bay-Cayucos Wastewater Treatment Plant for several years; Chapter representatives have submitted written and oral comments to both the City of Morro Bay and the Cayucos Sanitary District in support of the tertiary upgrade over these years. The Chapter feels that this tertiary upgrade has the potential to provide environmental benefits, such as the improvement of coastal water quality, increased water supply reliability, and reduction of greenhouse gas emissions associated with providing water supply. To this end, the Chapter feels that the project should treat 100% of its effluent to tertiary and work to reclaim 100% of its effluent for beneficial reuse.

In response to the NOP, we would like to provide the following comments:

Suggested Revisions:

The Project Description is vague and incomplete. In the Project Description, it states that the proposed project would discharge an average of 1.5 mgd of tertiary treated effluent. It is unclear whether this would be blended with primary or secondary effluent and subsequently discharged or whether all of the effluent discharged would be tertiary. Also, the new treatment capacity of the project, if it will change as a result of the upgrade, is not described. The Project Description should be revised accordingly.

If the project does not propose to upgrade the facility to full tertiary (or at the very least full secondary with partial tertiary), the upgrade will not sufficiently improve the effluent discharged from the plant to the standard supported by the local communities of Morro Bay and Cayucos.

NATIONAL OFFICE • P.O. BOX 6010 • SAN CLEMENTE, CA 92674-6010
(949) 492-8170 • FAX (949) 492-8142 • www.surfrider.org • E-MAIL info@surfrider.org

Surfrider Foundation

Furthermore, failure to upgrade to full tertiary or secondary with partial tertiary would not be consistent with the unanimous votes taken by the City of Morro Bay[1] and the Cayucos Sanitary District[2] to achieve an upgrade to tertiary standards. It should also be noted that both parties additionally signaled intent to move toward [effluent] reclamation.

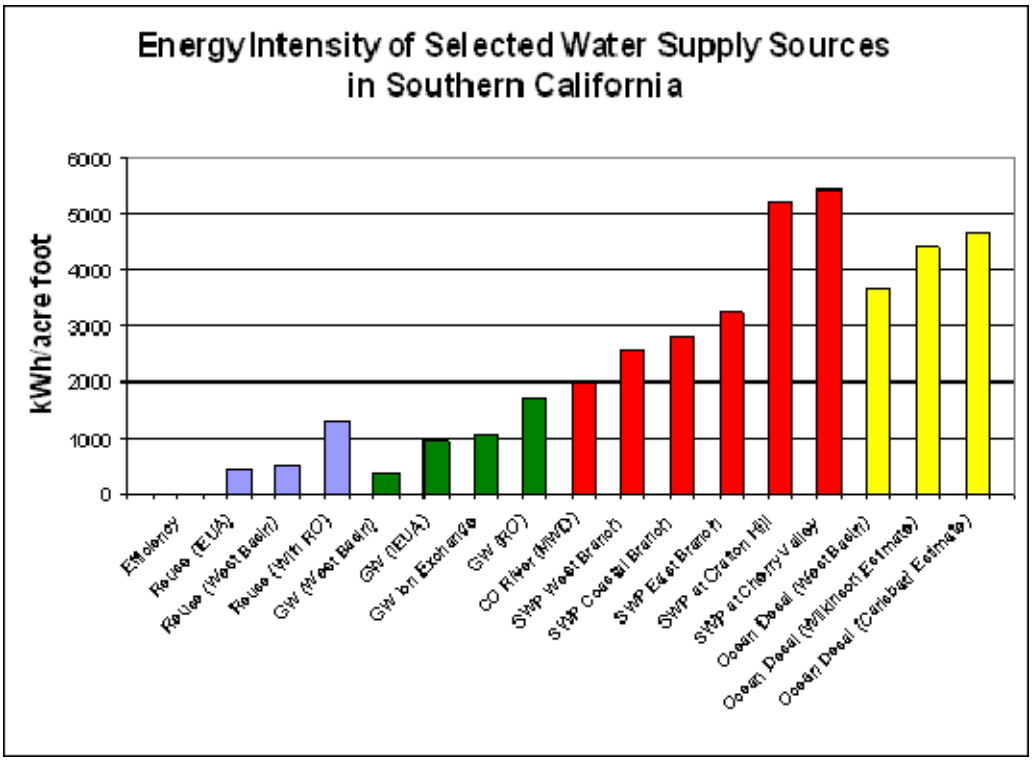
Suggested Additions:

In the Project Description, there doesn't appear to be any proposed infrastructure improvements or infrastructure additions for the conveyance of tertiary treated water for beneficial reuse; in fact, it seems that reclamation of tertiary treated water for beneficial reuse is not considered at all. While the advanced treatment would meet NPDES permit requirements, there is potential to completely eliminate discharge to coastal waters by reclaiming and distributing the tertiary treated water. This would not only increase environmental benefits through improved coastal water quality via elimination of discharged effluent, but—as a supplemental water supply—the tertiary treated water could enhance the reliability of local water supplies and reduce the amount of greenhouse gas ("GHG") emissions associated with current and future methods of providing water supply.

AB 32, also known as the Global Warming Solutions Act of 2006, sets a goal for GHG emissions to be achieved in California by 2020; it also requires the Air Resources Board to prepare a scoping plan to achieve this goal. The Scoping Plan, which is slated for approval in December 2008, identifies opportunities to decrease GHG emissions in water resources management[3]. Three measures are proposed to reduce GHG emissions associated with providing reliable water supplies: water use efficiency, *water recycling*, and reuse of urban runoff.[4]

In a study comparing energy intensity of water supply projects in Southern California done by Robert Wilkinson, Adjunct Instructor of Water Policy at the Bren School of Environmental Science & Management at UC Santa Barbara, Wilkinson finds that various wastewater reuse projects are significantly less energy intensive than all of the various branches of the State Water Project.[5] The energy intensity of these water supply projects and others is displayed in the figure below.

[1] City of Morro Bay, City Council Meeting on May 29, 2007
[2] City of Morro Bay and Cayucos Sanitary District, Joint Meeting (JPA) on May 24, 2007
[3] http://www.arb.ca.gov/cc/scopingplan/document/psp.pdf ;
[4] California Air Resources Board. *Climate Change Proposed Scoping Plan*. October 2008. pp 65-66.
[5] Wilkinson, Robert. *Methodology for Analysis of the Energy Intensity of California's Water Systems and An Assessment of Multiple PotentialBenefits through Integrated Water-Energy Efficiency Measures.* January 2000. pp 46-53. http://www.es.ucsb.edu/faculty/wilkinson.pdfs/Wilkinson_EWRPT01%20DOC.pdf



Given that the majority of the City of Morro Bay's water comes from the State Water Project, which is becoming an increasingly less reliable source of water due to decreasing Sierra snowpack and the need to protect the Delta, and which is also a very energy-intensive water supply, the reclaimed tertiary water could conceivably provide indirect environmental benefits by supplanting a portion of water that Morro Bay receives from the State Water Project. These environmental benefits could include, but not be limited to, decreased GHG emissions associated with providing a reliable water supply and decreased reliance on State Water.

Additionally, even if the tertiary water becomes a supplemental supply instead of offsetting State Water, reclaimed tertiary water is relatively energy efficient option to enhance water supplies when considering other potential water supply alternatives such as ocean desalination. Generally speaking, wastewater recycling tends to be less energy intensive than other water treatment projects (i.e. brackish or ocean water) because it makes use of pretreated water—wastewater effluent. Thus, the energy use attributed to wastewater recycling is only the incremental energy use between secondary treatment and, in this case, tertiary treatment. Further, the energy expended to treat water to tertiary standards is itself reclaimed when the water is reclaimed for beneficial reuse. Significant amounts of energy are used to treat wastewater so that it can be safely discharged to the ocean – wasting precious water AND the energy "embedded" in the treated water. In effect, energy is discharged with the water pumped to the sea. Instead of discharging the water and the energy, the treated water can be reclaimed by expending a marginal addition of energy, thus recovering the "embedded" energy.

Surfrider Foundation

Based upon these findings, we feel that it would be prudent to expand the scope of the project to include tertiary water reclamation, as opposed to segmenting this component from the project, because of the additional benefits that reclaimed water could provide. In the case that plans to incorporate reclamation of tertiary treated water are incorporated into the project, there are additions to the EIR that should be made, including:

Project Description: Should include information relating to the physical improvements that would need to be made to accommodate reclamation and distribution.

Issues to be Addressed in the EIR: There should be an additional analysis of impacts to Water Supply. If the tertiary water will not be replacing any current water supplies and, instead, serve as an additional water supply, growth inducing impacts may also need to be considered.

Impacts that could result from the addition of infrastructure associated with reclamation of the tertiary water should also be evaluated in the context of the other issues already listed in the Notice of Preparation .

Thank you for the opportunity to comment.

Sincerely,

Sarah Corbin
Central California Regional Manager
Surfrider Foundation

FAX

To:	Bruce Ambo	Fax #:	772-6268
From:	Andy Mutziger	Date:	11/26/2008
Re:	Morro Bay-Cayucos Wastewater Treatment Plant		
Pages:	6 incl. cover page		

☐ Urgent ☐ For Review ☐ Please Comment ☐ Please Reply ☐ Please Recycle

AIR POLLUTION CONTROL DISTRICT
COUNTY OF SAN LUIS OBISPO

November 26th, 2008

Dear Mr. Ambo,

Enclosed you will find you copy of the comment letter for the Morro Bay-Cayucos Wastewater Treatment Plant. Your hard copy will be delivered via U.S. mail however, we have faxed it to meet the deadline. Please let us know if you have any questions or concerns.

Thank you!

AIR POLLUTION
CONTROL DISTRICT
COUNTY OF SAN LUIS OBISPO

RECEIVED
DEC 02 2008
City of Morro Bay
Public Services Department

November 26, 2008

RECEIVED
DEC 08 2008
ENVIRONMENTAL SCIENCE ASSOC
LOS ANGELES

Bruce Ambo, Director
City of Morro Bay Public Services Department
955 Shasta Avenue
Morro Bay, CA 93442

SUBJECT: SLO County APCD Comments Regarding the Notice of Preparation for an EIR for the Morro Bay - Cayucos Wastewater Treatment Plant

Dear Mr. Ambo,

Thank you for including the San Luis Obispo County Air Pollution Control District (APCD) in the environmental review process. We have completed our review of the proposed project that would upgrade the Morro Bay-Cayucos primary and partial secondary wastewater treatment plant to a tertiary treatment plant. The project, located at 160 Atascadero Road in Morro Bay would require construction of new facilities, as well as the rehabilitation and demolition of existing facilities. The project would increase the average discharge amount of 1.09 to a 1.5 mgd. Specifically, the project would:

1) Retire the existing chlorine contact basin, solids contact basin, trickling filters, primary clarifiers, and Digester No. 1;
2) Rehabilitate the headworks, Digesters No. 2 and 3, and the secondary clarifier, and make improvements to existing electrical facilities; and
3) Construct new oxidation ditches, cloth-media disk filters, a secondary clarifier, centrifuge facility, gravity belt thickener, and chlorine contact basin.

The following are APCD comments that are pertinent to the Notice of Preparation for this proposed project.

1. Contact Person:

   Andy Mutziger
   Air Pollution Control District
   3433 Roberto Court
   San Luis Obispo, CA 93401
   (805) 781-5912

2. Permit(s) or Approval(s) Authority:

   Portable equipment used during construction activities may require statewide registration or an APCD permit. Additionally, some future developments (i.e. sites with backup diesel generators, etc.) may require APCD permits and applicants will need to apply for an

Authority to Construct. Please contact our Engineering Division at (805) 781-5912 prior to final permit approval of these types of projects by your agency.

Demolition and remodeling activities have potential negative air quality impacts, including issues surrounding proper demolition and disposal of asbestos containing material (ACM). Demolition and remodeling projects are subject to the requirements stipulated in the National Emission Standard for Hazardous Air Pollutants (NESHAP), which includes but is not limited to: 1) notification requirements to the District, 2) asbestos survey conducted by a Certified Asbestos Inspector, and, 3) applicable removal and disposal requirements of identified ACM. Please contact APCD's Enforcement Division at 781-5912 prior to final approval of these types of projects by your agency.

3. Environmental Information:

The potential air quality impacts from construction and build-out of the project should be assessed in the EIR. The project under development has the potential for significant impacts to local air emissions, ambient air quality, sensitive receptors, and the implementation of the Clean Air Plan (CAP). A complete air quality analysis should be included in the DEIR to adequately evaluate the overall air quality impacts associated with implementation of the proposed project. This analysis should address both short-term construction and long-term operational phase emissions impacts. The following is an outline of items that should be included in the analysis:

a) A description of existing air quality and emissions in the impact area, including the attainment status of the county relative to State air quality standards and any existing regulatory restrictions to development. The most recent CAP should be consulted for applicable information.

b) A detailed quantitative air emissions analysis at the project scale is relevant at this time.

c) The DEIR should include a range of alternatives that could effectively minimize air quality impacts. A quantitative air emission analysis should be performed for each of the proposed alternatives identified, as described above.

d) Mitigation measures to reduce or avoid significant air quality impacts should be recommended.

4. Permit Stipulations/Conditions:

It is recommended that you refer to the "CEQA Air Quality Handbook" (the Handbook). If you do not have a copy, it can be accessed on the District web page (www.slocleanair.org) in the Business Assistance section, listed under Regulations, or a hardcopy can be requested by contacting the District. The Handbook provides information on mitigating emissions from development (Section 5) which should be referenced in the DEIR.

5. Alternatives:

   Any alternatives described in the DEIR should involve the same level of air quality analysis as described in bullet items 3.b and 3.c listed above.

6. Reasonably Foreseeable Projects, Programs or Plans:

   The most appropriate standard for assessing the significance of potential air quality impacts for project EIRs is the preparation of a consistency analysis where the proposed project is evaluated against the land use goals, policies, and population projections contained in the CAP. The rationale for requiring the preparation of a consistency analysis is to ensure that the attainment projections developed by the District are met and maintained. Failure to comply with the CAP could result in long term air quality impacts. Inability to maintain compliance with the state ozone standard could bear potential negative economic implications for the county's residents and business community. The District's CEQA Air Quality Handbook provides guidance for preparing the consistency analysis and recommends evaluation of the following questions:

   a) Are the population projections used in the plan or project equal to or less than those used in the most recent CAP for the same area?

   b) Is the rate of increase in vehicle trips and miles traveled less than or equal to the rate of population growth for the same area?

   c) Have all applicable land use and transportation control measures from the CAP been included in the plan or project to the maximum extent feasible?

7. Relevant Information:

   As mentioned earlier, the Handbook should be referenced in the EIR for determining the significance of impacts and level of mitigation recommended.

8. Further Comments:

   Naturally Occurring Asbestos
   The project site is located in a candidate area for Naturally Occurring Asbestos (NOA), which has been identified as a toxic air contaminant by the California Air Resources Board (ARB). Under the ARB Air Toxics Control Measure (ATCM) for Construction, Grading, Quarrying, and Surface Mining Operations, **prior to any grading activities at the site, the project proponent shall ensure that a geologic evaluation is conducted to determine if NOA is present within the area that will be disturbed. If NOA is not present, an exemption request must be filed with the District (see Attachment 1). If NOA is found at the site the applicant must comply with all requirements outlined in the Asbestos**

ATCM. This may include development of an Asbestos Dust Mitigation Plan and an Asbestos Health and Safety Program for approval by the APCD. Please refer to the APCD web page at *http://www.slocleanair.org/business/asbestos.asp* for more information or contact the APCD Enforcement Division at 781-5912.

Developmental Burning
Effective February 25, 2000, **the APCD prohibited developmental burning of vegetative material within San Luis Obispo County.** Under certain circumstances where no technically feasible alternatives are available, limited developmental burning under restrictions may be allowed. This requires prior application, payment of fee based on the size of the project, APCD approval, and issuance of a burn permit by the APCD and the local fire department authority. The applicant is required to furnish the APCD with the study of technical feasibility (which includes costs and other constraints) at the time of application. If you have any questions regarding these requirements, contact the APCD Enforcement Division at 781-5912.

Greenhouse Gas (GHG) Emissions
The NOP states that the contribution of the project's construction phase global warming impact will be evaluated and impacts will be mitigated, however, it did not indicate that the project's operational phase GHG impacts will be evaluated and mitigated and they should be. The following supports the need for GHG impact evaluation and mitigation:

On June 19, 2008, the State of California's Governor's Office of Planning and Research released a Technical Advisory entitled CEQA AND CLIMATE CHANGE: Addressing Climate Change Through California Environmental Quality Act Review. This document states:

> Public agencies are encouraged but not required to adopt thresholds of significance for environmental impacts. Even in the absence of clearly defined thresholds for GHG emissions, the law requires that such emissions from CEQA projects must be disclosed and mitigated to the extent feasible whenever the lead agency determines that the project contributes to a significant, cumulative climate change impact.

The document goes on to say:

> Lead agencies should make a good-faith effort, based on available information, to calculate, model, or estimate the amount of CO_2 and other GHG emissions from a project, including the emissions associated with vehicular traffic, energy consumption, water usage and construction activities.

Regarding the determination of GHG impact significance, the Technical Advisory states:

> The potential effects of a project may be individually limited but cumulatively considerable. Lead agencies should not dismiss a proposed project's direct and/or indirect climate change impacts without careful available information and analysis

> should be provided for any project that may significantly contribute new GHG emissions, either individually or cumulatively, directly or indirectly (e.g., transportation impacts).

Regarding GHG impact mitigation, the Technical Advisory states:

> The lead agency must impose all mitigation measures that are necessary to reduce GHG emissions to a less than significant level. CEQA does not require mitigation measures that are infeasible for specific legal, economic, technological or reasons. A lead agency is not responsible for wholly eliminating all GHG emissions from a project; the CEQA standard is to mitigate to a level that is "less than significant."

The APCD recommends that the lead agency follows OPR's recommendations and implement measures included in the Technical Advisory's guidance regarding mitigation of GHGs for the operational and construction phase of this project and integrate this into the project's Environmental Impact Report.

Sensitive Receptors
The NOP also noted that impacts to sensitive receptors would be evaluated and impacts mitigated. In some cases, human health risk assessments are necessary to evaluate a project's risk from diesel emission impacts. Please contact the SLO County APCD Planning Division at 781-5912 for guidance on this issue.

Again, thank you for the opportunity to comment on this proposal. If you have any questions or comments, feel free to contact me at 781-5912.

Sincerely,

Andy Mutziger
Air Quality Specialist

AJM/arr

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State Water Resources Control Board

Division of Financial Assistance
1001 I Street • Sacramento, California 95814 • (916) 341-5700 FAX (916) 341-5707
Mailing Address: P.O. Box 944212 • Sacramento, California • 94244-2120
Internet Address: http://www.waterboards.ca.gov

Linda S. Adams
Secretary for
Environmental Protection

Arnold Schwarzenegger
Governor

NOV 24 2008

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NOV 26 2008

City of Morro Bay
Public Services Department

Mr. Mike Prater
City of Morro Bay
955 Shasta Avenue
Morro Bay, CA 93442

Dear Mr. Prater:

NOTICE OF PREPARATION (NOP) FOR THE CITY OF MORRO BAY (CITY); MORRO BAY-CAYUCOS WASTEWATER TREATMENT PLANT UPGRADE PROJECT (PROJECT); STATE CLEARINGHOUSE (SCH NO. 2008101138)

Thank you for the opportunity to review the above document. We understand that the City is not currently pursuing funds from the Clean Water State Revolving Fund (CWSRF) Program for the Project. As a funding agency and a State agency with jurisdiction by law to preserve, enhance, and restore the quality of California's water resources, the State Water Resources Control Board (State Water Board) is providing the following information for the California Environmental Quality Act (CEQA) document being prepared for the Project.

The City may want to consider the CWSRF Program to provide funding for future construction. The State Water Board, Division of Financial Assistance, is currently responsible for administering CWSRF funds. The primary purpose for the CWSRF Program is to implement the Clean Water Act and various state laws by providing financial assistance for wastewater treatment facilities necessary to prevent water pollution, recycle water, correct nonpoint source and storm drainage pollution problems, and provide for estuary enhancement, and thereby protect and promote health, safety and welfare of the inhabitants of the state. The CWSRF Program provides low-interest funding equal to one-half the most recent State General Obligation Bond Rates with a 20-year term. Applications are accepted and processed continuously. Please refer to the State Water Board's CWSRF website at http://www.waterboards.ca.gov/water_issues/programs/grants_loans/srf/index.shtml.

The CWSRF Program is partially funded by the U.S. Environmental Protection Agency and requires additional "CEQA-Plus" environmental documentation and review. Three enclosures are included that further explain the environmental review process and some additional federal requirements in the CWSRF Program. The State Water Board is required to consult directly with agencies responsible for implementing federal environmental laws and regulations. Any environmental issues raised by federal agencies or their representatives will need to be resolved prior to State Water Board approval of a CWSRF funding commitment for the proposed Project.

It is important to note that prior to a CWSRF funding commitment, projects are subject to provisions of the Federal Endangered Species Act and must obtain Section 7 clearance from the U.S. Fish and Wildlife Service (USFWS), and/or National Marine Fisheries Service (NMFS) for any potential effects to special status species. Please be advised that the State Water Board will consult with USFWS, and/or NMFS regarding all federal special status species the Project has the potential to impact if the Project is to be funded under the CWSRF Program.

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The City will need to identify whether the Project will involve any direct effects from construction activities or indirect effects, such as growth inducement, that may affect federally listed threatened, endangered, or candidate species that are known, or have a potential to occur on-site, in the surrounding areas, or in the service area, and to identify applicable conservation measures to reduce such effects.

In addition, CWSRF projects must comply with federal laws pertaining to cultural resources, specifically Section 106 of the National Historic Preservation Act. Please contact the State Water Board's Cultural Resources Officer (CRO), Ms. Cookie Hirn, at (916) 341-5690 to find out more about the requirements and to initiate the Section 106 process pursuant to CWSRF financing. Note that the City will need to identify the Area of Potential Effects (APE), including construction and staging areas and the depth of any excavation.

As stated above, the State Water Board has responsibility for ensuring compliance with Section 106, and the CRO must consult directly with the California State Historic Preservation Officer (SHPO). SHPO consultation is initiated when sufficient information is provided by the CWSRF applicant.

If the City pursues CWSRF financing, please provide the CRO with a copy of a current records search for the Project area including maps that show all recorded sites and surveys in relation to the APE for the Project. The APE is three dimensional and includes all areas that may be affected by the project. The APE includes the surface area and extends below ground to the depth of any Project excavations. The records search request should be made for an area larger than the APE. The appropriate area varies for different projects but should be drawn large enough to provide information on what types of sites may exist in the vicinity.

Native American and Interested Party Consultation are necessary for Section 106 compliance:

- A Project description and map should be sent to the Native American Heritage Commission (NAHC). The NAHC will provide a list of Native American tribes and individuals that are culturally affiliated with your Project area and recommend that they all be contacted.
- A Project description and map should be sent to everyone on the list provided by the NAHC, asking for information on the Project area,.
- Similar letters should be sent to local historical organizations.
- Follow-up contact should be made by phone, if possible, and a phone log should be included.
- Comments from the NAHC, local tribes and historical organizations affiliated with the Project area, as well as the City's response to these comments should be included in the final CEQA document.

The NAHC can be contacted at:

915 Capitol Mall, Room 364
Sacramento, CA 95814
(916) 653-4082

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Other federal requirements pertinent to the Project under the CWSRF Program include the following:

A. Compliance with the federal Clean Air Act: (a) Provide air quality studies that may have been done for the Project; and (b) if the Project is in a nonattainment area or attainment area subject to a maintenance plan; (i) provide a summary of the estimated emissions (in tons per year) that are expected from both the construction and operation of the Project for each federal criteria pollutant in a nonattainment or maintenance area, and indicate if the nonattainment designation is moderate, serious, or severe (if applicable); (ii) if emissions are above the federal de minimis levels, but the Project is sized to meet only the needs of current population projections that are used in the approved State Implementation Plan for air quality, quantitatively indicate how the proposed capacity increase was calculated using population projections.

B. Protection of Wetlands: Identify any portion of the proposed Project area that may contain areas that should be evaluated for wetlands or U.S. waters delineation by the U.S. Army Corps of Engineers (USACE), or require a permit from the USACE, and identify the status of coordination with the USACE.

C. Compliance with the Farmland Protection Policy Act: Identify whether the Project will result in the conversion of farmland. State the status of farmland (Prime, Unique, or Local Statewide Importance) in the Project area and determine if this area is under a Williamson Act Contract.

D. Compliance with the Migratory Bird Treaty Act: List any birds protected under this Act that may be impacted by the Project and identify conservation measures to minimize impacts.

E. Compliance with the Flood Plain Management Act: Identify whether or not the Project is in a Flood Management Zone and provide a copy of the Federal Emergency Management Agency flood zone maps for the area.

F. Compliance with the Wild and Scenic Rivers Act: Identify whether or not any Wild and Scenic Rivers would be potentially impacted by the Project and include conservation measures to minimize such impacts.

G. Compliance with the Coastal Zone Management Act: Identify whether or not the proposed Project is in the Coastal Zone and include compliance measures to minimize impacts to the Coastal Zone.

The following are additional comments specific to CEQA:

1. If the City decides to pursue Proposition 84 funds, Public Resources Code §75102 requires that before the adoption of a negative declaration or environmental impact report required for any project to be financed with Proposition 84 funds, the lead agency shall notify the proposed action to a California Native American tribe, which is on the contact list maintained by the NAHC, if that tribe has traditional lands located within the area of the proposed Project.

2. When preparing the CEQA document for the Project, please be aware that according to CEQA Guidelines §15064.5 subsection (b), "A project with an effect that may cause a substantial adverse change in the significance of an historical resource," as defined under subsection (a), "is a project that may have a significant effect on the environment." Subsections (1) and (2) of CEQA Guidelines §15064.5 describe the actions that lead to a historical resource being impaired by a project activity. Impairment of a historical resource is a significant impact that cannot be mitigated, as the negative effects upon such a resource cannot be repaired. Therefore, any significant impacts on cultural resources in or around the Project site as a result of project construction or operation will require the preparation of an environmental impact report.

Thank you once again for the opportunity to review the City's NOP. If you have any questions or concerns, please feel free to contact Jim Hockenberry at (916) 341-5686, or by email at jhockenberry@waterboards.ca.gov or Ms. Michelle L. Jones at (916) 341-6983.

Sincerely,

James Hockenberry
Environmental Scientist

Enclosures (3)

cc: State Clearinghouse w/o enclosures
(Re: SCH# 2008101138)
P. O. Box 3044
Sacramento, CA 95812-3044

STATE WATER RESOURCES CONTROL BOARD

CEQA AND STATE WATER BOARD GRANTS

Environmental Requirements for State Water Board Grants

The State Water Resources Control Board (State Water Board) distributes funding through various grants, including Propositions 13, 40, 50, Water Recycling, Small Community Grants and others. Applicants seeking funds are required to comply with the California Environmental Quality Act (CEQA), and provide documents for the State Water Board's environmental review process.

GRANT FUNDING

State Water Board grants are subject to CEQA. The State Revolving Fund Loan program has additional federal requirements described in the *SRF & CEQA-Plus* pamphlet.

LEAD AGENCY

The applicant is usually the **Lead Agency** and must prepare and circulate an environmental document before approving a project. Only a public agency, such as a local, regional or state government, may be the Lead Agency under CEQA. If a project will be completed by a non-governmental organization, Lead Agency responsibility goes to the first public agency providing discretionary approval for the project.

RESPONSIBLE AGENCY

The State Water Board is a **Responsible Agency** and must review and consider the environmental document prior to providing funding to any portion of a project.

As the Responsible Agency, the State Water Board must make findings based on information provided by the Lead Agency before granting "environmental clearance" for the project. The Lead Agency must adhere to the CEQA process and provide detailed information about any potential adverse or beneficial environmental impacts resulting from the project.

STATE WATER BOARD RESPONSIBILITIES

The State Water Board's mission is to preserve, enhance and restore the quality of California's water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations. To fulfill this responsibility, and to carry out obligations as a Responsible Agency under CEQA, the State Water Board must consider the Lead Agency's environmental document before providing funding.

ENVIRONMENTAL CLEARANCE

Environmental clearance must be done before a project can be funded. For Small Community Wastewater grants and Water Recycling Funding Program grants, environmental clearance must be received before a Facilities Plan Approval is issued by the State Water Board for a project.

DOCUMENT REVIEW

The State Water Board would like to review documents as early in the process as possible. Send environmental documents to the State Water Board, Regional Programs Unit during the CEQA public review period. Be sure to identify yourself as a grant applicant. This way, any environmental concerns the State Water Board has about the project can be addressed early in the process.

REQUIRED DOCUMENTS

The Regional Programs Unit must have the documents listed below to provide environmental clearance.

1. **Draft and Final Environmental Documents** – Environmental Impact Reports, Negative Declarations, CEQA exemptions;

2. **Resolution** approving the project, adopting the environmental document and making CEQA findings;

3. **All comments** received during the public review period and your responses to those comments;

4. **Adopted Mitigation Monitoring Plan**, if applicable; and

5. **Notice of Determination** filed with the Governor's Office of Planning and Research.

Once the State Water Board has received all documents, considered them and found them adequate, environmental clearance for the funding can be granted.

CONTACT INFORMATION

For more information, please contact the Division of Financial Assistance, Loans and Grants at (916) 341-5700.

CALIFORNIA
Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

If project emissions are **below the "de minimis" levels** and less than 10% of the emissions inventory for the non-attainment or maintenance area, **then:**

- **Further general conformity analysis is not required.**

If project emissions are **above the "de minimis" levels:**

- **A conformity determination for the area must be made.**

A conformity determination can be made if facilities are sized to meet the needs of current population projections used in an **approved** State Implementation Plan (SIP) for air quality. Using population projections, applicants must **quantify** their description of how the proposed capacity increase was calculated.

NATIONAL HISTORIC PRESERVATION ACT

Section 106 of the NHPA requires federal agencies to take into account effects on historic properties caused by federal actions (such as funding SRF projects) and to provide the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment on such undertakings through consultation with the State Historic Preservation Officer (SHPO) and with interested Indian Tribes and individuals.

***USEPA has delegated to the State Water Board the responsibility for carrying out the requirements of Section 106 of the NHPA.**

Historic properties include:

- Archaeological sites.
- Historic era buildings.
- Traditional cultural properties.

Starting point for the 106 process: Applicant's record search and cultural resource documents prepared for CEQA.

State Water Board's Cultural Resource Officer (CRO) requires:

- Copies of all original maps and studies for consultation with SHPO.

If your project has the potential to affect historic properties the consultation process can be quite lengthy. **Please contact the CRO early in your planning process to discuss what additional information may be needed for your specific project.**

Environmental Review Process Guidelines for State Revolving Fund Loan Applicants document provides additional information on the review process and can be found on the State Water Board's web site located at:

http://www.waterboards.ca.gov/funding/srf.html

CALIFORNIA
Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

SRF & CEQA-PLUS

Environmental Review for State Revolving Fund (SRF) Loan Applicants

- WHAT - WHY - HOW -

State Water Resources Control Board
Division of Financial Assistance
November 2005

WHAT IS CEQA-PLUS?

The SRF Loan Program is partially funded by the U.S. Environmental Protection Agency (USEPA) and subject to federal environmental regulations, including the Endangered Species Act (ESA), the National Historic Preservation Act (NHPA), and the General Conformity Rule for the Clean Air Act (CAA), among others. Federal agencies have their own policies on how they comply with federal environmental laws. Instead of the National Environmental Policy Act (NEPA), USEPA has chosen to use the California Environmental Quality Act (CEQA) as the compliance base for California's SRF Loan Program, in addition to compliance with ESA, NHPA and CAA. Collectively, the State Water Board calls these requirements **CEQA-Plus**. Additional federal regulations also may apply.

Lead Agency: The Applicant

Duties:

- Prepare, circulate and consider the environmental documents prior to approving the project.
- Provide the State Water Board with eight (8) copies of the applicant's CEQA documents.

Responsible Agency: State Water Board, Division of Financial Assistance

Duties:

- Acting on behalf of USEPA, review and consider the CEQA documents before approving the project's funding.
- Make findings as to the adequacy of the documents and require additional studies or documentation, as needed.
- Distribute the applicant's CEQA documents to selected federal agencies for review and comment before making a determination on adequacy. (This distribution is in addition to the standard State Clearinghouse distribution under CEQA.)

***The applicant must address all comments by federal agencies before funding is approved.**

ENDANGERED SPECIES ACT

Non-federal Representative (for all wastewater and water reclamation projects in California that involve an SRF loan): **State Water Board**

State Water Board - Environmental Services Staff (ES) reviews SRF projects to determine potential effects on federally listed species.

Applicant Duties:

- At the earliest possible date, provide ES with:
  - **Species lists.**
  - **Biological assessments.**
  - **Other documents related to project effects on sensitive species.**
- Notify ES **early** during the planning process of any issues regarding sensitive species.

ES Duties:

- Confer informally with the U.S. Fish and Wildlife Service (USFWS) and/or National Marine Fisheries Service (NMFS), as necessary.
- Evaluate and inform USFWS/NMFS of project impacts to federally listed species.
- Ask USEPA to request formal consultation if ES, in conjunction with USFWS/NMFS, determines that a project will adversely affect a federally listed species.

***USEPA will act as the lead agency in the formal consultation process. In response to a formal request from USEPA, USFWS/NMFS may have up to 90 days to prepare a biological opinion. The process can last 135 days or longer.**

CLEAN AIR ACT

CAA general conformity analysis applies only to projects in areas:

- Not meeting National Ambient Air Quality Standards (NAAQS)
- Subject to a maintenance plan.

An analysis is necessary for each **criteria pollutant below** for which an area is considered as being in nonattainment or maintenance:

- **ozone**
- **carbon monoxide**
- **nitrogen dioxide**
- **sulfur dioxide**
- **lead**
- **inhalable particulate matter**

Cultural Resources

Compliance with Section 106 of the National Historic Preservation Act

Information Needed from the Applicant:

- Current records search with maps showing all sites and surveys drawn in relation to the project area.
- Native American consultation.
- Instructions as to how to get started are found in the CEQA Guidelines. Since these two items are basic to any cultural resources review.

Migratory Bird Treaty Act

Information Needed From the Applicant:

- Identification of whether or not the project is within jurisdiction of the Migratory Bird Treaty Act.

Wild and Scenic Rivers Act

Information Needed from the Applicant:

- Identification of whether or not the project will impact any Wild and Scenic Rivers.

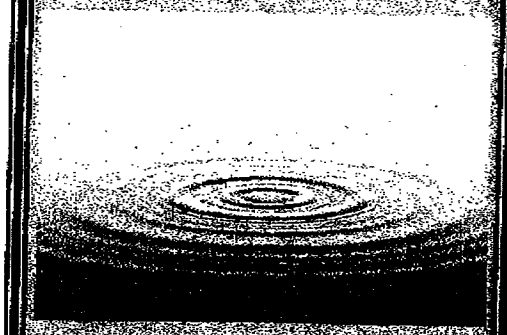
Other Requirements

Information Needed from the Applicant:

- Eight (8) copies of the final CEQA document.
- A date stamped copy of the Notice of Determination or the Notice of Exemption filed with the Governor's Office of Planning and Research, and a receipt of the filing fees paid to the California Department of Fish and Game for Negative Declarations (ND) or Environmental Impact Reports (EIR).
- A copy of the Resolution from the lead agency, approving or certifying the CEQA document and their project. *Note: The CEQA Guidelines uses "approve" or "adopt" for ND and "certify" for EIR.*

Quick Reference Guide to the California Environmental Quality Act (CEQA)-Plus Requirements for State Revolving Fund Loans

Guide to Federal Requirements



State Water Resources Control Board
Division of Financial Assistance
January 2008

Endangered Species

Compliance with Section 7 of the Endangered Species Act

Information Needed from the Applicant:

- List of special status species (both animal and plant) likely or possibly to occur at project site. *Note: If none will possibly occur, provide supporting information.*
- Any biological assessments or special biological studies that may have been done for the project.
- Other documents that disclose information about the project's effection sensitive species.

Protection of Wetlands

Information Needed from the Applicant:

- Identification of whether or not the project or its infrastructure will impact streams, flood control channels, or wetlands.

Air Quality

Compliance with the Federal Air Quality Act

Information Needed from the Applicant:

- Air quality studies that may have been done for the project.
- For those projects in non-attainment areas or attainment areas subject to maintenance plans:
  - Emission data for each criteria pollutant for which the area has been designated non-attainment or maintenance; and
  - Summary of the emission that are expected from both the construction and operation of the project for each criteria pollutant in a non-attainment or maintenance area.
- If emissions fall above de minimis levels, but the project is sized to meet only the needs of current population projections, are use of the approved air implementation plan or an equivalent.
  - Quantitative indication how the proposed rate of increase was calculated using population projections.

Floodplain Management

Information Needed from the Applicant:

- Identification of whether or not the project is in a Flood Management Zone and a copy of the Federal Emergency Management Agency flood zone maps for the project area.

Farmland Protection Policy Act

Information Needed from the Applicant:

- Identification of whether or not the proposed project will impact any important farmland or land under Williamson Act contract.

Coastal Zone Management Act

Information Needed from the Applicant:

- Identification of whether or not the proposed project is in the Coastal Zone.

STATE OF CALIFORNIA – THE RESOURCES AGENCY ARNOLD SCHWARZENEGGER, GOVERNOR

CALIFORNIA COASTAL COMMISSION
CENTRAL COAST DISTRICT OFFICE
725 FRONT STREET, SUITE 300
SANTA CRUZ, CA 95060
PHONE: (831) 427-4863
FAX: (831) 427-4877
WEB: WWW.COASTAL.CA.GOV

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DEC 11 2008
City of Morro Bay
Public Services Department

December 8, 2008

Bruce Ambo
Director Public Services Dept.
955 Shasta Avenue
Morro Bay, CA 93442

Subject: **Notice of Preparation Comments, Morro Bay Wastewater Treatment Facilities Upgrade (SCH#2008101138)**

Dear Mr. ~~Ambo,~~ Bruce

Please accept these general comments and recommendations on the Notice of Preparation (NOP) for the joint Morro Bay - Cayucos Wastewater Treatment Plant (WWTP) facilities upgrade. Generally speaking, the Commission is supportive of the project as it serves to bring the City into compliance with its National Pollutant Discharge Elimination System II permit, benefit water quality of Estero Bay, and enhance the quality of life for the citizens of and visitors to Morro Bay. In general, the NOP identifies a valid range of issues to be explored in the DEIR. We have the following preliminary commentsyou're your consideration as the DEIR is prepared:

1. Plant Sizing. The NOP states that although the planned upgrade increases the treatment of the wastewater effluent, it also results in a decrease in the average dry weather flow level of capacity of the plant. Please ensure that the plant capacity has been adequately sized to handle current and future volumes (where future volumes are tied to allowed development under the certified LCPs, i.e., City of Morro Bay and SLO County) of effluent originating from both municipalities (Morro Bay and Cuyucos) and will not result in intentional or accidental diversions of untreated effluent during peak or wet weather flows. The Coastal Act supports plant capacity designed to accommodate build out of Morro Bay and Cayucos as established under the existing applicable LCPs, but over-sizing the plant to accommodate future growth not not accounted for by the current LCPs is not appropriate. Please ensure the DEIR clearly demonstrates that plant upgrade will be appropriately sized to serve build out of both the City of Morro Bay and Cayucos as established by their respective LCPs.

2. Critical Facilities. In the recent past there have been WWTP reliability issues (including piping, pump, and lift stations that have caused spills, contamination, and diversion of untreated wastewater into the Bay and coastal waters). As you know, the Commission recently acted on an appeal brought by local residents claiming that breaches in the City's wastewater pipes was causing the City's potable water wells to be cross-contaminated with undesirable constituents. Although the Commission chose not to take jurisdiction over the CDP in that case, it was clear from our review of the appeal that there may be problems with the City's wastewater infrastructure. Thus, the DEIR should address how the proposed upgrade will also correct any

deficiencies in these related WWTP facilities to eliminate future spills or contamination and ensure that coastal water quality is appropriately protected.

3. Water Reclamation. The NOP states that the wastewater treatment plant will be capable of tertiary treatment and that the resultant water will be discharged through the City's ocean outfall near Morro Rock. It is our understanding that tertiary treated wastewater with additional sanitation/purification can potentially be used for irrigation, wetlands enhancement, or re-injection into deep water aquifers, and potentially other uses. The EIR should identify a suite of potential beneficial uses for this treated water along with any additional infrastructure and processes that would be needed to reclaim this potential source of water relative to various alternative beneficial uses.

4. Aesthetics. Although the NOP concludes that the proposed upgrade will not have a negative impact on the visual aesthetic of the area, the project does involve an expansion of plant facilities immediately adjacent to an area that is heavily use by the public for access and recreation to the coast. The certified LCP provides clear guidance regarding protecting, preserving, and enhancing visual resources in and around the beach environment. The proposed upgrade provides a good opportunity for the City to enhance the visual aesthetic of the City's wastewater treatment plant grounds including by planting vegetation around the perimeter of the plant and possibly within the plant as well. Please ensure that the DEIR identifies a range of appropriate mitigation measures (i.e., landscape camouflage, paint palettes, screening apparatus, etc.) that can be taken to improve the visual aesthetic of the area.

Thank you for the opportunity to comment in this stage of the project. As the City moves forward with project analysis and environmental review, the issues identified above, as well as any other relevant coastal issues identified upon further review or due to project modifications, should be considered in light of the provisions of the certified Morro Bay LCP and the Coastal Act. Please forward a hardcopy of the DEIR to my attention when it is ready for public review. If you have any questions, please do not hesitate to call me at (831) 427-4898.

Regards,

Mike Watson

Mike Watson
Coastal Planner

MBCSD WWTP Upgrade Project

Scoping Meeting Verbal Comments

November 18, 2008

Name	Affiliation	Comment Summary
Steve Shimek	The Otter Project	The Otter Project supports the upgrade to tertiary treatment. Greatest concern is the project's impact to biological impacts, particularly the southern sea otter, which is a federally threatened species. Toxoplasmosis is responsible for sea otter mortality along the California coast, caused by a parasite that originates in cat feces. If cat litter is flushed down the toilet, then the parasite can enter the wastewater system. Primary and secondary treatments do not kill the parasite. There have been no studies demonstrating a connection between parasites in wastewater effluent and sea otter mortality. There also have been no studies disproving a linkage. The EIR should include an analysis of the effectiveness of planned new treatment facilities to remove the parasite from treated effluent discharged into Estero Bay. Toxic algal blooms are a problem along the California coast. Algal blooms are related to urea in the water. The EIR should include an analysis of the effectiveness of planned new treatment facilities to remove urea from treated effluent discharged into Estero Bay.
Doug Claassen	Morro Dunes RV Park	Requested that something be done about the odors generated at the treatment plant. Odors have affected operation of the RV Park. The severity of the odors depends upon the prevailing wind direction.
Dana Putnam	Surfrider Foundation	Water quality issues are important. Water reclamation facilities and recycled water use should be considered. Cogeneration facilities also should be considered.
Noah Smukler	Morro Bay citizen	Water reclamation facilities and recycled water use should be considered. Small scale recycled water reuse should be considered by tapping into the recycled effluent and using water trucks to provide recycled water locally as needed. The EIR should also include consideration of cogeneration facilities and analysis of impacts due to potential sea level rise and climate change.

Appendix A-2
Revised Notice of Preparation

ESA

ESA

707 Wilshire Boulevard
Suite 1450
Los Angeles, CA 90017
213.599.4300 phone
213.599.4301 fax

www.esassoc.com

Scoping Report

date December 7, 2009

to Bruce Ambo

from Jennifer Jacobus

subject MBCSD Wastewater Treatment Plant Upgrade Revised Project Scoping Report

MORRO BAY-CAYUCOS SANITARY DISTRICT WASTEWATER TREATMENT PLANT UPGRADE PROJECT

Scoping Report No. 2

Introduction

The City of Morro Bay is the Lead Agency for the proposed Morro Bay-Cayucos Sanitary District (MBCSD) Wastewater Treatment Plant (WWTP) Upgrade Project (proposed project). The proposed project would upgrade the WWTP to tertiary treatment and enable it to discharge an average peak season dry weather flow (PSDWF) of up to 2.0 mgd to the ocean. The existing onsite composting program at the WWTP would be discontinued as a result of the proposed project. The existing MBCSD WWTP is located at 160 Atascadero Road within the City of Morro Bay in San Luis Obispo County, California. The project is being proposed to phase out the need for the 301(h) modified discharge permit by upgrading the WWTP to at least full secondary treatment.

Revised Notice of Preparation and Notice of Availability

On October 28, 2008, a Notice of Preparation (NOP) for the proposed project was distributed to the State Clearinghouse, responsible agencies, and interested persons for a 30-day review period that ended November 26, 2008. A public scoping meeting was held during the review period on November 18, 2008. On October 13, 2009, Environmental Science Associates (ESA) prepared and circulated a Revised NOP to inform the public that the City of Morro Bay had modified the proposed project from that described in the previous NOP (see Attachment 1).

Based on the results of a Flood Hazard Analysis conducted for the proposed project, the MBCSD is proposing to build a new treatment plant next to the existing treatment plant, in an area that is less prone to flooding. The existing treatment plant would be demolished after the new treatment plant is constructed and brought online. The Revised NOP was mailed to approximately 70 interested parties, including local, state, and federal agencies; news

publications; and other groups or individuals who had previously expressed interest in the project. A Notice of Completion (NOC) was also prepared by the City of Morro Bay and sent to the State Clearinghouse (see Attachment 2). Copies of the Revised NOP were made available for public review at local libraries, the City's Public Services Department, the WWTP, Cayucos Sanitary District, and at the following websites: www.morro-bay.ca.us/water/water.htm, www.cayucossd.org.

Scoping Period

The 30-day project scoping period, which began with the distribution of the NOP on October 13, 2009, remained open through November 11, 2009. The City placed public notices in the Bay News on October 22, 2009, and the San Luis Obispo Tribune newspaper on October 16, 2009 (see Attachment 3).

Comments

During the scoping period, the City received eight (8) comment letters on the proposed project via mail, e-mail or facsimile and received verbal comments at a special joint meeting of the City of Morro Bay and Cayucos Sanitary District as reflected in the meeting minutes (see Attachment 4).

The next formal opportunity for public comments will be associated with the release of the Draft Environmental Impact Report, expected to be available for public review Winter 2010.

Contents of this Report

This Scoping Report contains documents pertinent to the scoping process. The following items are included:

Attachment 1: Notice of Preparation
Attachment 2: Notice of Completion
Attachment 3: Proof of Publication of Public Notices
Attachment 4: Comment Letters Received by the City

REVISED NOTICE OF PREPARATION

To: California Office of Planning and Research Responsible and Trustee Agencies Other Interested Parties

Subject: Revised Notice of Preparation of an Environmental Impact Report (State Clearinghouse No. 2008101138)

Project: Morro Bay–Cayucos Wastewater Treatment Plant Upgrade

Lead Agency: City of Morro Bay

Date: October 13, 2009

The City of Morro Bay as the Lead Agency is preparing an Environmental Impact Report (EIR) pursuant to the California Environmental Quality Act (CEQA) for the Morro Bay–Cayucos Wastewater Treatment Plant Upgrade Project (proposed project). The proposed project would be implemented in conjunction with the Cayucos Sanitary District (CSD), which shall serve as a Responsible Agency under CEQA.

On October 28, 2008, a Notice of Preparation (NOP) for the proposed project was distributed to the State Clearinghouse, responsible agencies, and interested persons for a 30-day review period that ended November 26, 2008. A public scoping meeting was held during the review period on November 18, 2008. This Revised NOP is being circulated to inform the public that the City of Morro Bay has modified the proposed project from that described in the previous NOP.

The City of Morro Bay/Cayucos Sanitary District (MBCSD) proposes to upgrade the Morro Bay–Cayucos Wastewater Treatment Plant (WWTP) to tertiary treatment. However, based on the results of a Flood Hazard Analysis conducted for the proposed project, the MBCSD is proposing to build a new treatment plant next to the existing treatment plant, in an area that is less prone to flooding. The existing treatment plant would be demolished after the new treatment plant is constructed and brought online. **Figure 1** (attached) provides a conceptual site plan of the proposed project.

The City of Morro Bay is soliciting the views of responsible agencies and interested persons as to the scope and content of the environmental resources and topics to be studied in the EIR. The City requests that comments on this Revised NOP be limited to new topics related to the project description modifications. The City will consider comments submitted in response to both NOPs when preparing the EIR.

COMMENT PERIOD

The Revised NOP is herby released on October 13, 2009 and will be available for public review through November 11, 2009. In accordance with the time limits mandated by CEQA, comments to the Revised NOP must be received by the City of Morro Bay no later than 30 days after publication of this notice. We request that comments to this Revised NOP be received no later than November 11, 2009. Please send your comments to Mr. Bruce Ambo at the address shown below. Please include a return address and contact name with your comments.

Bruce Ambo, Director
City of Morro Bay, Public Services Department
955 Shasta Avenue
Morro Bay, CA 93442
(805) 772-6215 Phone
(805) 772-6268 Fax
bambo@morro-bay.ca.us

Copies of the NOP and project documents are available on the City Web Site (www.morro-bay.ca.us); at the Morro Bay Public Library (625 Harbor Street, Morro Bay); at City Hall (595 Harbor Street, Morro Bay); in the Public Services Department (955 Shasta Avenue, Morro Bay); and at the Wastewater Treatment office (160 Atascadero Road, Morro Bay). Copies are also available at the Cayucos Library (248 S. Ocean Avenue, Cayucos); Cayucos Sanitary District (200 Ash Street, Cayucos); and CSD Web Site (www.cayucossd.org).

PROJECT LOCATION

The existing WWTP is located at 160 Atascadero Road within the City of Morro Bay in San Luis Obispo County, California (see Figure 1).

EXISTING FACILITIES

The WWTP is owned 60 percent by the City of Morro Bay and 40 percent by the Cayucos Sanitary District (CSD). The WWTP is run through a Joint Powers Agreement (JPA) Board, which is comprised of members from the City Council and the CSD Board. The WWTP is rated for an average dry weather flow of 2.06 million gallons per day (mgd), a peak seasonal dry weather flow of 2.36 mgd, and a peak wet weather flow of 6.6 mgd. The secondary treatment facilities have a design capacity of 0.97 mgd. Flows in excess of 0.97 mgd receive primary treatment only and the primary effluent is blended with the secondary effluent. The effluent blend is disinfected by chlorination and then dechlorinated before it is discharged to the Pacific Ocean via an outfall pipe that extends 2900 feet offshore into Estero Bay. In 2007, the WWTP treated an average measured daily flow of 1.09 mgd.

PROJECT NEED

As described in the previous NOP, the WWTP currently operates under a Clean Water Act (CWA) Section 301(h) modified discharge permit, which allows the disinfected blend of primary and secondary treated effluent to be discharged through its ocean outfall. In accordance with Sections 301(h) and 402 of the CWA, the WWTP is operated under a modified NPDES Permit No. CA0047881 issued by the U.S. EPA and the Central Coast Regional Water Quality Control Board (RWQCB). The City and CSD ("MBCSD" collectively) have made a commitment to the Central Coast RWQCB to phase out the need for the 301(h) modified discharge permit by upgrading the WWTP to at least full secondary treatment.

With implementation of the proposed project, operation of the WWTP would meet future NPDES permit requirements as determined by the Central Coast RWQCB. The proposed project also would protect all beneficial uses and water quality objectives for Estero Bay as defined by the California Ocean Plan.

CHANGES TO THE PROJECT AS PREVIOUSLY NOTICED

The proposed project would upgrade the WWTP to tertiary treatment and enable it to discharge an average dry weather flow of 2.0 mgd of tertiary treated effluent to the ocean. The following modifications have been made to the project description:

- The existing onsite composting program at the WWTP would be discontinued.
- A new treatment plant would be constructed adjacent to the existing treatment plant.
- The existing treatment plant would be demolished once the new treatment plant is complete and brought online.

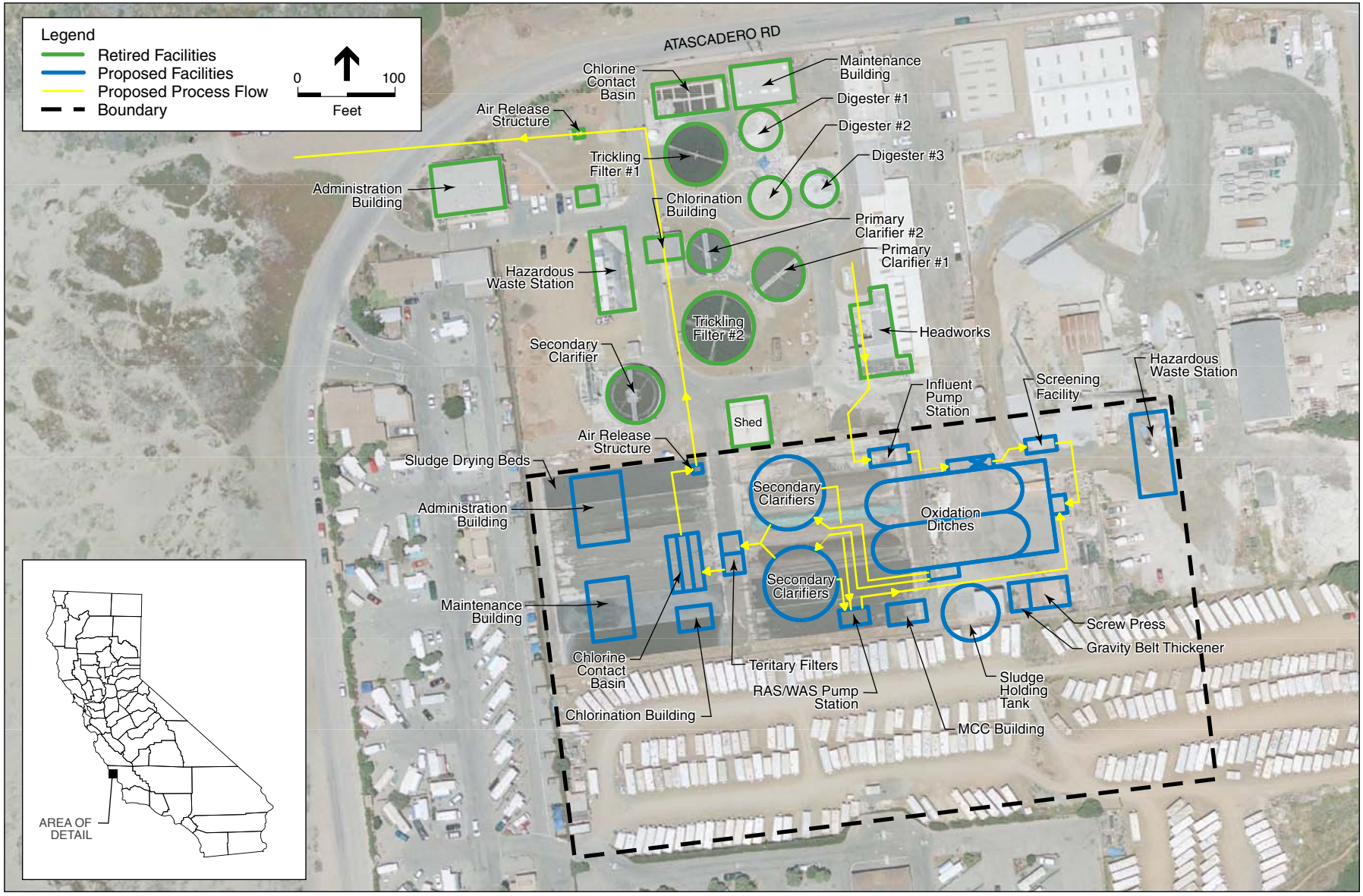
The proposed physical improvements associated with the modified project include construction of the following facilities: administration building, maintenance building, influent pumping station, screening facility, oxidation ditches, RAS/WAS pumping station, tertiary filters, secondary clarifiers, solids handling facilities, chlorination building, hazardous waste station, and chlorine contact basin. The proposed configuration of facilities is shown in Figure 1. The exact location of each facility is subject to change during project design within the delineated project boundary.

Pending completion of all environmental compliance, permitting, and final design documentation, construction of the proposed project is expected to begin in January 2012 and be completed by January 2014.

ISSUES TO BE ADDRESSED IN THE EIR

The EIR will assess the physical changes to the environment that would likely result from construction and operation of the proposed project, including direct, indirect and cumulative impacts. The EIR also will discuss alternatives to the proposed project including the No Project Alternative and discuss potential growth inducing effects of the proposed project. The EIR will identify mitigation measures if necessary to minimize potentially significant impacts of the proposed project. As described in the previous NOP, in accordance with Appendix G of the CEQA Guidelines, the EIR will assess potential impacts of the proposed project to the following resource areas:

- Aesthetics
- Air Quality and Greenhouse Gas Emissions
- Biological Resources
- Cultural Resources
- Geology and Soils
- Hazards and Hazardous Materials
- Hydrology, Groundwater and Water Quality
- Land Use and Recreation
- Noise
- Traffic and Transportation
- Utilities and Public Services



SOURCE: Carollo, 2009.

Morro Bay Cayucos Wastewater Treatment Plant Revised NOP . 208013

Figure 1
Proposed Conceptual Site Plan

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P. O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH # 2008101138

Project Title: Morro Bay-Cayucos Wastewater Treatment Plant Upgrade

Lead Agency: City of Morro Bay Contact Person: Bruce Ambo

Mailing Address: 955 Shasta Ave Phone: (805) 772-6215

City: Morro Bay Zip: CA County: San Luis Obispo

Project Location: County: San Luis Obispo City/Nearest Community: Morro Bay

Cross Streets: Atascadero Road and Embarcadero Zip Code: 93442

Lat. / Long.: 35° 22′ 45″ N/ 120° 51′ 42″ W Total Acres: _____

Assessor's Parcel No.: _____ Section: _____ Twp.: _____ Range: _____ Base: _____

Within 2 Miles: State Hwy #: 1, 41 Waterways: Morro Creek, Toro Creek, Estero Bay, Morro Bay

Airports: _____ Railways: _____ Schools: Morro Bay High School

Document Type:

CEQA:
- ☒ NOP
- ☐ Early Cons
- ☐ Neg Dec
- ☐ Mit Neg Dec
- ☐ Draft EIR
- ☐ Supplement/Subsequent EIR (Prior SCH No.) _____
- Other Revised NOP

NEPA:
- ☐ NOI
- ☐ EA
- ☐ Draft EIS
- ☐ FONSI

Other:
- ☐ Joint Document
- ☐ Final Document
- ☐ Other _____

Local Action Type:

- ☐ General Plan Update
- ☐ General Plan Amendment
- ☐ General Plan Element
- ☐ Community Plan
- ☐ Specific Plan
- ☐ Master Plan
- ☐ Planned Unit Development
- ☐ Site Plan
- ☐ Rezone
- ☐ Prezone
- ☒ Use Permit
- ☐ Land Division (Subdivision, etc.)
- ☐ Annexation
- ☐ Redevelopment
- ☒ Coastal Permit
- ☐ Other _____

Development Type:

- ☐ Residential: Units _____ Acres _____
- ☐ Office: Sq.ft. _____ Acres _____ Employees _____
- ☐ Commercial: Sq.ft. _____ Acres _____ Employees _____
- ☐ Industrial: Sq.ft. _____ Acres _____ Employees _____
- ☐ Educational _____
- ☐ Recreational _____
- ☐ Water Facilities: Type _____ MGD _____
- ☐ Transportation: Type _____
- ☐ Mining: Mineral _____
- ☐ Power: Type _____ MW _____
- ☒ Waste Treatment: Type WWTP Tertiary MGD 2.0
- ☐ Hazardous Waste: Type _____
- ☐ Other: _____

Project Issues Discussed in Document:

- ☒ Aesthetic/Visual
- ☐ Agricultural Land
- ☒ Air Quality
- ☒ Archeological/Historical
- ☒ Biological Resources
- ☒ Coastal Zone
- ☒ Drainage/Absorption
- ☐ Economic/Jobs
- ☐ Fiscal
- ☒ Flood Plain/Flooding
- ☐ Forest Land/Fire Hazard
- ☒ Geologic/Seismic
- ☐ Minerals
- ☒ Noise
- ☒ Population/Housing Balance
- ☒ Public Services/Facilities
- ☒ Recreation/Parks
- ☒ Schools/Universities
- ☐ Septic Systems
- ☒ Sewer Capacity
- ☒ Soil Erosion/Compaction/Grading
- ☒ Solid Waste
- ☒ Toxic/Hazardous
- ☒ Traffic/Circulation
- ☐ Vegetation
- ☒ Water Quality
- ☐ Water Supply/Groundwater
- ☐ Wetland/Riparian
- ☐ Wildlife
- ☒ Growth Inducing
- ☒ Land Use
- ☒ Cumulative Effects
- ☐ Other _____

Present Land Use/Zoning/General Plan Designation:

General (Light) Industrial

Project Description: *(please use a separate page if necessary)*

The proposed project would upgrade the Morro Bay-Cayucos Wastewater Treatment Plant (WWTP) to tertiary treatment and would enable it to discharge up to 2.0 of tertiary treated effluent to the ocean. The upgrade involves the construction of a new treatment plant, including the following facilities: administration building, maintenance building, influent pumping station, screening facility, oxidation ditches, RAS/WAS pumping station, tertiary filters, secondary clarifiers, solids handling facilities, chlorination building, hazardous waste station, and chlorine contact basin. Once the new treatment plant is constructed and brought online, the existing treatment plant would be demolished. The existing onsite composting program at the WWTP would be discontinued.

Note: The state Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with and "**X**".
If you have already sent your document to the agency please denote that with an "**S**".

x Air Resources Board
_ Boating & Waterways, Department of
_ California Highway Patrol
_ CalFire
x Caltrans District # 5
_ Caltrans Division of Aeronautics
_ Caltrans Planning (Headquarters)
_ Central Valley Flood Protection Board
_ Coachella Valley Mountains Conservancy
S Coastal Commission
_ Colorado River Board
x Conservation, Department of
_ Corrections, Department of
_ Delta Protection Commission
_ Education, Department of
_ Energy Commission
x Fish & Game Region # 4
_ Food & Agriculture, Department of
_ General Services, Department of
x Health Services, Department of
_ Housing & Community Development
S Integrated Waste Management Board
x Native American Heritage Commission

x Office of Emergency Services
x Office of Historic Preservation
_ Office of Public School Construction
x Parks & Recreation
_ Pesticide Regulation, Department of
x Public Utilities Commission
S Regional WQCB # 3
x Resources Agency
_ S.F. Bay Conservation & Development Commission
_ San Gabriel & Lower L.A. Rivers and Mtns Conservancy
_ San Joaquin River Conservancy
_ Santa Monica Mountains Conservancy
x State Lands Commission
_ SWRCB: Clean Water Grants
x SWRCB: Water Quality
_ SWRCB: Water Rights
_ Tahoe Regional Planning Agency
x Toxic Substances Control, Department of
x Water Resources, Department of

_ Other _____
_ Other _____

Local Public Review Period (to be filled in by lead agency)

Starting Date _____ Ending Date _____

Lead Agency (Complete if applicable):

Consulting Firm: ESA
Address: 707 Wilshire Blvd, Suite 1450
City/State/Zip: Los Angeles, CA 90017
Contact: Jennifer Jacobus
Phone: 213-599-4300

Applicant: _____
Address: _____
City/State/Zip: _____
Phone: _____

Signature of Lead Agency Representative: _____ **Date:** _____

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.

THE TRIBUNE
Newspaper of the Central Coast

3825 South Higuera • Post Office Box 112 • San Luis Obispo, California 93406-0112 • (805) 781-7800

In The Superior Court of The State of California
In and for the County of San Luis Obispo
AFFIDAVIT OF PUBLICATION

AD #6849793
ESA/WATER

STATE OF CALIFORNIA
ss.
County of San Luis Obispo

I am a citizen of the United States and a resident of the County aforesaid; I am over the age of eighteen and not interested in the above entitled matter; I am now, and at all times embraced in the publication herein mentioned was, the principal clerk of the printers and publishers of THE TRIBUNE, a newspaper of general Circulation, printed and published daily at the City of San Luis Obispo in the above named county and state; that notice at which the annexed clippings is a true copy, was published in the above-named newspaper and not in any supplement thereof – on the following dates to wit; OCTOBER 16, 2009 that said newspaper was duly and regularly ascertained and established a newspaper of general circulation by Decree entered in the Superior Court of San Luis Obispo County, State of California, on June 9, 1952, Case #19139 under the Government Code of the State of California.

I certify (or declare) under the penalty of perjury that the foregoing is true and correct.

Janet E. Durand
(Signature of Principal.Clerk)
DATED: OCTOBER 16, 2009
AD COST: $150.80

Revised Notice of Preparation of an Environmental Impact Report

The City of Morro Bay as the Lead Agency is preparing an Environmental Impact Report (EIR) pursuant to the California Environmental Quality Act (CEQA) for the proposed Morro Bay-Cayucos Wastewater Treatment Plant Upgrade Project (proposed project). The proposed project would be implemented in conjunction with the Cayucos Sanitary District (CSD), which shall serve as a Responsible Agency under CEQA. The proposed project would be located at 160 Atascadero Road in the City of Morro Bay.

On Oct 28, 2008, a Notice of Preparation (NOP) for the proposed project was published for a 30-day review period that ended on Nov 26, 2008. A public scoping meeting was held during the review period on Nov 18, 2008. The Revised NOP is being circulated to inform the public that the project has since been modified. The City proposes to upgrade the wastewater treatment plant to tertiary treatment. However, based on the results of a Flood Hazard Analysis, the City is proposing to build a new treatment plant next to the existing treatment plant, in an area that is less prone to flooding. The existing treatment plant would be demolished after the new treatment plant is constructed and brought online.

Pursuant to Section 15072(b)(1) and 15073(a) of the CEQA Guidelines, the City and CSD are soliciting comments from the public about this proposed action. Copies of the Revised NOP of the EIR and other project documents are available on the City's web site **(www.morro-bay.ca.us)**; at the Morro Bay Public Library (625 Harbor Street, Morro Bay); at City Hall (595 Harbor Street, Morro Bay); in the Public Services Department (955 Shasta Avenue, Morro Bay); and at the Wastewater Treatment office (160 Atascadero Road, Morro Bay). Copies are also available at the Cayucos Library (248 S. Ocean Avenue, Cayucos); Cayucos Sanitary District (200 Ash Street, Cayucos); and CSD Web Site **(www.cayucossd.org)**.

The NOP was released on Oct 13, 2009 and will be available for public review through Nov 11, 2009 at 5:00 PM. The public and interested parties are invited to comment on the proposed action. Comments must be received by the City before the end of the review period.

October 16, 2009 6849793

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Brannigan's, from page 1

disclose any details of the counter offer.

However, the original offer was $3.5 million for all three parcels, leaving the Embarcadero parking lot open to the public and reopening a restaurant/meeting center.

That offer became a campaign issue in the 2008 mayoral race, as challenger George Lease used the offer and the council's reluctance to accept it, to criticize incumbent Mayor Janice Peters in a closely fought race that Peters won.

Meanwhile, local realtor Stanley Craig of Bayshore Realty is listing the property for the city.

The city paid $2.75 million in 2002 for the restaurant and the former RV park, investing the windfall from the Morro Bay Power Plant (under Duke Energy's ownership) during the energy crisis the previous year. In 2001, it paid some $500,000 out of parking in-lieu monies for the 40-space parking lot, for a total of $3.25 million.

SLO businessman Jesse Norris sold the little lot to the city after the council passed on his proposal to build a large motel on both sites. Norris also owned Brannigan's and joined with the Northern California owners of the RV park property to sell it to the city.

When the city eventually sells the properties, it will have to put $500,000 back into the parking in-lieu fund.

This is at least the third time the city has asked for bids to either redevelop the properties or outright sell them. The first time, no one was interested. The last time, in 2008, the city got interest from three parties , Salwasser, Burt Caldwell (of the Embarcadero Grill) and West Pac Development of SLO. West Pac was the most ambitious, proposing to build a 100-room hotel with underground parking, retail spaces, a restaurant and rising four stories above the Embarcadero.

That project died on the vine and the city is now looking to cash in its investment.

Schultz said one of the possibilities being discussed is for the city to carry the loan on the property, if necessary. Schultz said the council discussed the property in closed session and wants to move forward with a sale. "We have a live offer," said Schultz, "and the property is up for sale."

It's the second sizable property the city has up for sale. It still has not sold a 6-lot subdivision — nearly an acre — it owns at San Jacinto Street and Highway 1. Proceeds for that property are supposed to be used to help pay for rebuilding the Harbor Street fire station, a burden that got $1.6 million lighter with a recent federal grant award.

Schultz said there is no time limit on the Brannigan's sale and expects any escrow to close in about 90 days, once a sale is finalized.

Brannigan's closed in late 1995, after being open for decades under various incarnations (The Breakers, Hungry Tiger, Reuben's and Brannigan's Reef). Co-owners, George Lease and Jack Franklin lost the place and it's remained closed since then, except for a brief stint in the late 1990s as a restaurant (Anthony's).

At various times people have come to the city with ideas for using the building — a church and another for a laser tag facility. The building needs extensive repairs and upgrades — including ADA restrooms and possibly an elevator — and the city hasn't wanted to make them. Salwasser, through his agent Dan Reddell, said last year that he would make the necessary repairs to reopen it.

"I certainly believe we can close a deal with Salwasser," Schultz said, "unless we get a better offer."

If they do close a deal it would not be the first time Salwasser has bought a city-owned property. He also purchased the former Flippo's Skate Harbor on Atascadero Road from the city several years ago.

Tentative Agenda

Morro Bay City Council

The Morro Bay City Council will meet on Monday, October 26, 2009 at 6:00 p.m. in the Veterans Memorial Building, 209 Surf Street in Morro Bay. The following items are scheduled for consideration at that time. A final agenda packet will be available for public review by the close of business on Wednesday, October 21st.

CONSENT CALENDAR

Approval of Minutes for the Regular City Council Meetings of September 28, 2009 and October 12, 2009

Status Report on Applications for Economic Stimulus Funding (American Recovery and Reinvestment Act - ARRA)

PUBLIC HEARINGS, REPORTS & APPEARANCES

Discussion on the Use of Commercial Boats vs. Recreational Boats in the Areas South of Tidelands Park

Review and Approval of Public Art (Peace Pole) Located at the Morro Bay Library

UNFINISHED BUSINESS

Update on Mandatory Water Conservation Measures

NEW BUSINESS

Approval to Incorporate E-Mail Notification Module on City Website

Application Fee for Affordable Housing Project Financing

Refer to www.morro-bay.ca.us for the final agenda and closed session agenda

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Pursuant to Section 15072(b)(1) and 15073(a) of the CEQA Guidelines, the City and CSD are soliciting comments from the public about this proposed action. Copies of the Revised NOP of the EIR and other project documents are available on the City's web site (www.morro-bay.ca.us); at the Morro Bay Public Library (625 Harbor Street, Morro Bay); at City Hall (595 Harbor Street, Morro Bay); in the Public Services Department (955 Shasta Avenue, Morro Bay); and at the Wastewater Treatment office (160 Atascadero Road, Morro Bay). Copies are also available at the Cayucos Library (248 S. Ocean Avenue, Cayucos); Cayucos Sanitary District (200 Ash Street, Cayucos); and CSD Web Site (http://www.cayucossd.org.)

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STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

STATE CLEARINGHOUSE AND PLANNING UNIT

ARNOLD SCHWARZENEGGER
GOVERNOR

CYNTHIA BRYANT
DIRECTOR

Notice of Preparation

RECEIVED
OCT 16 2009
City of Morro Bay
Public Services Department

October 13, 2009

To: Reviewing Agencies

Re: Morro Bay-Cayucos Wastewater Treatment Plant Upgrade
SCH# 2008101138

Attached for your review and comment is the Notice of Preparation (NOP) for the Morro Bay-Cayucos Wastewater Treatment Plant Upgrade draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Bruce Ambo
City of Morro Bay
955 Shasta Avenue
Morro Bay, CA 93442

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

for Scott Morgan
Acting Director, State Clearinghouse

Attachments
cc: Lead Agency

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044
(916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH# 2008101138
Project Title Morro Bay-Cayucos Wastewater Treatment Plant Upgrade
Lead Agency Morro Bay, City of

Type NOP Notice of Preparation

Description The proposed project would upgrade the Morro Bay-Cayucos Wastewater Treatment Plant (WWTP) to tertiary treatment and would enable it to discharge 2.0 mgd of tertiary treated effluent to the ocean. The upgrade involves the construction of a new treatment plant, including the following facilities: administrative building, maintenance building, influent pumping station, screening facility, oxidation ditches, RAS/WAS pumping station, tertiary filters, secondary clarifiers, solids handling facilities, chlorination building, hazardous waste station, and chlorine contact basin. Once the new treatment plant is constructed and brought online, the existing treatment plant would be demolished. The existing onsite composting program at the WWTP would be discontinued.

Lead Agency Contact

Name Bruce Ambo
Agency City of Morro Bay
Phone 805-772-6215 **Fax**
email
Address 955 Shasta Avenue
City Morro Bay **State** CA **Zip** 93442

Project Location

County San Luis Obispo
City Morro Bay
Region
Cross Streets Atascadero Road and Embarcadero
Lat / Long 35° 22' 45" N / 120° 51' 42" W
Parcel No.
Township **Range** **Section** **Base**

Proximity to:

Highways 1, 41
Airports
Railways
Waterways Morro Creek, Toro Creek, Estero Bay, Morro Bay
Schools Morro Bay High
Land Use General (Light) Industrial

Project Issues Aesthetic/Visual; Air Quality; Archaeologic-Historic; Biological Resources; Coastal Zone; Drainage/Absorption; Flood Plain/Flooding; Geologic/Seismic; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Schools/Universities; Sewer Capacity; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Water Quality; Growth Inducing; Landuse; Cumulative Effects

Reviewing Agencies Resources Agency; Department of Parks and Recreation; Department of Water Resources; Department of Fish and Game, Region 4; CA Department of Public Health; Native American Heritage Commission; Public Utilities Commission; State Lands Commission; Caltrans, District 5; Integrated Waste Management Board; State Water Resources Control Board, Divison of Financial Assistance; Department of Toxic Substances Control; Regional Water Quality Control Board, Region 3

Date Received 10/13/2009 **Start of Review** 10/13/2009 **End of Review** 11/12/2009

Note: Blanks in data fields result from insufficient information provided by lead agency.

NOP Distribution List

County: San Luis Obispo

SCH# 2008101138

Resources Agency

- [x] **Resources Agency**
  Nadell Gayou
- [ ] **Dept. of Boating & Waterways**
  Mike Sotelo
- [x] **California Coastal Commission**
  Elizabeth A. Fuchs
- [ ] **Colorado River Board**
  Gerald R. Zimmerman
- [ ] **Dept. of Conservation**
  Rebecca Salazar
- [ ] **California Energy Commission**
  Dale Edwards
- [ ] **Cal Fire**
  Allen Robertson
- [ ] **Office of Historic Preservation**
  Wayne Donaldson
- [x] **Dept of Parks & Recreation**
  Environmental Stewardship Section
- [ ] **Central Valley Flood Protection Board**
  Jon Yego
- [ ] **S.F. Bay Conservation & Dev't. Comm.**
  Steve McAdam
- [x] **Dept. of Water Resources**
  Resources Agency
  Nadell Gayou
- [ ] _____
  Conservancy

Fish and Game

- [ ] **Depart. of Fish & Game**
  Scott Flint
  Environmental Services Division
- [ ] **Fish & Game Region 1**
  Donald Koch
- [ ] **Fish & Game Region 1E**
  Laurie Harnsberger
- [ ] **Fish & Game Region 2**
  Jeff Drongesen
- [ ] **Fish & Game Region 3**
  Robert Floerke
- [x] **Fish & Game Region 4**
  Julie Vance
- [ ] **Fish & Game Region 5**
  Don Chadwick
  Habitat Conservation Program
- [ ] **Fish & Game Region 6**
  Gabrina Gatchel
  Habitat Conservation Program
- [ ] **Fish & Game Region 6 I/M**
  Gabrina Gatchel
  Inyo/Mono, Habitat Conservation Program
- [ ] **Dept. of Fish & Game M**
  George Isaac
  Marine Region

Other Departments

- [ ] **Food & Agriculture**
  Steve Shaffer
  Dept. of Food and Agriculture
- [ ] **Depart. of General Services**
  Public School Construction
- [ ] **Dept. of General Services**
  Anna Garbeff
  Environmental Services Section
- [x] **Dept. of Public Health**
  Bridgette Binning
  Dept. of Health/Drinking Water

Independent Commissions,Boards

- [ ] **Delta Protection Commission**
  Linda Fiack
- [ ] **Office of Emergency Services**
  Dennis Castrillo
- [ ] **Governor's Office of Planning & Research**
  State Clearinghouse
- [x] **Native American Heritage Comm.**
  Debbie Treadway
- [x] **Public Utilities Commission**
  Leo Wong
- [ ] **Santa Monica Bay Restoration**
  Guangyu Wang
- [x] **State Lands Commission**
  Marina Brand
- [ ] **Tahoe Regional Planning Agency (TRPA)**
  Cherry Jacques

Business, Trans & Housing

- [ ] **Caltrans - Division of Aeronautics**
  Sandy Hesnard
- [ ] **Caltrans - Planning**
  Terri Pencovic
- [ ] **California Highway Patrol**
  Scott Loetscher
  Office of Special Projects
- [ ] **Housing & Community Development**
  CEQA Coordinator
  Housing Policy Division

Dept. of Transportation

- [ ] **Caltrans, District 1**
  Rex Jackman
- [ ] **Caltrans, District 2**
  Marcelino Gonzalez
- [ ] **Caltrans, District 3**
  Bruce de Terra
- [ ] **Caltrans, District 4**
  Lisa Carboni
- [x] **Caltrans, District 5**
  David Murray
- [ ] **Caltrans, District 6**
  Michael Navarro
- [ ] **Caltrans, District 7**
  Elmer Alvarez
- [ ] **Caltrans, District 8**
  Dan Kopulsky
- [ ] **Caltrans, District 9**
  Gayle Rosander
- [ ] **Caltrans, District 10**
  Tom Dumas
- [ ] **Caltrans, District 11**
  Jacob Armstrong
- [ ] **Caltrans, District 12**
  Chris Herre

Cal EPA

Air Resources Board

- [ ] Airport Projects
  Jim Lerner
  - [ ] Transportation Projects
    Douglas Ito
  - [ ] Industrial Projects
    Mike Tollstrup
- [x] **California Integrated Waste Management Board**
  Sue O'Leary
- [x] **State Water Resources Control Board**
  Regional Programs Unit
  Division of Financial Assistance
- [ ] **State Water Resources Control Board**
  Student Intern, 401 Water Quality Certification Unit
  Division of Water Quality
- [ ] **State Water Resouces Control Board**
  Steven Herrera
  Division of Water Rights
- [x] **Dept. of Toxic Substances Control**
  CEQA Tracking Center
- [ ] **Department of Pesticide Regulation**
  CEQA Coordinator

Regional Water Quality Control Board (RWQCB)

- [ ] **RWQCB 1**
  Cathleen Hudson
  North Coast Region (1)
- [ ] **RWQCB 2**
  Environmental Document Coordinator
  San Francisco Bay Region (2)
- [x] **RWQCB 3**
  Central Coast Region (3)
- [ ] **RWQCB 4**
  Teresa Rodgers
  Los Angeles Region (4)
- [ ] **RWQCB 5S**
  Central Valley Region (5)
  - [ ] **RWQCB 5F**
    Central Valley Region (5)
    Fresno Branch Office
  - [ ] **RWQCB 5R**
    Central Valley Region (5)
    Redding Branch Office
- [ ] **RWQCB 6**
  Lahontan Region (6)
  - [ ] **RWQCB 6V**
    Lahontan Region (6)
    Victorville Branch Office
- [ ] **RWQCB 7**
  Colorado River Basin Region (7)
- [ ] **RWQCB 8**
  Santa Ana Region (8)
- [ ] **RWQCB 9**
  San Diego Region (9)

- [ ] Other _____

Last Updated on 03/24/2009

10/21/2009 10:17 8057726268 MB PUBLIC SERVICES PAGE 04/05

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P. O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH # 2008101138

Project Title: Morro Bay-Cayucos Wastewater Treatment Plant Upgrade

Lead Agency: City of Morro Bay — Contact Person: Bruce Ambo

Mailing Address: 955 Shasta Ave — Phone: (805) 772-6215

City: Morro Bay — Zip: CA — County: San Luis Obispo

Project Location: County: San Luis Obispo — City/Nearest Community: Morro Bay

Cross Streets: Atascadero Road and Embarcadero — Zip Code: 93442

Lat. / Long.: 35° 22' 45" N/ 120° 51' 42" W — Total Acres: _____

Assessor's Parcel No.: _____ Section: _____ Twp.: _____ Range: _____ Base: _____

Within 2 Miles: State Hwy #: 1, 41 — Waterways: Morro Creek, Toro Creek, Estero Bay, Morro Bay

Airports: _____ Railways: _____ Schools: Morro Bay High School

Document Type:

CEQA:
- [x] NOP
- [ ] Early Cons
- [ ] Neg Dec
- [ ] Mit Neg Dec
- [ ] Draft EIR
- [ ] Supplement/Subsequent EIR (Prior SCH No.)
- Other Revised NOP

NEPA:
- [ ] NOI
- [ ] EA
- [ ] Draft EIS
- [ ] FONSI

Other:
- [ ] Joint Document
- [ ] Final Document
- [ ] Other _____

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Local Action Type:

- [ ] General Plan Update
- [ ] General Plan Amendment
- [ ] General Plan Element
- [ ] Community Plan
- [ ] Specific Plan
- [ ] Master Plan
- [ ] Planned Unit Development
- [ ] Site Plan
- [ ] Rezone
- [ ] Prezone
- [x] Use Permit
- [ ] Land Division (Subdivision, etc.)
- [ ] Annexation
- [ ] Redevelopment
- [x] Coastal Permit
- [ ] Other _____

Development Type:

- [ ] Residential: Units _____ Acres _____
- [ ] Office: Sq.ft. _____ Acres _____ Employees _____
- [ ] Commercial: Sq.ft. _____ Acres _____ Employees _____
- [ ] Industrial: Sq.ft. _____ Acres _____ Employees _____
- [ ] Educational _____
- [ ] Recreational _____
- [ ] Water Facilities: Type _____ MGD _____
- [ ] Transportation: Type _____
- [ ] Mining: Mineral _____
- [ ] Power: Type _____ MW _____
- [x] Waste Treatment: Type WWTP Tertiary MGD 2.0
- [ ] Hazardous Waste: Type _____
- [ ] Other: _____

Project Issues Discussed in Document:

- [x] Aesthetic/Visual
- [ ] Agricultural Land
- [x] Air Quality
- [x] Archeological/Historical
- [x] Biological Resources
- [x] Coastal Zone
- [x] Drainage/Absorption
- [ ] Economic/Jobs
- [ ] Other _____
- [ ] Fiscal
- [x] Flood Plain/Flooding
- [ ] Forest Land/Fire Hazard
- [x] Geologic/Seismic
- [ ] Minerals
- [x] Noise
- [x] Population/Housing Balance
- [x] Public Services/Facilities
- [x] Recreation/Parks
- [x] Schools/Universities
- [ ] Septic Systems
- [x] Sewer Capacity
- [x] Soil Erosion/Compaction/Grading
- [x] Solid Waste
- [x] Toxic/Hazardous
- [x] Traffic/Circulation
- [ ] Vegetation
- [x] Water Quality
- [ ] Water Supply/Groundwater
- [ ] Wetland/Riparian
- [ ] Wildlife
- [x] Growth Inducing
- [x] Land Use
- [x] Cumulative Effects

Present Land Use/Zoning/General Plan Designation:

General (Light) Industrial

Project Description: *(please use a separate page if necessary)*

The proposed project would upgrade the Morro Bay-Cayucos Wastewater Treatment Plant (WWTP) to tertiary treatment and would enable it to discharge up to 2.0 of tertiary treated effluent to the ocean. The upgrade involves the construction of a new treatment plant, including the following facilities: administration building, maintenance building, influent pumping station, screening facility, oxidation ditches, RAS/WAS pumping station, tertiary filters, secondary clarifiers, solids handling facilities, chlorination building, hazardous waste station, and chlorine contact basin. Once the new treatment plant is constructed and brought online, the existing treatment plant would be demolished. The existing onsite composting program at the WWTP would be discontinued.

Note: The state Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

January 2008

STATE OF CALIFORNIA Arnold Schwarzenegger, Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-4082
(916) 657-5390 - Fax

October 21, 2009

RECEIVED
OCT 26 2009
City of Morro Bay
Public Services Department

Bruce Ambo
City of Morro Bay
955 Shasta Avenue
Morro Bay, CA 93442

RE: SCH#2008101138 Morro Bay-Cayucos Wastewater Treatment plant Upgrade; San Luis Obispo County

Dear Mr. Ambo:

The Native American Heritage Commission (NAHC) has reviewed the Notice of Preparation (NOP) referenced above. The California Environmental Quality Act (CEQA) states that any project that causes a substantial adverse change in the significance of an historical resource, which includes archeological resources, is a significant effect requiring the preparation of an EIR (CEQA Guidelines 15064(b)). To comply with this provision the lead agency is required to assess whether the project will have an adverse impact on historical resources within the area of project effect (APE), and if so to mitigate that effect. To adequately assess and mitigate project-related impacts to archaeological resources, the NAHC recommends the following actions:

- ✓ Contact the appropriate regional archaeological Information Center for a record search. The record search will determine:
  - If a part or all of the area of project effect (APE) has been previously surveyed for cultural resources.
  - If any known cultural resources have already been recorded on or adjacent to the APE.
  - If the probability is low, moderate, or high that cultural resources are located in the APE.
  - If a survey is required to determine whether previously unrecorded cultural resources are present.
- ✓ If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
  - The final report containing site forms, site significance, and mitigation measurers should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure.
  - The final written report should be submitted within 3 months after work has been completed to the appropriate regional archaeological Information Center.
- ✓ Contact the Native American Heritage Commission for:
  - A Sacred Lands File Check. **USGS 7.5 minute quadrangle name, township, range and section required.**
  - A list of appropriate Native American contacts for consultation concerning the project site and to assist in the mitigation measures. **Native American Contacts List attached.**
- ✓ Lack of surface evidence of archeological resources does not preclude their subsurface existence.
  - Lead agencies should include in their mitigation plan provisions for the identification and evaluation of accidentally discovered archeological resources, per California Environmental Quality Act (CEQA) §15064.5(f). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American, with knowledge in cultural resources, should monitor all ground-disturbing activities.
  - Lead agencies should include in their mitigation plan provisions for the disposition of recovered artifacts, in consultation with culturally affiliated Native Americans.
  - Lead agencies should include provisions for discovery of Native American human remains in their mitigation plan. Health and Safety Code §7050.5, CEQA §15064.5(e), and Public Resources Code §5097.98 mandates the process to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery.

Sincerely,

Katy Sanchez

Katy Sanchez
Program Analyst
(916) 653-4040

CC: State Clearinghouse

Native American Contact
San Luis Obispo County
October 21, 2009

Beverly Salazar Folkes
1931 Shadybrook Drive
Thousand Oaks, CA 91362
805 492-7255
(805) 558-1154 - cell
folkes9@msn.com
Chumash
Tataviam
Fetrnandeño

Judith Bomar Grindstaff
63161 Argyle Road
King City , CA 93930
(831) 385-3759-home
Salinan

Santa Ynez Band of Mission Indians
Vincent Armenta, Chairperson
P.O. Box 517
Santa Ynez , CA 93460
varmenta@santaynezchumash.
(805) 688-7997
(805) 686-9578 Fax
Chumash

San Luis Obispo County Chumash Council
Chief Mark Steven Vigil
1030 Ritchie Road
Grover Beach CA 93433
cheifmvigil@fix.net
(805) 481-2461
(805) 474-4729 - Fax
Chumash

Julie Lynn Tumamait
365 North Poli Ave
Ojai , CA 93023
jtumamait@sbcglobal.net
(805) 646-6214
Chumash

Diane Napoleone and Associates
Diane Napoleone
1433 Camino Trillado
Carpinteria , CA 93013
805-684-4213
Chumash

Lei Lynn Odom
1339 24th Street
Oceano , CA 93445
(805) 489-5390
Chumash

Salinan Tribe of Monterey, San Luis Obispo and San Benito Counties
John W. Burch, Traditional Chairperson
7070 Morro Rd, #A
Atascadero , CA 93422
salinantribe@aol.com
805-460-9202
805 235-2730 Cell
805-460-9204
Salinan

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH# 2008101138 Morro Bay-Cayucos Wastewater Treatment Plant Upgrade; San Luis Obispo County.

San Luis Coastal Unified School District

1500 Lizzie Street
San Luis Obispo, CA 93401-3062
(805) 549-1334

RECEIVED
OCT 27 2009
City of Morro Bay
Public Services Department

October 23, 2009

Mr. Bruce Ambo, Director
Public Services Department
City of Morro Bay
955 Shasta Avenue
Morro Bay, CA. 93442

Re: Revised Notice of Preparation of an Environmental Impact Report
(State Clearinghouse No. 2008101138)
Morro Bay – Cayucos Wastewater Treatment Plant Upgrade

Dear Mr. Ambo:

Thank you for the opportunity to comment on the preparation of a new Environmental Impact Report (EIR) for the revised wastewater treatment plant.

The San Luis Coastal Unified District is interested in limiting potential impacts to Morro Bay High School and its staff and students in the areas of:

- Flooding
- Hazardous materials and safety for our students and staff
- Odor control

Sincerely,

Edward T. Valentine

EDWARD T. VALENTINE, Ed.D.
Superintendent

EV/mkh

S:\SUPTOFFICE\SUPERINT\Admin\Government\Morro Bay\Wastewater Plant EIR.doc

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OCT 27 2009
City of Morro Bay
Public Services Department

MORRO DUNES
TRAVEL TRAILER PARK & RESORT CAMPGROUND
www.morrodunes.com
(805) 772-2722 ☐ 1700 EMBARCADERO ☐ MORRO BAY, CA 93442

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OCT 27 2009
City of Morro Bay
Public Services Department

October 27, 2009

Bruce Ambo
Public Services Director
955 Shasta Ave.
Morro Bay, CA 93442

Mr. Ambo,

This letter is in regards to some concerns I have about the upgrade to the Wastewater Treatment Plant located at 180 Atascadero Rd.

1. If the expansion of the plant includes some of our storage area, the City and Morro Dunes will be losing income.
2. There would be a problem of where we would re-locate trailers that would lose their storage spot.
3. The City needs to address the odors of an enlarged plant. There is already an existing problem that could potentially worsen.

Thank You for your consideration,

Doug Claassen
President, Morro Dunes R.V. Park
1700 Embarcadero
Morro Bay, CA 93442

State Water Resources Control Board

Division of Financial Assistance
1001 I Street, Sacramento, California 95814• (916) 341-5700
Mailing Address: P.O. Box 944212 • Sacramento, California 94244-2120
FAX (916) 341-5707 • http://www.waterboards.ca.gov

Linda S. Adams
Secretary for Environmental Protection

Arnold Schwarzenegger
Governor

OCT 30 2009

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NOV 04 2009

City of Morro Bay
Public Services Department

Mr. Bruce Ambo
City of Morro Bay
955 Shasta Avenue
Morro Bay, CA 93442

Dear Mr Ambo:

NOTICE OF PREPARATION (NOP) FOR THE CITY OF MORRO BAY (CITY); MORRO BAY-CAYUCOS WASTEWATER TREATMENT PLANT UPGRADE (PROJECT); STATE CLEARINGHOUSE NO. 2008101138

We understand the City is pursuing Clean Water State Revolving Fund (CWSRF) financing for this Project (CWSRF No. C-06-5091-110). As a funding agency and a state agency with jurisdiction by law to preserve, enhance, and restore the quality of California's water resources, the State Water Resources Control Board (State Water Board) is providing the following information for the environmental document prepared for the Project.

We would appreciate notice of any hearings or meetings held regarding environmental review of any projects to be funded by the State Water Board, and look forward to reviewing the draft Environmental Impact Report (EIR). Once the EIR is certified, please provide the following documents applicable to the Project: (1) Two copies of the draft and final EIR, (2) the resolution certifying the EIR, adopting the Mitigation Monitoring and Reporting Program (MMRP) and a Statement of Overriding Considerations, if applicable, and making California Environmental Quality Act (CEQA) findings, (3) all comments received during the review period and the City response to those comments, (4) the final MMRP, and (5) a date stamped copy of the Notice of Determination filed with the Governor's Office of Planning and Research.

The CWSRF Program is partially funded by the U.S. Environmental Protection Agency, and requires additional "CEQA-Plus" environmental documentation and review. Three information sheets are included that further explain the CWSRF environmental compliance process and additional federal requirements in the CWSRF Program. In addition, an evaluation form is included for the City to submit to the State Water Board Project Manager. The State Water Board can consult directly with agencies responsible for implementing federal environmental laws and regulations. Any environmental issues raised by federal agencies or their representatives will need to be resolved prior to State Water Board approval of a CWSRF funding commitment for the Project. For further information on the environmental compliance process in the CWSRF Program, please contact me at (916) 341-6983.

It is important to note that prior to a CWSRF funding commitment, projects are subject to provisions of the federal Endangered Species Act and must obtain approval from the U.S. Fish and Wildlife Service (USFWS), and/or National Marine Fisheries Service (NMFS) for any potential effects to special status species. Please be advised that the State Water Board can consult with USFWS and NMFS on behalf of the City regarding all federal special status species the Project has the potential to impact.

The City will need to identify whether the Project will involve any direct effects from construction activities, or indirect effects, such as growth inducement, that may affect federally-listed threatened, endangered, or candidate species that are known, or have a potential to occur on-site, in the surrounding areas, or in the service area. Please identify applicable conservation measures to reduce such effects, if any.

CWSRF projects must comply with Section 106 of the National Historic Preservation Act. The State Water Board has been delegated responsibility for carrying out the requirements of Section 106 under a Nationwide Programmatic Agreement executed for the CWSRF Program by the USEPA, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers.

As stated above, the State Water Board has responsibility for ensuring compliance with Section 106 and the State Water Board's Cultural Resources Officer (CRO) consults directly with the State Historic Preservation Officer (SHPO). SHPO consultation is initiated when sufficient information is provided by the CWSRF applicant for projects having the potential to impact cultural resources. Please contact the State Water Board's CRO, Ms. Cookie Hirn at 916-341-5690, with any questions on how to begin the Section 106 compliance process. Note that the City will need to identify the Area of Potential Effects (APE), including construction, staging areas, and depth of any excavation.

Please provide the CRO with a copy of the current Records Search for the Project area, and include maps that show all recorded sites and surveys in relation to the APE for the Project. The APE is three-dimensional and includes all areas that may be affected by the Project. The APE includes the surface area and extends below ground to the depth of any Project excavations. The Records Search request should be made for an area larger than the APE. The appropriate area varies for different projects, but should be drawn large enough to provide information on what types of sites may exist in the vicinity.

Native American and Interested Party Consultation are required for Section 106 compliance:

- A Project description and map should be sent to the Native American Heritage Commission (NAHC). The NAHC will provide a list of Native American tribes and individuals that are culturally affiliated with your Project area and recommend that they all be contacted
- A Project description and map should be sent to everyone on the list provided by the NAHC, asking for information on the Project area
- Similar letters should be sent to local historical organizations
- Follow-up contact should be made by phone and a phone log should be included

Comments from the NAHC, local tribes and historical organizations affiliated with the Project area, as well as the City response to these comments should be included in the submittal to the CRO.

Other federal requirements pertinent to the Project under the CWSRF Program include the following:

A. Compliance with the federal Clean Air Act: (a) Provide air quality studies that may have been done for the Project; and (b) if the Project is in a nonattainment area or attainment area subject to a maintenance plan; (i) provide a summary of the estimated emissions (in tons per year) that are expected from both the construction and operation of the Project for each federal criteria pollutant in a nonattainment or maintenance area, and indicate if the nonattainment designation is moderate, serious, severe, or extreme; (ii) if emissions are above the federal de minimis levels, but the Project is sized to meet only the needs of current population projections that are used in the approved State Implementation Plan for air quality, quantitatively indicate how the proposed capacity increase was calculated using population projections.

B. Compliance with the Wild and Scenic Rivers Act: Identify whether or not Wild and Scenic Rivers would be potentially impacted by the Project, and include conservation measures to minimize such impacts.

C. Compliance with the Migratory Bird Treaty Act (Act): List any birds that are protected under this Act that may be impacted by the Project, and identify conservation measures to minimize such impacts.

D. Protection of Wetlands: Identify whether or not the Project or construction activities impact streams, flood control channels, or wetlands. Identify the status of coordination with the U.S. Army Corps of Engineers and measures to avoid, minimize, or mitigate for impacts.

E. Compliance with the Flood Plain Management Act: Identify whether the Project is within the 100-year flood zone. Include a flood map.

F. Compliance with Farmland Protection Policy Act: Identify whether the Project will result in the conversion of farmland. State the status of farmland (Prime, Unique, or Local Statewide Importance) in the Project area and determine if this area is under a Williamson Act Contract.

G. Compliance with the Coastal Zone Management Act: Identify whether the Project is within a coastal zone and the status of any coordination with the California Coastal Commission.

Following are specific comments on the NOP:

1. The State Water Board's web page has information on Low Impact Development (LID) that may be applicable to this Project. Identify any Project features (e.g., roads, parking lots, and other hard surfaces) that could benefit from LID practices. LID information can be located at: www.waterboards.ca.gov/water_issues/programs/low_impact_development/.

2. When identifying mitigation for the Project, please be aware that all mitigation should include specific, feasible actions that will improve adverse environmental conditions, be measurable to allow monitoring, and be enforceable. Compliance with laws, statutes, and regulations is not considered mitigation. For more information on mitigation measures, please refer to the California Environmental Quality Act Guidelines, Article 20, Section 15370.

3. The Project is located within the Central Coast Regional Water Quality Control Board's jurisdiction and the Central Coast Water Quality Control Plan (Basin Plan). Please be aware that the Project must comply with the Basin Plan's water quality objectives and protect the designated beneficial uses identified in the Basin Plan.

Thank you once again for the opportunity to review the NOP. We have no further comments on the NOP at this time. If you have any questions or concerns about the State Water Board environmental compliance process please feel free to contact me at (916) 341-6983, or by email at MLobo@waterboards.ca.gov. For all other comments or questions please contact Parker Thaler at (916) 341-7388, or by email at PThaler@waterboards.ca.gov.

Sincerely,

Michelle Lobo

Michelle Lobo
Environmental Scientist

cc: State Clearinghouse
(Re: SCH# 2008101138)
P. O. Box 3044
Sacramento, CA 95812-3044

INSTRUCTIONS AND GUIDANCE FOR
"ENVIRONMENTAL COMPLIANCE INFORMATION"

Introduction:

Detailed information, including statutes and guidelines on the California Environmental Quality Act (CEQA), can be obtained at http://ceres.ca.gov/ceqa. A CEQA Process Flowchart that shows interaction points between lead and responsible agencies can be found at http://ceres.ca.gov/topic/env_law/ceqa/flowchart/index.html. In addition, State Water Board environmental staff is available to answer questions about the CEQA process. Please contact your assigned Project Manager to be directed to an appropriate environmental staff person for further clarification.

CEQA Checklist:

All projects coming to the State Water Board for funding are considered "projects" under CEQA because the State Water Board is providing discretionary approval for that funding.

The types of CEQA documents that might apply to an applicant's project include one of the following: 1. Notice of Exemption; 2. Initial Study/Negative Declaration (or Mitigated Negative Declaration with a Mitigation Monitoring and Reporting Program [MMRP]); or 3. Environmental Impact Report (EIR) with an MMRP. The applicant must determine the appropriate document for its project and submit the additional supporting information listed under the applicable section of the CEQA Checklist. Please submit two copies of all documents. If the applicant is using a CEQA document that is older than five years, the applicant must re-evaluate environmental and project conditions, and develop and submit an updated document based on the results of that re-evaluation.

The applicant must ensure the CEQA document is specific to the project for which funding is being requested. Tier I CEQA documents, such as Program or Master Plan EIRs, may not be suitable for satisfying State Water Board requirements if these documents are not project-specific. Instead, the applicant should be submitting a Tier II CEQA document that is project-specific. If this Tier II CEQA document references pertinent environmental and mitigation information contained in the Tier I CEQA document, then the applicant must submit both documents. *[NOTE: Tier I and Tier II documents refer to documents as defined under CEQA. Although the same terminology is used, these documents do not relate to the Tier I and Tier II level of reviews under the CWSRF Program.]*

Each applicant, if it is a public agency, is responsible for approving the CEQA documents it uses regardless of whether or not it is a lead agency under CEQA. Non-profit organizations, however, shall only be responsible for approving the applicable project mitigation measures identified in the MMRP. For purposes of State Water Board funding, all public agencies applying for this funding shall file either a Notice of Exemption or a Notice of Determination with the Governor's Office of Planning and Research (State Clearinghouse). Stamped copies of these notices shall be submitted with the rest of the environmental documents.

If the CEQA document is linked to a National Environmental Policy Act (NEPA) document (such as an Environmental Assessment or an Environmental Impact Statement), then the applicant shall submit the additional corresponding NEPA items with either a Finding of No Significant Impact, or a Record of Decision made by the lead agency under NEPA.

Note that additional information may be requested from the applicant after review of all the environmental documents to ensure the State Water Board can complete its own CEQA compliance.

Federal Information:

CEQA requires full disclosure of all aspects of the project, including impacts and mitigation measures that are not only regulated by state agencies, but also by federal agencies. Early consultation with state and federal agencies in the CEQA process will assist in minimizing changes to the project when funding is being requested from the State Water Board. For the items that follow the CEQA Checklist, the applicant shall provide the information and/or reference any applicable sections from the documents being submitted to assist with environmental staff's CEQA review, as well as to provide applicant guidance on any potential concerns, and to assist with federal coordination as needed.

1. Federal Endangered Species Act (ESA), Section 7:

For further information on the federal ESA relating to law, regulation, policy, and notices, go to http://www.fws.gov/endangered/policy/index.html and http://www.nmfs.noaa.gov/pr/laws/esa/. Note that compliance with both state and federal ESA is required of projects having the potential to impact special status species. Although overlap exists between the federal and state ESAs, there might be additional or more restrictive state requirements. For further information on the state ESA, go to http://www.dfg.ca.gov/habcon/cesa/.

2. National Historic Preservation Act, Section 106:

The NHPA focuses on federal compliance. In addition, CEQA requires that impacts to cultural and historic resources be analyzed. The "CEQA and Archeological Resources" section from the Governor's Office of Planning and Research CEQA Technical Advice Series states that the lead agency obtains a current records search from the appropriate California Historical Resources File System Information Center. In addition, the Native American Heritage Commission (NAHC) will provide a list of Native American tribes to be contacted and that are culturally affiliated with a project area.

The NAHC can be contacted at:

915 Capitol Mall, Room 364
Sacramento, CA 95814
(916) 653-4082

3. Clean Air Act:

For CWSRF financed projects, we recommend including a general conformity section in the CEQA documents so that another public review process will not be needed, should a conformity determination be required. The applicant should check with its air quality management district and review the State Air Resources Board California air emissions map for information on the State Implementation Plan. For information on the analysis steps involved in evaluating conformity, please contact the environmental staff person through the assigned Project Manager.

4. Coastal Zone Management Act:

For affected areas, refer to http://coastalmanagement.noaa.gov/mystate/docs/StateCZBoundaries.pdf. For additional information please refer to http://www.coastal.ca.gov/ccatc.html and/or http://www.bcdc.ca.gov/.

5. Farmland Protection Policy Act:

The Natural Resources Conservation Service provides information on the Farmland Protection Policy Act at http://www.nrcs.usda.gov/programs/fppa. Please see the following website regarding the Williamson Act http://www.consrv.ca.gov/dlrp/lca.

6. Floodplain Management - Executive Order 11988:

Each agency shall provide leadership and take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health and welfare, and to restore and preserve the natural and beneficial values served by floodplains in carrying out its responsibilities. Before taking an action, each agency shall determine whether the proposed action will occur in a floodplain. The generally established standard for risk is the flooding level that is expected to occur every 100 years. If an agency has determined to, or proposes to, conduct, support, or allow an action to be located in a floodplain. The agency shall consider alternatives to avoid adverse effects and incompatible development in the floodplains. For further information, please consult the following web link: http://www.epa.gov/owow/wetlands/regs/eo11988.html.

7. Migratory Bird Treaty Act (MBTA):

The MBTA, along with subsequent amendments to this Act, provides legal protection for almost all breeding bird species occurring in the United States and must be addressed in CEQA. The MBTA restricts the killing, taking, collecting and selling or purchasing of native bird species or their parts, nests, or eggs. The treaty allows hunting of certain game bird species, for specific periods, as determined by federal and state governments. In the CEQA document, each agency must make a finding that a project will comply with the MBTA. For further information, please consult the following web link: http://www.fws.gov/laws/lawsdigest/migtrea.html.

8. Protection of Wetlands – Executive Order 11990:

Projects, regardless of funding, must get approval for any temporary or permanent disturbance to federal and state waters, wetlands, and vernal pools. The permitting process is usually through the

U.S. Army Corps of Engineers (USACOE), can be lengthy and may ultimately require project alterations to avoid wetlands. Applicants must consult with USACOE early in the planning process if any portion of the project site contains wetlands, or other federal waters. The USACOE Wetland Delineation Manual is available at: http://www.wetlands.com/regs/tlpge02e.htm. Also note that the Water Boards are involved in providing approvals through a 401 Water Quality Certification and/or Waste Discharge Requirements (http://www.waterboards.ca.gov/water_issues/programs/cwa401/index.shtml).

9. Wild and Scenic Rivers Act:

There are construction restrictions or prohibitions for projects near or on a "wild and scenic river." A listing of designated "wild and scenic rivers" can be obtained at http://www.rivers.gov/wildriverslist.html . Watershed information can be obtained through the "Watershed Browser" at: http://cwp.resources.ca.gov/map_tools.php.

10. Source Water Protection:

For more information, please visit: http://epa.gov/region09/water/groundwater/ssa.html.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)
CHECKLIST FOR THE APPLICANT
What to Submit to your State Water Board's Project Manager

If project is covered under a **CEQA Categorical or Statutory Exemption**, submit a copy of the following:

- ❑ **Notice of Exemption (filed with the Governor's Office of Planning and Research)**
- ❑ **List of Best Management Practices (BMPs) and their locations, if project implements BMPs**
- ❑ **Map of the project area**

If project is covered under a **Negative Declaration**, submit a copy of the following:

- ❑ **Draft and Final Initial Study/Negative Declaration**
  (or Mitigated Negative Declaration, if applicable)
  - ❑ Comments and Responses to the Draft
  - ❑ Mitigation Monitoring and Reporting Program (if using a Mitigated Negative Declaration)
- ❑ **Resolution approving the CEQA documents**
  - ❑ Adopting the Negative Declaration
  - ❑ Making CEQA Findings
- ❑ **Notice of Determination (filed with the Governor's Office of Planning and Research)**

If project is covered under an **Environmental Impact Report (EIR)**, submit a copy of the following:

- ❑ **Draft and Final EIR**
  - ❑ Comments and Responses to the Draft
  - ❑ Mitigation Monitoring and Reporting Program (MMRP)
- ❑ **Resolution approving the CEQA documents**
  - ❑ Certifying the EIR and adopting the MMRP
  - ❑ Making CEQA Findings
  - ❑ Adopting a Statement of Overriding Considerations for any adverse impact(s) that cannot be avoided or fully mitigated if project is implemented
- ❑ **Notice of Determination (filed with the Governor's Office of Planning and Research)**

If EIR is a joint CEQA/National Environmental Policy Act document (EIR/Environmental Impact Statement or EIR/Environmental Assessment), submit the applicable Record of Decision and/or Finding of No Significant Impact.

State Water Resources Control Board (State Water Board)
Clean Water State Revolving Fund Program

Evaluation Form for Environmental Review and Federal Coordination

1. **Federal Endangered Species Act:**
Does the project involve any direct effects from construction activities, or indirect effects such as growth inducement that may affect federally listed threatened or endangered species that are known, or have a potential, to occur on-site, in the surrounding area, or in the service area?

☐ No. Discuss why the project will not impact any federally listed special status species:

_____
_____
_____
_____
_____
_____

☐ Yes. Include information on federally listed species that could potentially be affected by this project and any proposed avoidance and compensation measures so that the State Water Board can initiate informal/formal consultation with the applicable federally designated agency. Document any previous ESA consultations that may have occurred with the project.

Attach project-level biological surveys, evaluations analyzing the project's direct and indirect effects on special-status species, and a current species list for the project area.

2. **National Historic Preservation Act:**
Identify the Area of Potential Effects (APE), including construction, staging areas, and depth of any excavation. (Note that the APE is three dimensional and includes all areas that may be affected by the project, including the surface area and extending below ground to the depth of any project excavations.)

_____
_____
_____
_____
_____
_____
_____
_____

Attach a current records search with maps showing all sites and surveys drawn in relation to the project area, and records of Native American consultation.

3. **<u>Clean Air Act:</u> Is the project subject to a State Implementation Plan (SIP) conformity determination?**

☐ No. The project is in an attainment or unclassified area.

☐ Yes. The project is in a nonattainment area or attainment area subject to maintenance plans. Include information to indicate the nonattainment designation (e.g. moderate, serious or severe), if applicable. If estimated emissions (below) are above the federal de minimis levels, but the project is sized to meet only the needs of current population projections that are used in the approved SIP for air quality, then quantitatively indicate how the proposed capacity increase was calculated using population projections.

Air Basin Name: _____

Provide the estimated project construction and operational air emissions (in tons per year) in the chart below, and attach supporting calculations.

Attach any air quality studies that may have been done for the project.

Pollutant	Status (Attainment, Nonattainment or Unclassified)	Threshold of Significance for the Area (if applicable)	Construction Emissions (Tons/Year)	Operation Emissions (Tons/Year)
Carbon Monoxide (CO)				
Ozone (O_3)				
Oxides of Nitrogen (NO_x)				
Particulate Matter ($PM_{2.5}$)				
Particulate Matter (PM_{10})				
Reactive Organic Gases (ROG)				
Sulfur Dioxide (SO_2)				
Volatile Organic Compounds (VOC)				

4. **<u>Coastal Zone Management Act:</u>**
Is any portion of the project site located within the coastal zone?

☐ No. The project is not within the coastal zone.

☐ Yes. Describe the project location with respect to coastal areas, and the status of the coastal zone permit:

_____
_____
_____
_____
_____
_____

5. **Farmland Protection Policy Act:**
Is any portion of the project site located on important farmland?

☐ No. The project will not impact farmland.

☐ Yes. Include information on the acreage that would be converted from important farmland to other uses. Indicate if any portion of the project site is located within Williamson Act control and the amount of affected acreage:

_____
_____
_____
_____
_____
_____

6. **Flood Plain Management:**
Is any portion of the project site located within a 100-year floodplain as depicted on a floodplain map or otherwise designated by the Federal Emergency Management Agency?

☐ No. Provide a description of the project location with respect to streams and potential floodplains:

_____
_____
_____

☐ Yes. Describe the floodplain, and include a floodplain map and a floodplains/wetlands assessment. Describe any measures and/or project design modifications that would minimize or avoid flood damage by the project:

_____
_____
_____
_____

7. **Migratory Bird Treaty Act:**
Will the project affect protected migratory birds that are known, or have a potential, to occur on-site, in the surrounding area, or in the service area?

☐No.

☐Yes. Discuss the impacts (such as noise and vibration impacts, modification of habitat) to migratory birds that may be directly or indirectly affected by the project and mitigation measures to reduce or eliminate these impacts. Include a list of all migratory birds that could occur where the project is located:

_____
_____
_____

8. **Protection of Wetlands:**
Does any portion of the project area contain areas that should be evaluated for wetland delineation or require a permit from the U.S. Army Corps of Engineers?

☐ No. Provide the basis for such a determination:

_____
_____
_____

☐ Yes. Describe the impacts to wetlands, potential wetland areas, and other surface waters, and the avoidance, minimization, and mitigation measures to reduce such impacts. Provide the status of the permit and information on permit requirements:

_____
_____
_____
_____
_____
_____

9. **Wild and Scenic Rivers Act:**
Is any portion of the project located within a wild and scenic river?

☐ No. The project will not impact a wild and scenic river.

☐ Yes. Identify the wild and scenic river watershed and project location relative to the affected wild and scenic river:

_____
_____
_____
_____
_____
_____

Identify watershed where the project is located:_____

10. **Source Water Protection:**
Is the project located in an area designated by the U.S. Environmental Protection Agency, Region 9, as a Sole Source Aquifer?

☐ No. The project is not within the boundaries of a sole source aquifer.

☐ Yes. Identify the aquifer (e.g., Santa Margarita Aquifer, Scott's Valley, the Fresno County Aquifer, the Campo/Cottonwood Creek Aquifer or the Ocotillo-Coyote Wells Aquifer):

_____

BASIC CRITERIA FOR CULTURAL RESOURCES REPORTS

FOR SECTION 106 CONSULTATION WITH THE STATE HISTORIC PRESERVATION OFFICER (SHPO) UNDER THE NATIONAL HISTORIC PRESERVATION ACT (NHPA)

CURRENT RECORDS SEARCH INFORMATION

- A current (less than a year old) records search from the appropriate Information Center is necessary. The records search must include maps that show all recorded sites and surveys in relation to the area of potential effects (APE) for the project.

- The APE is three-dimensional and includes all areas that may be affected by the project. The APE includes the surface area and extends below ground to the depth of any project excavations.

- The records search request should be made for an area larger than the APE. The appropriate area varies for different projects but must be drawn large enough to provide information on what types of sites may exist in the vicinity.

NATIVE AMERICAN AND INTERESTED PARTY CONSULTATION

- Native American and interested party consultation should be initiated at the beginning of any cultural resource investigations. The purpose is to gather information from people with local knowledge that may be used to guide research.

- A project description and map should be sent to the Native American Heritage Commission (NAHC) when the applicant requests a check of their Sacred Lands Files. The Sacred Lands Files include religious and cultural places that are not recorded at the information centers.

- The NAHC will include a list of Native American groups and individuals with their response. A project description and maps must be sent to everyone on the list asking for information on the project area.

- Similar letters should be sent to local historical organizations and other interested parties.

- Follow-up contact should be made by phone, if possible, and a contact log must be included in the report.

REPORT TERMINOLOGY

- A cultural resources report used for Section 106 consultation should use terminology consistent with the NHPA.

- Being consistent with the NHPA does not mean that the report needs to be "filled" with passages and interpretations of the regulations; the SHPO reviewer already knows the law.

- If "findings" are made, they must be one of the four "findings" listed in Section 106. These include:

  "No historic properties affected" (no properties are within the APE, including the below ground APE).

  "No effect to historic properties" (properties may be near the APE but the project will not impact them).

  "No adverse effect to historic properties" (the project may affect historic properties but the impacts will not be adverse).

  "Adverse effect to historic properties." *Note: the SHPO must be consulted at this point. If your consultant proceeds on his/her own, his/her efforts may be wasted.*

WARNING PHRASES IN ALREADY PREPARED CEQA REPORTS

- A finding of **"no known resources"** does not mean anything. The consultant's job is to find out if there are resources within the APE or to explain why they are not present.

- **"The area is sensitive for buried archaeological resources,"** followed by a statement that **"monitoring is recommended as mitigation."** Monitoring is not acceptable mitigation. A reasonable effort should be made to find out if buried resources are present in the APE.

- **"The area is already disturbed by previous construction."** This statement may be true, but documentation is still needed to show that the new project will not affect cultural resources. As an example, an existing road can be protecting a buried archaeological site. Or, previous construction may have impacted an archaeological site that was never documented.

- No mention of **"Section 106."** A report that gives adequate information for compliance with the California Environmental Quality Act may not be sufficient to comply with Section 106.

Please contact Ms. Cookie Hirn with any questions on cultural resources reports.

Cookie Hirn
State Water Resources Control Board
Cultural Resources Officer
916-341-5690
Mhirn@waterboards.ca.gov

STATE WATER RESOURCES CONTROL BOARD

CEQA AND STATE WATER BOARD GRANTS

Environmental Requirements for State Water Board Grants

The State Water Resources Control Board (State Water Board) distributes funding through various grants, including Propositions 13, 40, 50, Water Recycling, Small Community Grants and others. Applicants seeking funds are required to comply with the California Environmental Quality Act (CEQA), and provide documents for the State Water Board's environmental review process.

GRANT FUNDING

State Water Board grants are subject to CEQA. The State Revolving Fund Loan program has additional federal requirements described in the *SRF & CEQA-Plus* pamphlet.

LEAD AGENCY

The applicant is usually the **Lead Agency** and must prepare and circulate an environmental document before approving a project. Only a public agency, such as a local, regional or state government, may be the Lead Agency under CEQA. If a project will be completed by a non-governmental organization, Lead Agency responsibility goes to the first public agency providing discretionary approval for the project.

RESPONSIBLE AGENCY

The State Water Board is a **Responsible Agency** and must review and consider the environmental document prior to providing funding to any portion of a project.

As the Responsible Agency, the State Water Board must make findings based on information provided by the Lead Agency before granting "environmental clearance" for the project. The Lead Agency must adhere to the CEQA process and provide detailed information about any potential adverse or beneficial environmental impacts resulting from the project.

STATE WATER BOARD RESPONSIBILITIES

The State Water Board's mission is to preserve, enhance and restore the quality of California's water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations. To fulfill this responsibility, and to carry out obligations as a Responsible Agency under CEQA, the State Water Board must consider the Lead Agency's environmental document before providing funding.

ENVIRONMENTAL CLEARANCE

Environmental clearance must be done before a project can be funded. For Small Community Wastewater grants and Water Recycling Funding Program grants, environmental clearance must be received before a Facilities Plan Approval is issued by the State Water Board for a project.

DOCUMENT REVIEW

The State Water Board would like to review documents as early in the process as possible. Send environmental documents to the State Water Board, Regional Programs Unit during the CEQA public review period. Be sure to identify yourself as a grant applicant. This way, any environmental concerns the State Water Board has about the project can be addressed early in the process.

REQUIRED DOCUMENTS

The Regional Programs Unit must have the documents listed below to provide environmental clearance.

1. **Draft and Final Environmental Documents** – Environmental Impact Reports, Negative Declarations, CEQA exemptions;

2. **Resolution** approving the project, adopting the environmental document and making CEQA findings;

3. **All comments** received during the public review period and your responses to those comments;

4. **Adopted Mitigation Monitoring Plan**, if applicable; and

5. **Notice of Determination** filed with the Governor's Office of Planning and Research.

Once the State Water Board has received all documents, considered them and found them adequate, environmental clearance for the funding can be granted.

CONTACT INFORMATION

For more information, please contact the Division of Financial Assistance, Loans and Grants at (916) 341-5700.

CALIFORNIA
Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

Kip Lorenzetti
603 Johnson Ave.
Apt. 7
San Luis Obispo, CA 93401

Bruce Ambo, Director
City of Morro Bay, Public Services Department
955 Shasta Avenue
Morro Bay, CA 93442

RECEIVED
NOV 06 2009
City of Morro Bay
Public Services Department

Bruce,

I write to you as a concerned citizen regarding the Morro Bay Waste Water Treatment Plant. The WWTP is currently releasing 1.09 mgd of effluent (1,090,000 gallons per day), only .97 mgd receiving both primary and secondary sewage treatment, into Estero Bay, little more than half-a-mile from shore. Thanks to a federal waiver from sewage treatment standards, this has not raised any legal issues, however, environmental concerns arise from this practice.

Through the dumping of effluent into Estero Bay, the federally-threatened California Sea Otter has become negatively affected. The prevalence of the parasite *Toxoplasmosa gondi* (*T. gondi*) is extremely high and is a leading cause of California Sea Otter degradation in the area; otters in the Estero/Morro Bay area are nine times more likely to be infected with *T. gondi* than otters outside this range. The otter itself is considered an indicator species, meaning that it is a representation of the state ecosystem as a whole. Otter degradation can lead to over population of sea urchins, which will, in turn, feed on kelp, which can lead to beach erosion. In addition, the effluent that is above the .97 mgd threshold for both primary and secondary treatment is more prone to harbor shigella bacterium, salmonella, and enteric viruses. As an avid surfer, the presence of these harmful entities within the water I enjoy is unsettling.

I am currently aware of the plan to upgrade the WWTP, beginning in 2012. I have reviewed the notice of preparation issued by the City of Morro Bay and it seems that the inevitable course of action that will be pursued is to build a new WWTP adjacent to the current one. While this may resolve the treatment threshold issue, it does not stop dumping sewage into Estero Bay. A more viable solution, both economically and environmentally, would be to create a wetland treatment site, much like the City of Arcata has done. Arcata uses a series of oxidation ponds, treatment wetlands, and enhancement marshes to filter waste; sewage is held in sedimentation tanks to remove sludge, which is then used as fertilizer, then moved into oxidation pools, and finally to artificial wetlands where the water is cleaned by bacteria, reeds, and cattails. This produces no smell and serves as wildlife refuge as well. This would be fully capable of handling the waste from the Cities of Morro Bay and Cayucos, as Arcata harbors more people than both service districts combined and is prone to more frequent precipitation and thus, more waste water. While I can only suggest this course of action, I implore you and the City of Morro Bay to consider this as a viable option for a new WWTP.

Regards,

Kip Lorenzetti

SPECIAL JOINT MEETING
CITY OF MORRO BAY AND CAYUCOS SANITARY DISTRICT
WASTEWATER TREATMENT PLANT
(UNDER JOINT POWERS AGREEMENT)

CAYUCOS SANITARY DISTRICT BOARD OF DIRECTORS:

Robert Enns, President
R.H. Bud McHale, Vice-President
Harold Fones, Director
Michael Foster, Director
Shirley Lyon, Director

CITY OF MORRO BAY CITY COUNCIL: MEMBERS PRESENT:

Janice Peters, Mayor
Betty Winholtz, Vice-Mayor
Noah Smukler, Councilmember
Carla Borchard, Councilmember
Rick Grantham, Councilmember

MINUTES

MEETING DATE:
5:00 p.m., Thursday, November 5, 2009

HOSTED BY:
City of Morro Bay

MEETING PLACE:
Multi-Purpose Room
Community Center
1001 Kennedy Way
Morro Bay, CA 93442

CALL TO ORDER AND ROLL CALL

Mayor Peters called the meeting to order at 5:00 p.m. and asked that the record show all Council members present.

Mr. Enns asked that the record show Michael Foster and Harold Fones absent. Bud McHale will arrive a bit late, but will enable a quorum. It was agreed the reports and public comment could be proceed without in his absence.

PUBLIC COMMENT PERIOD
Members of the audience wishing to address the governing bodies on Morro Bay-Cayucos Wastewater Treatment Plant (WWTP) business matters may do so at this time. By the conditions of the Brown Act, the governing bodies may not discuss issues not on the agenda, but may set items for future agendas. When recognized by the Chair, please come forward to the podium and state your name and address for the record. Comments should be limited to three minutes.

Mayor Peters opened Public Comment.

John Birch, Traditional Lead for the Salinan Tribe. Stated this is an extraordinary Native American burial area. Ms. Winholtz asked for clarification of the area in question. Mr. Birch confirmed approximately 1/8th of a mile around Lila Kaiser park. Noted the burial areas are large. Mr. Smukler asked if he was intending to submit comments. He indicated his statement at the meeting represented his comments. He has had discussions with the Archaeologist who indicated there was difficulty obtaining information. He stated that the information resource appears to be approximately 5 years behind. There have been a number of studies completed in the area. He shared his knowledge of previous projects with the Archaeologist.

Bill Martoney – Spoke in support of Mr. Birch's comments saying that when PG&E was built, massive amounts of cultural resources were identified and well documented. Spoke in support of recycling water using Cambria as an example which utilizes a closed cycle system. Stated the valley is very short on water with some growers trucking water in. Expressed concerns regarding the proposed treatment plant location, stating there are other locations which are less tourist oriented which could be utilized. It was his understanding that the proposed location impacts the current WestPac redevelopment proposal which incorporates the site.

Gary Pierce, Traditional Lead, Salinan Tribe – Stated that the area along the creek is a huge cemetery. He expressed concerns regarding utilizing an out of the area archaeologist with no local knowledge.

Robert Stahler, Management Partner of Morro Creek Ranch, representing multiple growers in the Morro Creek Valley with over 30,000 avocado trees planted – Noted these trees provide carbon sequestration and oxygen. Spoke in support of water reclamation. Stated that adequate evaluation of whether there is a better or higher use than the current proposal of discharging to the ocean should be incorporated into the Environmental Impact Report and Coastal Commission review.

Doug Claasen, Manager/Owner, Morro Dunes – Primary concern continues to be if and how much property will be required for the proposed upgrade. Expressed concerns regarding the odor impacts related to the composting process.

Mayor Peters closed Public Comment. She encouraged submittal of formal comments and suggestions. Mr. Smukler asked for a recommendation regarding when comments should be submitted for inclusion in the EIR. Mr. Ambo clarified that this is the second Notice of Preparation (NOP) and that the purpose of the current review is related to scoping. The second Notice of Preparation was not a result of significant changes to the project description and related only to the relocation of the project slightly southward. He indicated that comments can be submitted at this time relative to the desired analysis, with a subsequent opportunity to comment on the analysis findings when the EIR document is circulated to address any comments or shortcomings. That will also be well noticed.

Discussion ensued regarding the cost of the reclamation system, noting that the current project is pre-plumbed for future potential.

Mr. Grantham addressed the potential for a cost share with the farmers for reclamation facilities and processing. Mr. Smukler indicated that the farmers are very interested in having those discussions. Expressed concerns with the Coastal Commission response should the alternative options not be analyzed. Mr. Grantham suggested legal counsel be asked to review the legalities. Mr. Smukler stated staff has assured them that evaluation of other alternatives will be included in the analysis, including the site location.

In response to a request to comment, Mayor Peters re-opened Public Comment.

Mr. Stahler shared that he recently met with the Tax Assessor in regard to value that is imparted to a ranch as a result of the Williams Act and/or land conservancy. The general discussion specific to irrigated land kept in production versus range land left fallow, noted a significant increase in tax revenues for parcels in production.

Seeing no further comments, Mayor Peters closed the Public Comment.

Mr. Enns announced a quorum upon the arrival of Mr. McHale.

Mayor Peters stated that Items B-2 and B-3 had been pulled. The documents are in process, but cannot be reviewed at this time.

Mr. Grantham noted that …….

A. CONSENT CALENDAR

1. Minutes of September 8, 2009 JPA Meeting – Recommend approve.
2. Wastewater Treatment Plant (WWTP) Operations Report through September, 2009 – Recommend receive and file
3. Status Report on the Design Process for the WWTP Upgrade Process – Recommend receive and file
4. Status Report on the Environmental Review Process for the WWTP Upgrade Process – Recommend receive and file
5. Discussion of Potential Funding Strategies for a State Revolving Fund Loan for the WWTP Upgrade Project

B. OLD BUSINESS

1. Approval of Proposal for Real Property Appraisals: WWTP Related Property with Consideration to Approve Real Property Appraisal Proposal, and Authorization for Staff to Negotiate and Enter into an Agreement for Real Property Appraisal Services – Recommend approve
2. Status of Analysis of Statement of Net Assets for FY 2006 and 2007 Relating to "Cash and Cash Equivalents"
3. FY 2007-2008 WWTP Audit

C. NEW BUSINESS

1. Schedule Next Joint Meeting and Agenda Items

ADJOURNMENT - (Next meeting will be hosted by the Cayucos Sanitary District)

The meeting was adjourned at ???? p.m.

Minutes recorded by: CC Rogers
Christine Rogers

COMMENT TO BE CONSIDERED FOR THE ENVIRONMENTAL IMPACT STATEMENT FOR THE MORRO BAY-CAYUCOS WASTEWATER TREATMENT PLANT UPGRADE

Nonylphenol is used extensively as a detergent (as a component of alkyl(mostly nonyl)-phenol ethoxylates) in a wide-range of industrial and household cleaning products, in pesticide formulations as an inactive ingredient, in paints, cosmetics and as a spermicide in condoms. It often enters the environment through wastewater treatment plant sludge that is distributed onto agricultural fields. Further, systems that rely heavily on anaerobic processes may increase the concentrations of nonylphenol distributed to the bay and ocean. As a result of the findings outlined below, we urge that the Morro Bay- Cayucos Wastewater Treatment Project EIR carefully consider the handling of wastewater sludge contaminated with nonylphenol and other potential endocrine disruptors.

Recent work by the San Luis Obispo Science and Ecosystem Alliance (SLOSEA) has discovered tumor growths in fish that inhabit the mudflats of Morro Bay. Further analysis has shown that organic pollutants may be the cause of these reproductive organ (gonads) and liver tumors. Subsequent chemical analyses of over 60 organic pollutants from fish liver tissues showed that nonylphenol was the most concentrated chemical. Additionally, a survey of relevant literature shows that nonylphenol is an endocrine disruptor that can bind to the estrogen receptor in animal species (e.g. salmon fry, trout, rats).

Our initial findings were confirmed by follow-up studies on other fish and marine invertebrate species, some of which are used for commercial purposes. Sediment samples taken from Morro Bay show that nonylphenol is prevalent throughout the bay, thus suggesting that a continuously high source of nonylphenol is discharged into it. Nonylphenol concentrations in sediment are dependent on the sediment's organic composition and the existing aerobic conditions. Therefore, it is also possible that nonylphenol discharged by episodic events may accumulate and stay inert in the sediment for months or longer. Studies on septic systems and associated leach fields show that they are frequently the source of heavy nonylphenol contamination into the environment. The factors that play into such a scenario are complex because they depend on the physical structure of the septic systems, the aerobic conditions and microbial community of the surrounding soil as well as on hydrological parameters.

Although it is not yet proven, it is likely that nonylphenol is causing the tumors seen in Morro Bay fish. Detergents such as nonylphenol can also enhance synergistic effects, meaning that they can exaggerate the known effects of other pollutants typically considered safe in certain concentrations. Additionally, we have found extremely high levels of nonylphenol in fish higher up the trophic food chain (i.e. bioaccumulation.) We have yet to study this effect; however, it is likely that nonylphenol contamination will cause pathologies in these larger game fish.

The extent of nonylphenol contamination on near shore coastal ecosystems, specifically estuaries, extends beyond Morro Bay. We have detected nonylphenol in fish from Tamales Bay and we know of data suggesting that it is widespread in southern California.

Nonylphenol seems to emerge as an ubiquitous pollutant that can even at low levels affect the endocrine system and possibly other physiological processes (tumor

growths) of aquatic life. Although not unique to Morro Bay & Cayucos, it is currently a major pollutant threatening Morro Bay's marine life. A reduction or elimination of nonylphenol from the waters and sediments of Morro Bay through appropriate waste water treatment conditions, may be a very important step towards restoring and maintaining the relatively pristine state of Morro Bay.

SLOSEA is interested in serving the community in addressing this issue with our scientific expertise and dedication to a sustainable management practice of Morro Bay.

Conclusion:

Based upon the preliminary analyses outlined above, we urge that the Morro Bay-Cayucos Wastewater Treatment Project EIR carefully consider the health and safety impacts of alternative wastewater treatment options when handling nonylphenol and other potential endocrine disruptors.

Sincerely,

Dr. Dean Wendt, Director Dr. Lars Tomanek, Member

San Luis Obispo Science and Ecosystem Alliance (SLOSEA)

Contact:
Melissa K. Locke, JD
SLOSEA Marine Policy & Communications Manager
mlocke@calpoly.edu
805-756-2902
Center for Coastal Marine Sciences
Cal Poly State University
San Luis Obispo, CA 93407-0401

AIR POLLUTION
CONTROL DISTRICT
COUNTY OF SAN LUIS OBISPO

RECEIVED

NOV 24 2009

City of Morro Bay
Public Services Department

November 20, 2009

Bruce Ambo, Director
City of Morro Bay Public Services Department
955 Shasta Avenue
Morro Bay, CA 93442

SUBJECT: SLO County APCD Comments Regarding the Revised Notice of Preparation for an EIR for the Morro Bay - Cayucos Wastewater Treatment Plant Upgrade

Dear Mr. Ambo,

Thank you for including the San Luis Obispo County Air Pollution Control District (APCD) in the environmental review process. We originally commented on this project on November 26, 2008; please refer to that letter for any additional comments. We have now completed our second review of the proposed project that would upgrade the Morro Bay-Cayucos primary and partial secondary wastewater treatment plant to a tertiary treatment plant. The proposed project, would be located at 160 Atascadero Road in Morro Bay would require construction of new facilities, as well as the rehabilitation and demolition of existing facilities. The changes to the project would upgrade the WWTP to tertiary treatment and enable it to discharge an average dry weather flow of 2.0 mgd of tertiary treated effluent to the ocean. Specifically, the following modifications have been made to the project description:

1) The existing onsite composting program at the WWTP would be discontinued.
2) A new treatment plant would be constructed adjacent to the existing treatment plant. This change was made based on the results of a Flood Hazard Analysis conducted for the proposed project; this change would have the proposed plant in an area that is less prone to flooding.
3) The existing treatment plant would be demolished once the new treatment plant is complete and brought online.

The following are APCD comments that are pertinent to the Notice of Preparation for this proposed project.

1. Contact Person:

   Meghan Field
   Air Pollution Control District
   3433 Roberto Court
   San Luis Obispo, CA 93401
   (805) 781-5912

2. Permit(s) or Approval(s) Authority:

Project Construction Phases

Demolition Activities
Based on the project referral, it was not clear whether there are existing structures on the proposed site that will be demolished, moved, or renovated. These activities can have potential negative air quality impacts, including issues surrounding proper handling, demolition, and disposal of asbestos containing material (ACM). Asbestos containing materials could be encountered during demolition or remodeling of existing buildings. Asbestos can also be found in utility pipes/pipelines (transite pipes or insulation on pipes). **If utility pipelines are scheduled for removal or relocation; or building(s) are removed or renovated this project may be subject to various regulatory jurisdictions, including the requirements stipulated in the National Emission Standard for Hazardous Air Pollutants (40CFR61, Subpart M - asbestos NESHAP).** These requirements include but are not limited to: 1) notification requirements to the District, 2) asbestos survey conducted by a Certified Asbestos Inspector, and, 3) applicable removal and disposal requirements of identified ACM. Please contact the APCD Compliance Division at 781-5912 for further information.

Naturally Occurring Asbestos
The project site is located in a candidate area for Naturally Occurring Asbestos (NOA), which has been identified as a toxic air contaminant by the California Air Resources Board (ARB). Under the ARB Air Toxics Control Measure (ATCM) for Construction, Grading, Quarrying, and Surface Mining Operations, **prior to any grading activities at the site, the project proponent shall ensure that a geologic evaluation is conducted to determine if NOA is present within the area that will be disturbed. If NOA is not present, an exemption request must be filed with the District (see Attachment 1). If NOA is found at the site, the applicant must comply with all requirements outlined in the Asbestos ATCM.** This may include development of an Asbestos Dust Mitigation Plan and an Asbestos Health and Safety Program for approval by the APCD. Please refer to the APCD web page at *http://www.slocleanair.org/business/asbestos.asp* for more information or contact the APCD Compliance Division at 781-5912.

Construction Permit Requirements
Based on the information provided, we are unsure of the final list of equipment that will be present during the project's construction phase. Portable equipment, 50 horsepower (hp) or greater, used during construction activities will require California statewide portable equipment registration (issued by the California Air Resources Board) or an APCD permit. The following list is provided as a guide to equipment and operations that may have permitting requirements, but should not be viewed as exclusive. For a more detailed listing, refer to page A-5 in the District's CEQA Handbook.

- Power screens, conveyors, diesel engines, and/or crushers;
- Portable generators and equipment with engines that are 50 hp or greater;
- Internal combustion engines;
- Unconfined abrasive blasting operations;
- Concrete batch plants;
- Rock and pavement crushing;
- Tub grinders; and
- Trommel screens.

To minimize potential delays, prior to the start of the project, please contact the APCD Engineering Division at (805) 781-5912 for specific information regarding permitting requirements.

Project Operational Phase

Operational Permit Requirements

Based on the information provided, we are unsure of the types of equipment that may occur under the plan. Operational sources may require APCD permits. The following list is provided as a guide to equipment and operations that may have permitting requirements, but should not be viewed as exclusive. For a more detailed listing, refer to page A-5 in the District's CEQA Handbook.

- Portable generators and equipment with engines that are 50 hp or greater;
- Electrical generation plants or the use of standby generator;
- Public utility facilities;
- Boilers;
- Internal combustion engines; and
- Cogeneration facilities.

To minimize potential delays, prior to the start of the project, please contact the APCD Engineering Division at (805) 781-5912 for specific information regarding permitting requirements.

3. Environmental Information:

The potential air quality impacts from construction and build-out of the project should be assessed in the EIR. The project under development has the potential for significant impacts to local air emissions, ambient air quality, sensitive receptors, and the implementation of the Clean Air Plan (CAP). A complete air quality analysis should be included in the DEIR to adequately evaluate the overall air quality impacts associated with implementation of the proposed project. This analysis should address both short-term construction and long-term operational phase emissions impacts. The following is an outline of items that should be included in the analysis:

a. A description of existing air quality and emissions in the impact area, including the attainment status of the county relative to State air quality standards and any existing

regulatory restrictions to development. The most recent CAP should be consulted for applicable information.

b. A detailed quantitative air emissions analysis at the project scale is relevant at this time.

c. Mitigation measures to reduce or avoid significant air quality impacts should be recommended.

4. Permit Stipulations/Conditions:

Please refer to section 2.

5. Alternatives:

Any alternatives described in the EIR should involve the same level of air quality analysis as described in bullet items 3.a, 3.b and 3.c listed above.

6. Reasonably Foreseeable Projects, Programs or Plans:

The most appropriate standard for assessing the significance of potential air quality impacts for project EIRs is the preparation of a consistency analysis where the proposed project is evaluated against the land use goals, policies, and population projections contained in the CAP. The rationale for requiring the preparation of a consistency analysis is to ensure that the attainment projections developed by the District are met and maintained. Failure to comply with the CAP could result in long term air quality impacts. Inability to maintain compliance with the state ozone standard could bear potential negative economic implications for the county's residents and business community. The District's CEQA Air Quality Handbook provides guidance for preparing the consistency analysis and recommends evaluation of the following questions:

a) Are the population projections used in the plan or project equal to or less than those used in the most recent CAP for the same area?

b) Is the rate of increase in vehicle trips and miles traveled less than or equal to the rate of population growth for the same area?

c) Have all applicable land use and transportation control measures from the CAP been included in the plan or project to the maximum extent feasible?

7. Relevant Information:

As mentioned earlier, the Handbook should be referenced in the EIR for determining the significance of impacts and level of mitigation recommended.

8. Further Comments:

Dust Control Measures

Construction activities can generate fugitive dust, which could be a nuisance to local residents and businesses in close proximity to the proposed construction site. Dust complaints could result in a violation of the APCD's 402 "Nuisance" Rule. **This project is near sensitive receptors and shall be conditioned to comply with all applicable Air Pollution Control District regulations pertaining to the control of fugitive dust (PM10) as contained in section 6.5 of the Air Quality Handbook. All site grading and demolition plans noted shall list the following regulations:**

a. Reduce the amount of the disturbed area where possible,
b. Use of water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site. Increased watering frequency would be required whenever wind speeds exceed 15 mph. Reclaimed (non-potable) water should be used whenever possible,
c. All dirt stock pile areas should be sprayed daily as needed,
d. Permanent dust control measures identified in the approved project revegetation and landscape plans should be implemented as soon as possible following completion of any soil disturbing activities,
e. Exposed ground areas that are planned to be reworked at dates greater than one month after initial grading should be sown with a fast germinating native grass seed and watered until vegetation is established,
f. All disturbed soil areas not subject to revegetation should be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the APCD,
g. All roadways, driveways, sidewalks, etc. to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used,
h. Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site,
i. All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard (minimum vertical distance between top of load and top of trailer) in accordance with CVC Section 23114,
j. Install wheel washers where vehicles enter and exit unpaved roads onto streets, or wash off trucks and equipment leaving the site, and
k. Sweep streets at the end of each day if visible soil material is carried onto adjacent paved roads. Water sweepers with reclaimed water should be used where feasible.

All PM_{10} mitigation measures that are required should be shown on grading and building plans. In addition, the contractor or builder should designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holidays and weekend periods when work may not be in progress. **The name and telephone number of such persons shall be provided to the APCD prior to land use clearance for map recordation and finished grading of the area.**

Developmental Burning

Effective February 25, 2000, **the APCD prohibited developmental burning of vegetative material within San Luis Obispo County**. Under certain circumstances where no technically

feasible alternatives are available, limited developmental burning under restrictions may be allowed. This requires prior application, payment of fee based on the size of the project, APCD approval, and issuance of a burn permit by the APCD and the local fire department authority. The applicant is required to furnish the APCD with the study of technical feasibility (which includes costs and other constraints) at the time of application. If you have any questions regarding these requirements, contact the APCD Enforcement Division at 781-5912.

Operational Phase

Greenhouse Gas Background

The California's Attorney General has required numerous projects reviewed through CEQA, to quantify and implement feasible project level mitigation of greenhouse gas (GHG) emissions. Further, the Attorney General has stated that any project that produces large GHG emission increases clearly could be an obstacle to the State's effort to reach the goals defined in AB 32 and SB 375 to reduce greenhouse gas emissions and promote sustainable community strategies.

On June 19, 2008, the State of California's Governor's Office of Planning and Research (OPR) released a Technical Advisory entitled CEQA AND CLIMATE CHANGE: Addressing Climate Change Through California Environmental Quality Act Review. The Advisory is available at:
www.opr.ca.gov/ceqa/pdfs/june08-ceqa.pdf

This document states:

> "Lead agencies should make a good-faith effort, based on available information, to calculate, model, or estimate the amount of CO2 and other GHG emissions from a project, including the emissions associated with vehicular traffic, energy consumption, water usage and construction activities."

Regarding the determination of GHG impact significance, the Technical Advisory states:

> "The potential effects of a project may be individually limited but cumulatively considerable. Lead agencies should not dismiss a proposed project's direct and/or indirect climate change impacts without careful available information and analysis should be provided for any project that may significantly contribute new GHG emissions, either individually or cumulatively, directly or indirectly (e.g., transportation impacts)."

Regarding GHG impact mitigation, the Technical Advisory states:

> "The lead agency must impose all mitigation measures that are necessary to reduce GHG emissions to a less than significant level. CEQA does not require mitigation measures that are infeasible for specific legal, economic, technological or other reasons. A lead agency is not responsible for wholly eliminating all GHG emissions from a project; the CEQA standard is to mitigate to a level that is "less than significant."

The California Air Pollution Control Officer Association (CAPCOA) published a document in January 2008 entitled "CEQA and Climate Change." The document is available at:
www.capcoa.org/CEQA/CAPCOA%20White%20Paper.pdf

This document provides methods for analyzing GHG both quantitatively and qualitatively and also provides a list of mitigations. This document is supported by both the Office of Planning and Research and the Attorney General's office.

Project Specific GHG Comments
The Attorney General requires project greenhouse gas (GHG) impact evaluations and the implementation of feasible mitigation.

GHG emissions, including carbon dioxide (CO_2) as well as other GHG sources converted to carbon dioxide equivalents should be evaluated for both the proposed new project and the relevant project from the original EIR. **Feasible mitigation measures needs to be identified in the EIR and implemented as part of the project. These measures should be identified from the above identified CAPCOA document or from other proven energy efficiency measures.**

Current project impact evaluation periods are 25 years for commercial or industrial facilities and construction phase impacts are amortized over the project life and added to the operational phase impacts. In some cases where the available measures are marginally effective, off-site GHG mitigation fees are appropriate.

Sensitive Receptors
The EIR must evaluate the impacts to nearby sensitive receptors and those impacts must be mitigated. In some cases, human health risk assessments are necessary to evaluate a project's risk from diesel emission impacts. Please contact the SLO County APCD Planning Division at 781-5912 for guidance on this issue.

Again, thank you for the opportunity to comment on this proposal. If you have any questions or comments, feel free to contact me at 781-5912.

Sincerely,

Meghan D. Field
Air Quality Specialist

MDF/AJM/arr

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Appendix B

Air Quality:
URBEMIS Worksheets

ESA

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Urbemis 2007 Version 9.2.4

Summary Report for Annual Emissions (Tons/Year)

File Name: C:\Documents and Settings\dsa\Application Data\Urbemis\Version9a\Projects\morro bay.urb924

Project Name: morro bay wastewater

Project Location: San Luis Obispo County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2011 TOTALS (tons/year unmitigated)	1.08	9.25	4.93	0.00	1.59	0.45	2.04	0.33	0.41	0.75	978.55
2012 TOTALS (tons/year unmitigated)	0.29	1.92	1.85	0.00	0.00	0.14	0.14	0.00	0.13	0.13	262.70
2013 TOTALS (tons/year unmitigated)	0.87	1.78	1.79	0.00	0.00	0.12	0.12	0.00	0.11	0.11	263.48
2014 TOTALS (tons/year unmitigated)	0.02	0.13	0.12	0.00	0.00	0.01	0.01	0.00	0.01	0.01	17.44

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Urbemis 2007 Version 9.2.4

Summary Report for Summer Emissions (Pounds/Day)

File Name: C:\Documents and Settings\dsa\Application Data\Urbemis\Version9a\Projects\morro bay.urb924

Project Name: morro bay wastewater

Project Location: San Luis Obispo County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2011 TOTALS (lbs/day unmitigated)	9.30	79.34	42.27	0.01	13.25	3.87	17.12	2.77	3.56	6.34	8,376.82
2012 TOTALS (lbs/day unmitigated)	2.20	14.72	14.20	0.00	0.02	1.05	1.07	0.01	0.97	0.97	2,013.04
2013 TOTALS (lbs/day unmitigated)	15.90	13.65	13.86	0.00	0.03	0.93	0.95	0.01	0.85	0.86	2,030.92
2014 TOTALS (lbs/day unmitigated)	0.88	6.03	5.46	0.00	0.01	0.39	0.40	0.00	0.36	0.36	811.00

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Urbemis 2007 Version 9.2.4

Detail Report for Summer Construction Unmitigated Emissions (Pounds/Day)

File Name: C:\Documents and Settings\dsa\Application Data\Urbemis\Version9a\Projects\morro bay.urb924

Project Name: morro bay wastewater

Project Location: San Luis Obispo County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Summer Pounds Per Day, Unmitigated)

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10 Total	PM2.5 Dust	PM2.5 Exhaust	PM2.5 Total	CO2
Time Slice 1/3/2011-3/1/2011 Active Days: 42	3.35	28.79	15.41	0.00	6.81	1.34	8.15	1.42	1.23	2.66	3,117.78
Fine Grading 01/01/2011-03/01/2011	3.35	28.79	15.41	0.00	6.81	1.34	8.15	1.42	1.23	2.66	3,117.78
Fine Grading Dust	0.00	0.00	0.00	0.00	6.80	0.00	6.80	1.42	0.00	1.42	0.00
Fine Grading Off Road Diesel	3.28	28.65	13.60	0.00	0.00	1.34	1.34	0.00	1.23	1.23	2,979.36
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.07	0.14	1.82	0.00	0.01	0.00	0.01	0.00	0.00	0.01	138.42
Time Slice 3/2/2011-12/30/2011 Active Days: 218	9.30	**79.34**	**42.27**	**0.01**	**13.25**	**3.87**	**17.12**	**2.77**	**3.56**	**6.34**	**8,376.82**
Mass Grading 03/02/2011-12/31/2011	9.30	79.34	42.27	0.01	13.25	3.87	17.12	2.77	3.56	6.34	8,376.82
Mass Grading Dust	0.00	0.00	0.00	0.00	13.20	0.00	13.20	2.76	0.00	2.76	0.00
Mass Grading Off Road Diesel	8.82	73.18	36.87	0.00	0.00	3.67	3.67	0.00	3.38	3.38	7,191.35
Mass Grading On Road Diesel	0.35	5.88	1.77	0.01	0.03	0.20	0.23	0.01	0.18	0.19	908.62
Mass Grading Worker Trips	0.14	0.28	3.63	0.00	0.02	0.01	0.02	0.01	0.01	0.01	276.84
Time Slice 1/2/2012-12/31/2012 Active Days: 261	2.20	14.72	14.20	0.00	0.02	1.05	1.07	0.01	0.97	0.97	2,013.04
Building 01/01/2012-12/31/2013	2.20	14.72	14.20	0.00	0.02	1.05	1.07	0.01	0.97	0.97	2,013.04
Building Off Road Diesel	2.00	14.09	9.06	0.00	0.00	1.03	1.03	0.00	0.95	0.95	1,548.30
Building Vendor Trips	0.02	0.26	0.25	0.00	0.00	0.01	0.01	0.00	0.01	0.01	60.83
Building Worker Trips	0.18	0.37	4.89	0.00	0.02	0.01	0.03	0.01	0.01	0.02	403.90

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Time Slice 1/1/2013-8/30/2013 Active Days: 174	2.02	13.63	13.66	0.00	0.02	0.93	0.95	0.01	0.85	0.86	2,012.99
Building 01/01/2012-12/31/2013	2.02	13.63	13.66	0.00	0.02	0.93	0.95	0.01	0.85	0.86	2,012.99
Building Off Road Diesel	1.83	13.07	8.94	0.00	0.00	0.91	0.91	0.00	0.84	0.84	1,548.30
Building Vendor Trips	0.02	0.23	0.23	0.00	0.00	0.01	0.01	0.00	0.01	0.01	60.84
Building Worker Trips	0.17	0.34	4.50	0.00	0.02	0.01	0.03	0.01	0.01	0.02	403.85
Time Slice 9/2/2013-12/31/2013 Active Days: 87	**15.90**	13.65	13.86	0.00	0.03	0.93	0.95	0.01	0.85	0.86	2,030.92
Building 01/01/2012-12/31/2013	2.02	13.63	13.66	0.00	0.02	0.93	0.95	0.01	0.85	0.86	2,012.99
Building Off Road Diesel	1.83	13.07	8.94	0.00	0.00	0.91	0.91	0.00	0.84	0.84	1,548.30
Building Vendor Trips	0.02	0.23	0.23	0.00	0.00	0.01	0.01	0.00	0.01	0.01	60.84
Building Worker Trips	0.17	0.34	4.50	0.00	0.02	0.01	0.03	0.01	0.01	0.02	403.85
Coating 09/01/2013-12/31/2013	13.88	0.02	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.93
Architectural Coating	13.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.01	0.02	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.93
Time Slice 1/1/2014-2/28/2014 Active Days: 43	0.88	6.03	5.46	0.00	0.01	0.39	0.40	0.00	0.36	0.36	811.00
Demolition 01/01/2014-03/01/2014	0.88	6.03	5.46	0.00	0.01	0.39	0.40	0.00	0.36	0.36	811.00
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.84	5.95	4.33	0.00	0.00	0.39	0.39	0.00	0.36	0.36	700.30
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.04	0.08	1.13	0.00	0.01	0.00	0.01	0.00	0.00	0.00	110.70

Phase Assumptions

Phase: Demolition 1/1/2014 - 3/1/2014 - Demolition

Building Volume Total (cubic feet): 80000

Building Volume Daily (cubic feet): 0

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 1 hours per day

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2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 6 hours per day

Phase: Fine Grading 1/1/2011 - 3/1/2011 - Fine Site Grading
Total Acres Disturbed: 4
Maximum Daily Acreage Disturbed: 0.34
Fugitive Dust Level of Detail: Default
20 lbs per acre-day
On Road Truck Travel (VMT): 0
Off-Road Equipment:
1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day
1 Other Equipment (190 hp) operating at a 0.62 load factor for 8 hours per day
1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day
1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Mass Grading 3/2/2011 - 12/31/2011 - Mass Site Grading
Total Acres Disturbed: 7.6
Maximum Daily Acreage Disturbed: 0.66
Fugitive Dust Level of Detail: Default
20 lbs per acre-day
On Road Truck Travel (VMT): 225.69
Off-Road Equipment:
2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day
1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day
2 Rollers (95 hp) operating at a 0.56 load factor for 8 hours per day
1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day
2 Scrapers (313 hp) operating at a 0.72 load factor for 8 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day
1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Building Construction 1/1/2012 - 12/31/2013 - Building Construction
Off-Road Equipment:
1 Cranes (399 hp) operating at a 0.43 load factor for 4 hours per day
2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day
3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

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Phase: Architectural Coating 9/1/2013 - 12/31/2013 - Architectural Coating

Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 150

Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 150

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Greenhouse Gas (GHG) Emissions Calculations

Project Name: Morro Bay-Cayucos WWTP Upgrade
ESA Proj. Number: D208013

Greenhouse Gas (GHG) Emissions from Area Sources and Vehicles

	Annual Emissions		
	pounds (lbs.)	Tons	Metric Tons
URBEMIS2007 Area Emissions	0	0	0
URBEMIS2007 Vehicle Emissions	30,860	15	14
Total Emissions (area sources + vehicles)	**30,860**	**15**	**14**

Indirect Greenhouse Gas (GHG) Emissions from Project use of Electricity (Power Plant Emissions)

Estimated Project Annual Electrical Use: 1,000,000 kWh (kilowatt hours)/year
1,000 mWh (megawatt hours)/year

		Annual		CO2	Annual
	Emission Factor	Project	GHGs	Equivalent	CO2 Equivalent
Indirect GHG gases	lb/mWh	Electricity mWh	metric tons	Factor	Emissions (metric tons)
Carbon Dioxide (CO2)	804.54	1,000	365	1	365
Nitrous Oxide (N2O)	0.0037	1,000	0.0	296	0
Methane (CH4)	0.0067	1,000	0.0	23	0
		Total Indirect GHG Emissions from Project Electricity Use=			**366**

Total Annual Greenhouse Gas (GHG) Emission from Project Operations -- All Sources (CO2 equivalent Metric Tons)

Area Sources	**0**
Vehicles	**14**
Electrical Use	**366**
Total=	**380**

Notes and References:
Total Emissions from Indirect Electricity Use
Formula and Emission Factor from The California Climate Action Regiustry Report Protocol 2006

Pg. 32 (CCARRP) gives Equations

Pg. 35 (CCARRP) gives CO2 output emission rate (lbs/mWh)
804.54 (lbs/mWh)

Pg. 85 (CCARRP) gives CO2 equivalency factors

Pg. 87 (CCARRP) gives Methane and Nitrous Oxide electricity emission factors (lbs/mWh)
Methane - 0.0067 (lbs/mWh)
Nitrous Oxide - 0.0037 (lbs/mWh)

lbs/metric ton = 2204.62

Percentage of 25,000 1.7%
Percentage of 169 Milli 0.0002%

	Tons from URBEMIS	Metric Tons
Construction	979	888

Amoritized over 25 Years Metric Tons	plus operations
36	415

169,000,000
0.0000025

Appendix C

Biological Resources: California Natural Diversity Data Base Search Results

ESA

California Department of Fish and Game
Natural Diversity Database
Selected Elements by Element Code - Portrait
Quads: Morro Bay North and Morro Bay South

	Element Code	Scientific Name/Common Name	Federal Status	State Status	GRank	SRank	CDFG or CNPS
1	AAABH01022	*Rana draytonii* California red-legged frog	Threatened		G4T2T3	S2S3	SC
2	ABNKC12040	*Accipiter cooperii* Cooper's hawk			G5	S3	
3	ABNME03041	*Laterallus jamaicensis coturniculus* California black rail		Threatened	G4T1	S1	
4	ABNME05016	*Rallus longirostris obsoletus* California clapper rail	Endangered	Endangered	G5T1	S1	
5	ABNNB03031	*Charadrius alexandrinus nivosus* western snowy plover	Threatened		G4T3	S2	SC
6	AFCHA0209H	*Oncorhynchus mykiss irideus* steelhead - south/central California coast ESU	Threatened		G5T2Q	S2	SC
7	AFCQN04010	*Eucyclogobius newberryi* tidewater goby	Endangered		G3	S2S3	SC
8	AMACC10010	*Antrozous pallidus* pallid bat			G5	S3	SC
9	AMACD04020	*Nyctinomops macrotis* big free-tailed bat			G5	S2	SC
10	AMAFD03063	*Dipodomys heermanni morroensis* Morro Bay kangaroo rat	Endangered	Endangered	G3G4T1	S1	
11	AMAFF08041	*Neotoma lepida intermedia* San Diego desert woodrat			G5T3?	S3?	SC
12	ARAAD02032	*Actinemys marmorata pallida* southwestern pond turtle			G3G4T2T3Q	S2	SC
13	ARACC01011	*Anniella pulchra nigra* black legless lizard			G3G4T2T3Q	S2	SC
14	ARACC01012	*Anniella pulchra pulchra* silvery legless lizard			G3G4T3T4Q	S3	SC
15	ARACF12022	*Phrynosoma coronatum (frontale population)* coast (California) horned lizard			G4G5	S3S4	SC
16	CTT21320CA	*Central Dune Scrub*			G2	S2.2	
17	CTT37C20CA	*Central Maritime Chaparral*			G2	S2.2	
18	CTT42110CA	*Valley Needlegrass Grassland*			G1	S3.1	
19	CTT52110CA	*Northern Coastal Salt Marsh*			G3	S3.2	
20	CTT52200CA	*Coastal Brackish Marsh*			G2	S2.1	
21	CTT52410CA	*Coastal and Valley Freshwater Marsh*			G3	S2.1	
22	IICOL02101	*Cicindela hirticollis gravida* sandy beach tiger beetle			G5T2	S1	
23	IICOL4A010	*Coelus globosus* globose dune beetle			G1	S1	
24	IILEPG801B	*Plebejus icarioides moroensis* Morro Bay blue butterfly			G5T1T3	S1S3	
25	IILEPP2010	*Danaus plexippus* monarch butterfly			G5	S3	

	Element Code	Scientific Name/Common Name	Federal Status	State Status	GRank	SRank	CDFG or CNPS
26	IMGASC2510	*Helminthoglypta walkeriana* Morro shoulderband (=banded dune) snail	Endangered		G1	S1	
27	IMGASJ7040	*Tryonia imitator* mimic tryonia (=California brackishwater snail)			G2G3	S2S3	
28	NLTEST0020	*Sulcaria isidiifera* splitting yarn lichen			G1	S1.1	
29	PDAST2E162	*Cirsium fontinale var. obispoense* San Luis Obispo fountain thistle	Endangered	Endangered	G2T1	S1.2	1B.2
30	PDAST3M5J0	*Erigeron blochmaniae* Blochman's leafy daisy			G2	S2.2	1B.2
31	PDAST5L0A1	*Lasthenia glabrata ssp. coulteri* Coulter's goldfields			G4T3	S2.1	1B.1
32	PDAST5N090	*Layia jonesii* Jones' layia			G1	S1.1	1B.2
33	PDBRA10020	*Dithyrea maritima* beach spectaclepod		Threatened	G2	S2.1	1B.1
34	PDBRA2G012	*Streptanthus albidus ssp. peramoenus* most beautiful jewel-flower			G2T2	S2.2	1B.2
35	PDCAR040L0	*Arenaria paludicola* marsh sandwort	Endangered	Endangered	G1	S1.1	1B.1
36	PDCHE041F3	*Atriplex joaquiniana* San Joaquin spearscale			G2	S2.1	1B.2
37	PDCHE0P020	*Suaeda californica* California seablite	Endangered		G1	S1.1	1B.1
38	PDCON040J1	*Calystegia subacaulis ssp. episcopalis* Cambria morning-glory			G3T1	S1.2	1B.2
39	PDCRA04011	*Dudleya abramsii ssp. bettinae* Betty's dudleya			G3T1	S1.2	1B.2
40	PDCRA04012	*Dudleya abramsii ssp. murina* mouse-gray dudleya			G3T2	S2.3	1B.3
41	PDCRA04051	*Dudleya blochmaniae ssp. blochmaniae* Blochman's dudleya			G2T2	S2.1	1B.1
42	PDERI040B0	*Arctostaphylos cruzensis* Arroyo de la Cruz manzanita			G2	S2.2	1B.2
43	PDERI040N0	*Arctostaphylos luciana* Santa Lucia manzanita			G2	S2.2	1B.2
44	PDERI040S0	*Arctostaphylos morroensis* Morro manzanita	Threatened		G2	S2.2	1B.1
45	PDERI04140	*Arctostaphylos pechoensis* Pecho manzanita			G2	S2.2	1B.2
46	PDERI041HD	*Arctostaphylos tomentosa ssp. daciticola* dacite manzanita			G4T1	S1.1	1B.1
47	PDERI042B0	*Arctostaphylos wellsii* Wells' manzanita			G2	S2.1?	1B.1
48	PDERI042S0	*Arctostaphylos osoensis* Oso manzanita			G1	S1.2	1B.2
49	PDFAB0F2X3	*Astragalus didymocarpus var. milesianus* Miles' milk-vetch			G5T2	S2.2	1B.2

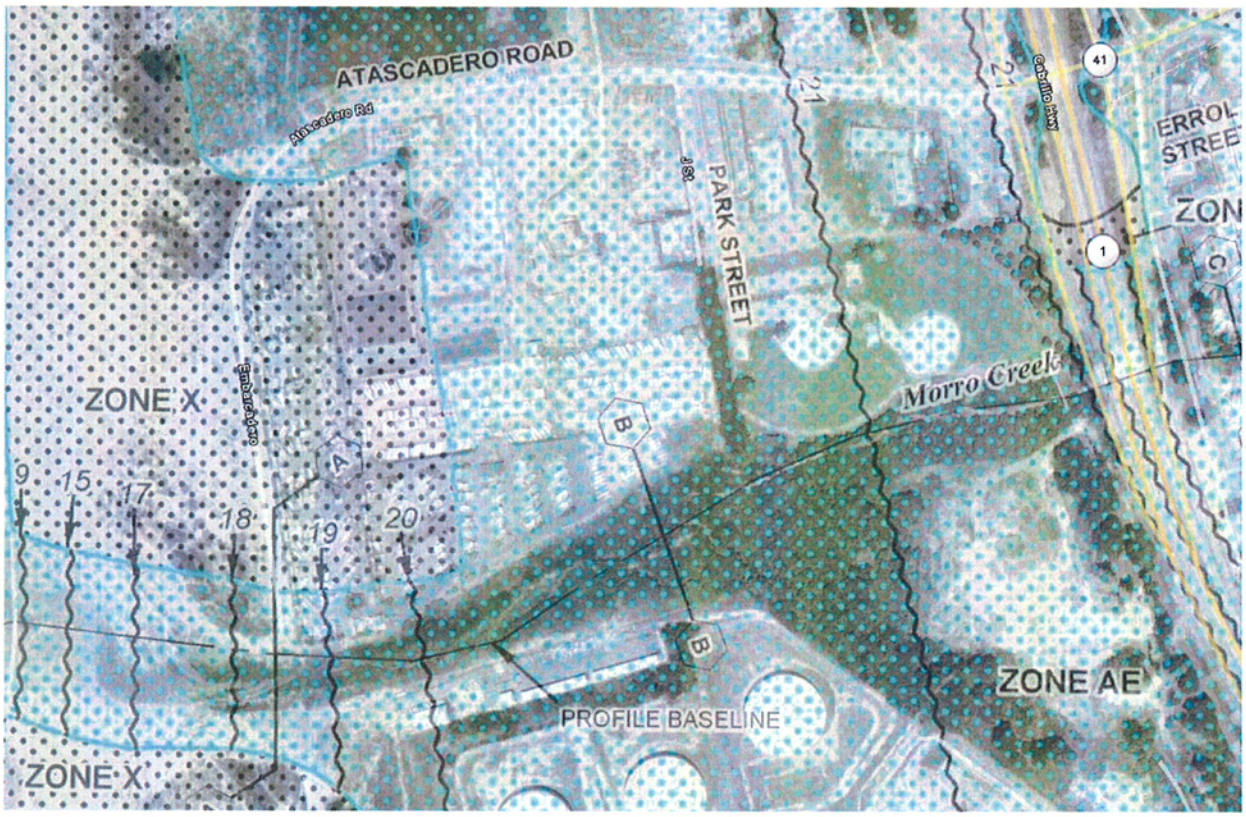
	Element Code	Scientific Name/Common Name	Federal Status	State Status	GRank	SRank	CDFG or CNPS
50	PDHYD04010	*Eriodictyon altissimum* Indian Knob mountainbalm	Endangered	Endangered	G2Q	S2.2	1B.1
51	PDLAM18070	*Monardella crispa* crisp monardella			G2	S2.2	1B.2
52	PDLAM180H0	*Monardella palmeri* Palmer's monardella			G2	S2.2	1B.2
53	PDLAM180X0	*Monardella frutescens* San Luis Obispo monardella			G2	S2.2	1B.2
54	PDMAL0Q0B5	*Malacothamnus palmeri var. palmeri* Santa Lucia bush-mallow			G3T2Q	S2.2	1B.2
55	PDPGN04050	*Chorizanthe breweri* Brewer's spineflower			G2	S2.2	1B.3
56	PDSCR0D453	*Castilleja densiflora ssp. obispoensis* San Luis Obispo owl's-clover			G5T2	S2.2	1B.2
57	PDSCR0J0C2	*Cordylanthus maritimus ssp. maritimus* salt marsh bird's-beak	Endangered	Endangered	G4?T2	S2.1	1B.2
58	PMCYP039J0	*Carex obispoensis* San Luis Obispo sedge			G2	S2.2	1B.2
59	PMLIL0D110	*Calochortus obispoensis* La Panza mariposa-lily			G2	S2.1	1B.2
60	PMLIL0V0L0	*Fritillaria viridea* San Benito fritillary			G3	S3.2	1B.2
61	PMPOA4Z390	*Poa diaboli* Diablo Canyon blue grass			G1	S1.2	1B.2

Appendix D

MBCSD WWTP
Flood Hazard Analysis

ESA

MORRO BAY CAYUCOS SANITARY DISTRICT
WASTEWATER TREATMENT PLANT
FLOOD HAZARD ANALYSIS



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8/7/09
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Job Number: 0866.001
Final Version August 7, 2009

August 7, 2009

Mr. Thomas Barnes
Environmental Science Associates
707 Wilshire Boulevard, Suite 1450
Los Angeles, California 90017

Subject: Morro Bay-Cayucos Sanitary District (MBCSD) Wastewater Treatment Plant Flood Hazard Analysis

Dear Mr. Barnes:

We have completed the final version of the second phase of the Flood Hazard Analysis of the MBCSD Wastewater Treatment Plant. This phase of the report builds on the first phase by quantifying flood risks and presenting several alternatives to reducing these flood risks. As flood protection measures could have an impact on adjacent properties, the flood impact of these alternative improvements on neighboring properties is assessed. Recommendations for mitigating these impacts are also presented.

Sincerely,

WALLACE GROUP

Barry Rands

Barry Rands, PE
Senior Civil Engineer

MORRO BAY CAYUCOS SANITARY DISTRICT
WASTEWATER TREATMENT PLANT
FLOOD HAZARD ANALYSIS
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APPENDIX

Exhibit 1 – Location Map
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Exhibit 3 – FEMA Flood Insurance Rate Map (FIRM)
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CERTIFICATION

Preparation of this report included efforts by the following persons:

Barry Rands, Project Manager
Craig Campbell, Principal (peer review)

Professional Engineer
This report was prepared by, or under the direction of the following Professional Engineer in accordance with the provisions of Section 6700 of the Business and Professions Code of the State of California.

Civil Engineer:

Barry Rands 8-7-09

Barry Rands, Civil Engineer Date
PE 72929

REGISTERED PROFESSIONAL ENGINEER
BARRY C. RANDS
No. 72929
Exp. 12-31-08
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STATE OF CALIFORNIA

LIST OF ACRONYMS AND TECHNICAL TERMS

1% ANNUAL CHANCE FLOOD: Commonly known as the 100-year flood or the base flood, it is the flood that has a 1% chance of being equaled or exceeded in any given year. The boundaries and depths of this flood are shown on maps published by FEMA.

10% ANNUAL CHANCE FLOOD: Commonly known as the 10-year flood. Not shown on FEMA maps.

2% ANNUAL CHANCE FLOOD: Commonly known as the 50-year flood. Not shown on FEMA maps.

0.2% ANNUAL CHANCE FLOOD: Commonly known as the 500-year flood. Shown on FEMA maps for informational purposes.

ACOE: Army Corps of Engineers

BASE FLOOD: 1% Annual Chance Flood (see above)

CFS: cubic feet per second. This is a common unit of flow rate measurement in flood analysis.

FEMA: Federal Emergency Management Agency

FIRM: Flood Insurance Rate Map. The FIRM is an official map published by FEMA indicating boundaries and depths of flooding in a 1% chance (100-year) flood. Also referred to as the "FEMA map".

FIS: Flood Insurance Study. The FIS is a FEMA-sponsored study to determine flood risks in a given community or county. The results are published as maps (FIRMs) and as a report. FIS usually refers to the report.

FLO-2D: A hydraulic analysis program that uses a grid system to model flooding over unconfined surfaces.

HEC-RAS: A hydraulic analysis program used to model flows in river and open channel systems.

LOMR: Letter of Map Revision. An application for a LOMR is a formal process requesting a change to the official flood map (FIRM) published by FEMA.

MBCSD: Morro Bay - Cayucos Sanitary District (Joint owners of the WWTP)

MBPP: Morro Bay Power Plant

NAVD 88: North American Vertical Datum of 1988. See NGVD 29 for more details.

NGVD 29: National Geodetic Vertical Datum of 1929. This vertical control datum was established in 1929 for vertical control surveying in the US. It has been replaced by the NAVD 88, though elevations shown on many maps still reference the NGVD 29 datum. The NAVD 88 datum is generally the higher of the two, but the difference is not constant. In Morro Bay, the NAVD 88 datum is approximately 2.8 feet higher than NGVD 29.

USGS: United States Geological Survey

WWTP: MBCSD Wastewater Treatment Plant. Also referred to in the report as the "plant".

EXECUTIVE SUMMARY

The MBCSD Wastewater Treatment Plant (WWTP) experiences both localized drainage problems and larger flooding problems. Flooding has occurred in the past at the plant, and the site is in a designated Flood Insurance Zone.

A flood analysis was performed for the WWTP site, based on two-dimensional flood modeling using FLO-2D software. This study shows that flooding at the WWTP site is in the range of 3 to 4.5 feet deep. The study also indicates that floodwaters have an outlet through the dunes to the north of the WWTP.

Examination of the current FEMA flood maps and reports show flood depths approximately 2.5 feet higher at the WWTP site than those determined with the above described FLO-2D model. The FEMA map shows about a third of the site as free from 100-year flooding and no flow outlet through the dunes. However, based on current topography, the entire site is below the 100-year flood elevation. Inconsistencies in the peak flow rates reported in the Flood Insurance Study (FIS) used to support the mapping were also discovered.

The FLO-2D model was originally developed by West Consultants for the Morro Bay Power Plant (MBPP) in 2001. To bring the flood analysis up to date, we obtained and revised the original FLO-2D files with current dune topography and analyzed the flood hazard under existing conditions. The updated analysis shows only a marginal increase in flood levels relative to the original study for the Power Plant. Ten flood risk reduction alternatives were also modeled to determine the impact on the WWTP and adjacent properties.

Results of the analysis of the alternatives and feedback from City and CSD staff lead to the following recommendations:

To address 100-year flooding issues:

- Construct the new WWTP facilities on higher ground. Construction on elevated fill provides the highest level of protection and least amount of operational inconveniences.
- Construct all or part of the new facilities on City owned land to the south of the current site that is already elevated, modeled in the analysis as MB10 through 12. Construction at this location will have the least adverse flood impact on neighboring properties.
- Reconstruct Atascadero Road with an inverted crown. This will reduce flooding for all properties along the road and nearly eliminate flooding at the high school for all but the most extreme storm events.
- The City floodplain management ordinance and funding agencies require that WWTP improvements be protected from flooding to the level of one foot above the 100-year flood elevation. Because of the potential reduction of flood levels relative to the current FIRM, we recommend that a Letter of Map Revision (LOMR) be applied for, including new hydrology and new hydraulic analyses. The LOMR process typically takes 3 to 6 months for complex situations such as this.

To address smaller, more frequent flooding:

- Drainage along Atascadero Road should be improved. Several options include:
  - Increasing the size of the 24 inch culvert through the dunes at the end of the street
  - Reestablishment of a surface flow path to the ocean through the dunes at the end of the street.
  - Reconstruction of Atascadero Road with an inverted crown will increase street capacity from a few cfs to approximately 150 cfs.
  - Atascadero Road could be managed as a flood conveyance facility with appropriate warning signs for traffic and parking limitations.
- Raising the WWTP site with fill will alleviate most of the inconveniences of smaller floods on the operation of the plant, but will not improve the flooding situation for neighboring

properties. We recommend that one or more of the measures to alleviate smaller flooding be implemented to mitigate the small impact that the new plant will have on the floodplain.

INTRODUCTION

The MBCSD Wastewater Treatment Plant (WWTP) occupies a 6-acre parcel in Morro Bay at the west end of Atascadero Road, and only a few hundred feet from the Pacific Ocean. It experiences both localized drainage problems and larger flooding problems. Flooding has occurred in the past at the WWTP, and the site is in a Special Flood Hazard Zone. With the proposed upgrade of the WWTP, there is need to investigate the sources of flooding, quantify the flood risk, and assess several alternatives to reduce the risk of damage to the plant due to flooding. The impact of flood protection alternatives on neighboring properties also requires evaluation. This report seeks to address these flood related issues.

LOCATION

The WWTP is in a topographic depression, situated between higher ground to the east and a narrow swath of sand dunes to the west. Nearby developments include Morro Bay High School to the north, Hanson Aggregates directly to the east and Morro Dunes RV Park to the south and west. Other business nearby include two motels and another RV park on Atascadero Road to the east. Morro Creek flows to the ocean approximately 600 feet south of the WWTP, and is separated from the WWTP by high ground occupied by the Morro Dunes RV Park. The WWTP's low-lying location aggravates the flooding problem, as the only stormwater drainage outlets for the site are subject to blockage and backwater. A location map is shown in Exhibit 1.

EXISTING DRAINAGE SYSTEM

The existing drainage system is comprised of five principle components: three underground storm drain systems for smaller flows and two surface routes to the ocean. They are described in more detail below. Exhibits 2 and 5 provide a map and photos of these facilities.

- **Underground storm drain to the ocean**: A 24-inch diameter storm drain captures runoff from the north portion of the WWTP and conveys it to the beach, just beyond the littoral dunes. Its full-flow capacity is 8 cfs, though sand accumulation at the outlet frequently reduces the effective capacity. Periodic maintenance to clear the outlet of sand is necessary. A catch basin in Atascadero road also contributes flow to this drain.
- **Underground storm drain to Morro Creek**: A 24-inch diameter storm drain captures runoff from the south portion of the WWTP and conveys it to Morro Creek. The outlet is capped by a flap gate to prevent high flows in the creek from backing up into the plant. The drain has a full-flow capacity of 11 cfs, but the capacity will be greatly diminished during high flows in Morro Creek.
- **Internal Stormwater Recapture System:** Approximately half of the WWTP site drains to a stormwater recapture system. This system captures runoff from the central part of the site and redirects it to the plant headworks were it enters the wastewater treatment process for eventual ocean discharge. Flows in excess of the capacity of this system are conveyed to Morro Creek in the 24-inch drain described above.
- **Surface drainage through the dunes at Atascadero Road**: Historic photos of the coastline (see Exhibit 5.3) show that there was once a fairly large gap in the dunes at the west end of Atascadero Road. It likely served as a primary surface outlet to the ocean for flood flows from the floodplain on the north side of Morro Creek. Over the years, this gap has diminished in width and increased in height to the point that it no longer serves as a free outlet for flood flows. It should be noted that the reduction in width is due primarily to encroachment from non-native vegetation (ice plant), which also likely contributes to the accumulation of windblown sand.

- **Surface drainage through the dunes to the north**: The dunes between the high school and the beach are well vegetated with a trough running parallel to the coastline. This trough serves as a surface path to the ocean for floodwaters on the north side of Morro Creek. The entrance to the trough at the south end is adjacent to a dirt parking area at the end of Atascadero Road. The outlet is 1,700 feet to the north where it crosses a pedestrian walkway and drops into a creek that leads to the ocean. The elevation drop across the 1,700 feet is only 1 foot with many depressions and hillocks along the way. Consequently, flow through along this path rather slow. This path conveys approximately 5 % of the 100-year flood flow to the ocean. This portion of the dunes is owned and managed by the State Park system.

HYDROLOGY

Our scope of work included a review of existing hydrology studies and analysis of the flood hydraulics using flows from these existing studies. Our review indicates that an independent verification of flows is warranted, however, we do not anticipate major conclusions to be effected.

The WWTP is situated on the floodplain and near the mouth of Morro Creek, which drains a reported 24 square mile watershed to the east of the plant. Two major hydrology studies have been conducted for Morro Creek by FEMA and the Army Corps of Engineers (ACOE). The findings of these reports are discussed below.

Because of inconsistencies in the hydrology studies reviewed, two peak flow values have been used for flood modeling through the plant site. A high flow value corresponds to the 14,900 cfs reported in the FIS and a lower value which represents the 11,668 cfs from the ACOE report. Additional discussion of the hydrology of Morro Creek can be found in the *Morro Bay Power Plant Flood Hazard Analysis (2001)* described later in this report. The authors of that report used the higher flow values in their analysis.

FEMA: The current FEMA Flood Insurance Study (FIS) for San Luis Obispo County (August 2008) states that peak flows for Morro Creek, as well as several other creeks in the area, were calculated with use of regional regression equations developed by USGS in 1977 for the Central Coast. The published peak discharges for Morro Creek at two locations are shown in a table from the FIS shown below:

FLOODING SOURCE AND LOCATION	DRAINAGE AREA (sq. miles)	PEAK DISCHARGES (cfs) 10-PERCENT ANNUAL CHANCE	2-PERCENT ANNUAL CHANCE	1-PERCENT ANNUAL CHANCE	0.2-PERCENT ANNUAL CHANCE
MORRO CREEK					
At mouth	24.0	2,200	9,200	14,900	38,000
At State Highway 1	24.0	2,400	7,800	11,200	24,300

It should be noted that this table reveals three inconsistencies.

- The first is that the drainage areas given at the mouth and at State Hwy 1 are identical (24 square miles), when in fact they are not. Willow Camp Creek joins Morro Creek just west of the highway and adds 0.5 square miles to the total drainage area at the mouth.
- The second is that the large difference between the 1% chance flows in Morro Creek at the highway and at the mouth (11,200 and 14,900 cfs) cannot be accounted for by Willow Camp Creek. Because of Willow Camp Creek's small drainage area and its proximity to the mouth, its contribution to the peak flow of Morro Creek is likely only a few hundred cfs.
- The third inconsistency is that the table shows a higher 10% chance flow at the highway than at the mouth.

We have contacted the FEMA contractor responsible for reviewing map change requests in regards to the anomalies in the FIS. At this writing, we are still awaiting a reply.

ACOE: The ACOE study was published in 1999, benefiting from over 20 years of additional streamflow records beyond what was available for the USGS study. They compared three different

methods for determining peak flows and concluded that their "regression analysis method is recommended for use in determining discharge frequency values for San Luis Obispo County streams."[1] According to the ACOE study, use of this method results in a 100-year peak flow for Morro Creek at Morro Bay of 11,668 cfs.

On-site hydrology: Runoff produced from on-site rainfall is small in comparison to flows delivered by flooding in the Morro Creek watershed, but are nevertheless a nuisance if not effectively managed. Estimated peak flows generated from onsite rainfall are shown in the table below:

Frequency	2-yr	5-yr	10-yr	25-yr	50-yr	100-yr
C	0.95	0.95	0.95	0.95	0.95	0.95
I (in/hr)	1.3	1.9	2.3	2.6	3.0	3.2
A (acres)	6.0	6.0	6.0	6.0	6.0	6.0
Q (cfs)	7.4	10.8	13.1	14.8	17.1	18.2

PAST FLOOD STUDIES

FEMA Flood Insurance Rate Map (FIRM)

The Federal Emergency Management Agency (FEMA) issued revised flood maps on August 28, 2008 for all of San Luis Obispo County. The new maps display flood information somewhat differently than in the past, but do not, in general, reflect new analysis. The flood boundaries and depths at the WWTP site remain unchanged, though the flood zone names have changed. More than half of the 6-acre site is classified as Zone AE, signifying that 100-year flood elevations have been determined and are shown on the map. Approximately 2.5 acres of the west portion of the site is classified as Zone X, signifying land that is subject to flooding during the 500-year (0.2% chance) flood. Zone X boundaries are provided for informational purposes only and are not used for regulatory or design purposes. The portion of the map (06079C0813F) that covers the WWTP site is included as Exhibit 3.

The FIRM indicates that the 100-year flood elevation at the plant is just over 20 feet based on the NVGD 1929 datum. In our initial review, we recommended that available topographic information for the WWTP site be tied to this datum in order to determine the depths of flooding at the site. We also recommended that the FEMA hydraulic data be checked against available topography and/or field measurements to determine if the FEMA flood levels are reasonable.

- **FEMA Flood Depths**: We were able to procure relatively recent topography (Fall 2000) from the Morro Bay Power Plant that includes topography at the WWTP site. This topography is on the NAVD 88 datum whereas the FEMA map is based on NGVD 29, but it includes a conversion factor to correlate the two surveys. Based on this topography, the typical FEMA flood depth on the WWTP site is approximately 6 feet but ranges between 5.5 to 7 feet. The deepest flooding would occur near the Primary Sedimentation Tank 2, as shown in Figure 1 on the next page. Note that the west part of the plant is shown as outside of the 100-year flood limit on the FIRM. The reason for this anomaly is that the FEMA flood limit is based on outdated topography of the site prior to the 1982 expansion. The area shown outside of the floodplain was part of the dune system prior to 1982.

- **Relation of FEMA flood levels to 1982 WWTP plans:** The procurement of new topographic maps has also allowed a determination to be made regarding the datum used in the Brown

[1] U.S. Army Corps of Engineers. (June 1999). Regional Discharge-Frequency Analysis – San Luis Obispo County, p. 5.

and Caldwell drawings of 1982. Based on a comparison of the two, it appears that the Brown and Caldwell drawings have used a datum of NGVD29 plus 100 feet.

- **FEMA Hydraulic Data**: We made a request to FEMA for the hydraulic and topographic data used to determine the base flood elevations (100-year flood level) in the vicinity of the WWTP site. FEMA notified us that they do not have any records of the requested data.

Figure 1: Portion of the FIRM showing the limits of the 100-year flood (shaded in pink)

- **Regulatory Requirements**: The flood depths depicted on FEMA maps are important from a regulatory perspective. Floodplain ordinances are tied to the floodplain limits and other data shown on these maps. New development must abide by the floodplain ordinances and floodplain data depicted on these maps, even if maps are outdated, unless an official map has been revised through a Letter of Map Revision (LOMR). Morro Bay's floodplain ordinance specifies floodproofing requirements for new non-residential buildings such as those proposed for the plant expansion. The ordinance requires elevation of structures or floodproofing to one foot above the base flood (100-year) elevation

2001 Morro Bay Power Plant (MBPP) Flood Hazard Analysis

The Morro Bay Power Plant commissioned a flood hazard study as part of their plant renovation plans. The study, performed by West Consultants in Bellevue, Washington, was submitted to the California Energy Commission (CEC) in June 2001 and is now part of the public record. We were able to obtain a copy of this report from West with assistance from the Morro Bay Power Plant Manager. Though the study area is focused on the Power Plant site, it also extends north beyond the WWTP site. According to this study, flood depths at the WWTP site are approximately 2 to 3 feet less than indicated on the FEMA map, however, the floodplain covers 100% of the site.

It also shows the source of flood flows, with some flow coming from Morro Creek and other flooding from Atascadero Road (see Exhibit 2.2) The Atascadero Road flow results from the severe restriction of Morro Creek as it passes under several bridges in the vicinity of Hwy 1 (Main Street, Hwy 1 and ramps, and a pedestrian bridge). This causes floodwaters on the east side of Hwy 1 to back up and flow to the south and north. To the south, they flow over Highway 1 and through portions of the Power Plant and on to the ocean. To the north, floodwaters find their way through a mobile home park and Main Street where they would cross under Highway 1 at the Atascadero Road underpass. From there, flows follow Atascadero Road to the dunes with the some flow spreading out and heading towards the high school.

The Morro Creek overflow occurs at Keiser Park, where floodwaters pass through the park and Hansen Aggregates before reaching the WWTP site.

The MBPP study indicates two flood paths through the coastal dunes in addition to the primary route in the Morro Creek channel. As the coastal dunes are in an almost constant state of movement, the current analysis incorporates current dune topography into the hydraulic model.

CURRENT (2009) FLOOD ANALYSIS

The past flood studies discussed above served as a basis for the flood analysis in this report. The current flood study is based on the FLO-2D model originally prepared by West Consultants. The model was run with modified hydrology as discussed below and updated by field investigations and a topographic survey of the dunes in the vicinity of the WWTP. This section begins with a summary of field investigations and concludes with the results of the analysis.

Field Investigations

The following issues were noted during field investigations in 2007 and 2009

- The existing headworks structure is below grade and is particularly at risk from flooding. Staff has constructed a low wall and installed facilities for placing flood gates. A stockpile of sand is also used for additional protection.
- The storm drain system is dependent on an open beach outfall. Due to shifting sand dunes, the outfall periodically becomes covered with sand. City maintenance crews are tasked with uncovering the outfall when needed. If this is not done, the plant storm drain system backs up. According to the WWTP Improvement Plans, the existing storm drain is a dedicated drain for the WWTP site.
- Some electrical control rooms are at grade and do not have flood protection other than operators placing berms and sand bags when needed.
- High ground water is present. Existing subsurface structures are filled with groundwater to within a few feet of the surface year-round.
- Staff coordinates with the neighboring Hanson Aggregate owners regarding the orientation of their yard and supplies. Flood waters from the southeast first cross the Hanson property. When Hanson has stock on hand of large concrete block, they store the blocks on-site in a manner that directs flood waters to Atascadero Road rather than through the WWTP.
- Recent flooding includes events in 1995 and 2004. In 1995, general flooding occurred from the Atascadero Road and from Morro Creek. In 2004, the flood source was limited to the overflows from the creek at Keiser Park. These flow paths are illustrated in Exhibit 2.2.
- The topography map reveals that sump conditions exist on the site in the vicinity of Primary Sedimentation Tank 2 with a low elevation of 15.7 feet. The lowest overland escape route for this sump is through the front entrance with an elevation of 16.3. Though this sump has an underground drain, high groundwater water table or blockage of this underground drain can cause over 6 inches of flooding of the sump area even during small storm events.

- The elevation of the primary surface outlet through the dunes has risen approximately two feet, but the secondary outlet through the dunes to the north has remained roughly the same.
- The capacity of Morro Creek in the vicinity of Main Street/Hwy 1 is limited due to channel geometry, restrictions at bridge openings and a build-up of sediment in the main channel. A depth gage at the Hwy 1 bridge indicates that sediment depth is 6 feet at that location.

Flood Model Updates

The FLO-2D files used to analyze flood hazards in 2001 for the Morro Bay Power Plant were obtained and reformatted to run on the latest version of FLO-2D. The files were then reviewed and modified to reflect current conditions as follows:

- The main modification to the base model was to incorporate current dune topography based on survey information gathered in February, 2009. As suspected, the dunes have changed since 2001, gaining an additional 2 feet in height at a critical outlet location at the end of Atascadero Road. The dune outlet near the north side of the high school, however, was virtually unchanged.
- Per the suggestion of the FLO-2D program developers, the storm hydrograph was revised to better represent the design flood, keeping the same flood peak, but modifying the shape and volume of the hydrograph to conform to hydrographs commonly used on the Central Coast. The revised hydrograph has a smaller total storm volume. A second flood hydrograph was developed representing the smaller peak flows from the ACOE study.
- In addition, the model was reviewed to determine if the current WWTP building layout and areal coverage were correctly accounted for in the model. Some minor adjustments were made accordingly.
- The model was also modified to relocate the junction of Willow Camp Creek to its true location as shown on the topographic map.

The updated existing conditions model was then developed with ten different alternative scenarios, based on flood protection/reduction strategies described in earlier reports and as discussed with City and CSD staff. These flood protection and reduction strategies are further elaborated in the next section of this report.

100-year Flood Event Scenarios

Our research discovered a range of values for the 100-year peak flow of Morro Creek. We modeled the upper and lower range of these values for most of the scenarios.

High Flow (14,900 cfs): Including the original and existing conditions models, a total of twelve scenarios were modeled at this flow rate. They are described as follows:

1. **MB1: Original 2001 model with the revised hydrograph**. The flood hydrograph for Morro Creek upstream of the Hwy 1 bridge was modified as described above. The junction of Willow Camp Creek and Morro Creek was corrected. No other changes to the original model were made.
2. **MB2: Existing Conditions Model**. The current dune topography was incorporated into the model as well as changes in the model representation of WWTP facilities to account for blockage of flow by existing structures. This served as the base model for all other scenarios.
3. **MB3: Entire site protected**. A floodwall protecting or fill elevating the entire site including the area around the new oxidation ponds was incorporated into this model. A 6.4 acre area is protected in this scenario.
4. **MB4: Entire site protected with improved dune outlet**. Similar to MB3, but with the

addition of an improved outlet through the dunes at the end of Atascadero Road.

5. **MB5: Flood protection of individual buildings and sludge beds**. Individual buildings are floodproofed in this model, allowing floodwaters to pass through the site, except for the sludge beds, which are surrounded by a perimeter wall covering 1.8 acres.
6. **MB6: Flood barrier along north bank of Morro Creek at Keiser Park**. This scenario is based on MB5, but includes a full height floodwall or levee along the north bank of Morro Creek in Keiser Park.
7. **MB7: Entire site protected and flood barrier on north side of Keiser Park**. Similar to MB3, but with the addition a full height floodwall or levee on the north side of Keiser Park (allowing the park to flood).
8. **MB8: Reduced site footprint protected and flood barrier on north side of Keiser Park**. This scenario features a perimeter wall or fill that protects a smaller, 4.6 acre, area and includes a floodwall or levee on the north side of Keiser Park (allowing the park to flood).
9. **MB9: Reduced site footprint protected**. This scenario features a perimeter wall or fill that protects a smaller, 4.6 acre, area. The new oxidation pond area is included, but most of the structures within 200 feet of Atascadero Road would not be included inside this smaller plant footprint.
10. **MB10: 5.5-acre site footprint protected**. This scenario features a perimeter wall and/or fill that protects a 5.5 acre area including the existing sludge ponds and approximately 4 acres of land to the south that is currently used for RV storage. All existing WWTP structures are demolished in this scenario.
11. **MB11: 7.3-acre site footprint protected**. This scenario features a perimeter wall and/or fill that protects a 7.3 acre area including the existing sludge ponds, approximately 4 acres of land to the south that is currently used for RV storage, and 2 acres of land currently used by Hansen Aggregates (in the vicinity of the proposed oxidation ditches). All existing WWTP structures are demolished in this scenario.
12. **MB12: 9.1-acre site footprint protected**. This scenario features a perimeter wall and/or fill that protects a 9.1 acre area including the existing sludge beds and much of the south half of the plant, approximately 4 acres of land to the south of the plant that is currently used for RV storage, and 2 acres of land currently used by Hansen Aggregates (in the vicinity of the proposed oxidation ditches). All existing WWTP structures within 200 feet of Atascadero Road are demolished in this scenario.

Low Flow (11,600 cfs): Including the existing conditions models, a total of eight scenarios were modeled at this flow rate. They are described as follows:

1. **MB2b: Existing Conditions:** The current dune topography was incorporated into the model as well as changes in the model representation of WWTP facilities to account for blockage of flow by existing structures. This served as the base model for all other scenarios.
2. **MB3b: Entire site protected:** A floodwall protecting or fill elevating the entire site including the area around the new oxidation ponds was incorporated into this model. A 6.4 acre area is protected in this scenario.
3. **MB5b: Flood protection of individual buildings and sludge beds**. Individual buildings are floodproofed in this model, allowing floodwaters to pass through the site, except for the sludge beds, which are surrounded by a perimeter wall covering 1.8 acres.
4. **MB7b: Entire site protected and flood barrier on north side of Keiser Park**. Similar to MB3, but with the addition a full height floodwall or levee on the north side of Keiser Park (allowing the park to flood).

5. **MB9b: Reduced site footprint protected**. This scenario features a perimeter wall or fill that protects a smaller, 4.6 acre, area. The new oxidation pond area is included, but most of the structures within 200 feet of Atascadero Road would not be included inside this area.
6. **MB10b: 5.5-acre site footprint protected**. This scenario features a perimeter wall and/or fill that protects a 5.5 acre area including the existing sludge ponds and approximately 4 acres of land to the south that is currently used for RV storage. All existing WWTP structures are demolished in this scenario.
7. **MB11b: 7.3-acre site footprint protected**. This scenario features a perimeter wall and/or fill that protects a 7.3 acre area including the existing sludge ponds, approximately 4 acres of land to the south that is currently used for RV storage, and 2 acres of land currently used by Hansen Aggregates (in the vicinity of the proposed oxidation ditches). All existing WWTP structures are demolished in this scenario.
8. **MB12b: 9.1-acre site footprint protected**. This scenario features a perimeter wall and/or fill that protects a 9.1 acre area including the existing sludge beds and much of the south half of the plant, approximately 4 acres of land to the south of the plant that is currently used for RV storage, and 2 acres of land currently used by Hansen Aggregates (in the vicinity of the proposed oxidation ditches). All existing WWTP structures within 200 feet of Atascadero Road are demolished in this scenario.

These scenarios are discussed in greater detail in the section on Flood Protection and Flood Reduction Methods.

Results of the Flood Event Scenarios

Results of the above described scenarios are shown in maps form in Exhibit 4. The tables on the following pages summarize the results at select locations. All elevations are given in feet based on the NAVD datum of 1988. Rows titled “FF elev.” are finish floor elevations of the indicated building according to survey information obtained on July 1, 2009. Rows titled “Ground El.” are average ground elevations in the vicinity of the location indicated based on topographic mapping performed in 2001. The row marked “Difference” shows the impact in depth of flooding, measured in feet relative to existing conditions, due to the modeled improvements. These values are color coded as follows to facilitate comparison:

- **Light red** indicates impact greater than 1.5 inches.
- **Yellow** indicates impact between 0 and 1.5 inches.
- **Light green** indicates a reduction in the depth of flooding.

MBCSD WWTP Flood Hazard Analysis **Q100 = 14,900 cfs**

		MB1	MB2	MB3	MB4	MB5	MB6	MB7	MB8	MB9	MB10	MB11	MB12
Location Grid#		2001 topo	Existing Conditions	Protect Entire Site	Prot Entire Site + Dune Breach	Protect Bldgs & Beds	Prot. Bldgs & Beds + Creek Fwall	Entire Site Protected + KPark Fwall	Reduced Size + Kpark Fwall	Reduced Size Protected	5.5-acre Protected	7.3-acre Protected	9.1-acre Protected
Maint Bldg 161	WSEL	20.55	20.6	21.47	21.42	20.75	20.31	20.98	20.26	20.84	20.69	20.64	20.8
	FF elev.	17.88	17.88	17.88	17.88	17.88	17.88	17.88	17.88	17.88	17.88	17.88	17.88
	Depth	2.67	2.72	3.59	3.54	2.87	2.43	3.1	2.38	2.96	2.81	2.76	2.92
	Difference		0	**0.87**	**0.82**	**0.15**	**-0.29**	**0.38**	**-0.34**	**0.24**	**0.09**	**0.04**	**0.2**
Desal Bldg 182	WSEL	21.11	21.19	22.09	22.07	21.34	20.91	21.56	20.9	21.45	21.18	21.15	21.42
	FF elev.	20.22	20.22	20.22	20.22	20.22	20.22	20.22	20.22	20.22	20.22	20.22	20.22
	Depth	0.89	0.97	1.87	1.85	1.12	0.69	1.34	0.68	1.23	0.96	0.93	1.2
	Difference		0	**0.9**	**0.88**	**0.15**	**-0.28**	**0.37**	**-0.29**	**0.26**	**-0.01**	**-0.04**	**0.23**
Admin Bldg 179	WSEL	19.94	20.07	19.78	19	20.23	19.79	19.43	19.72	20.24	20.33	20.27	20.21
	Ground El.	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7
	Depth	3.24	3.37	3.08	2.3	3.53	3.09	2.73	3.02	3.54	3.63	3.57	3.51
	Difference		0	**-0.29**	**-1.07**	**0.16**	**-0.28**	**-0.64**	**-0.35**	**0.17**	**0.26**	**0.2**	**0.14**
Chlor Bldg 180	WSEL	20.15	20.25	No Flood	No Flood	20.4	19.93	No Flood	19.93	20.49	20.52	20.46	20.46
	Ground El.	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7
	Depth	4.45	4.55	No Flood	No Flood	4.7	4.23	No Flood	4.23	4.79	4.82	4.76	4.76
	Difference		0	No Flood	No Flood	**0.15**	**-0.32**	No Flood	**-0.32**	**0.24**	**0.27**	**0.21**	**0.21**
MBHS 123	WSEL	21.39	21.4	21.88	21.87	21.45	21.24	21.56	21.29	21.51	21.4	21.41	21.5
	FF elev.	20.86	20.86	20.86	20.86	20.86	20.86	20.86	20.86	20.86	20.86	20.86	20.86
	Depth	0.53	0.54	1.02	1.01	0.59	0.38	0.7	0.43	0.65	0.54	0.55	0.64
	Difference		0	**0.48**	**0.47**	**0.05**	**-0.16**	**0.16**	**-0.11**	**0.11**	**0**	**0.01**	**0.1**
Motel 6 186	WSEL	23.68	23.68	23.7	23.7	23.68	23.64	24	24	23.69	23.68	23.69	23.69
	FF elev.	21.75	21.75	21.75	21.75	21.75	21.75	21.75	21.75	21.75	21.75	21.75	21.75
	Depth	1.93	1.93	1.95	1.95	1.93	1.89	2.25	2.25	1.94	1.93	1.94	1.94
	Difference		0	**0.02**	**0.02**	**0**	**-0.04**	**0.32**	**0.32**	**0.01**	**0**	**0.01**	**0.01**
Morro Strand RV 184	WSEL	22.04	22.04	22.42	22.41	22.08	21.81	21.95	21.73	22.15	22.05	22.11	22.17
	FF elev.	20.34	20.34	20.34	20.34	20.34	20.34	20.34	20.34	20.34	20.34	20.34	20.34
	Depth	1.7	1.7	2.08	2.07	1.74	1.47	1.61	1.39	1.81	1.71	1.77	1.83
	Difference		0	**0.38**	**0.37**	**0.04**	**-0.23**	**-0.09**	**-0.31**	**0.11**	**0.01**	**0.07**	**0.13**
Morro Shores Inn 187	WSEL	25.47	25.49	25.49	25.49	25.49	25.49	25.8	25.81	25.49	25.49	25.49	25.49
	FF elev.	25.39	25.39	25.39	25.39	25.39	25.39	25.39	25.39	25.39	25.39	25.39	25.39
	Depth	0.08	0.1	0.1	0.1	0.1	0.1	0.41	0.42	0.1	0.1	0.1	0.1
	Difference		0	**0**	**0**	**0**	**0**	**0.31**	**0.32**	**0**	**0**	**0**	**0**
So. Dune Outlet 178	WSEL	19.56	19.8	19.68	18.25	20.07	19.65	19.35	19.59	20.08	20.17	20.11	20.05
	Ground El.	18	20	20	15	20	20	20	20	20	20	20	20
	Depth	1.56	0	-0.32	3.25	0.07	-0.35	-0.65	-0.41	0.08	0.17	0.11	0.05
	Difference		0	**-0.32**	**3.25**	**0.07**	**-0.35**	**-0.65**	**-0.41**	**0.08**	**0.17**	**0.11**	**0.05**
Power Plant 353	WSEL	21.41	21.42	21.42	21.42	21.42	21.48	21.45	21.45	21.42	21.42	21.42	21.42
	Ground El.	16	16	16	16	16	16	16	16	16	16	16	16
	Depth	5.41	5.42	5.42	5.42	5.42	5.48	5.45	5.45	5.42	5.42	5.42	5.42
	Difference		0	**0**	**0**	**0**	**0.06**	**0.03**	**0.03**	**0**	**0**	**0**	**0**

MBCSD WWTP Flood Hazard Analysis Q100 = 11,600 cfs										
		MB2b	**MB3b**	**MB5b**	**MB7b**	**MB9b**	**MB10b**	**MB11b**	**MB12b**	**MB13b**
Location Grid#		Existing Conditions	Protect Entire Site	Protect Bldgs & Beds	Entire Site Protected + KPark Fwall	Reduced Size Protected	5.5-acre Protected	7.3-acre Protected	9.1-acre Protected	7.3-acre Protected + Invert Road
Maint Bldg 161	WSEL	20.05	20.90	20.19	20.56	20.24	20.09	20.06	20.20	20.14
	FF elev.	17.88	17.88	17.88	17.88	17.88	17.88	17.88	17.88	17.88
	Depth	2.17	3.02	2.31	2.68	2.36	2.21	2.18	2.32	2.26
	Difference	0.00	**0.85**	**0.14**	**0.51**	**0.19**	**0.04**	**0.01**	**0.15**	**0.09**
Desal Bldg 182	WSEL	20.62	21.52	20.80	21.16	20.89	20.63	20.61	20.86	20.56
	FF elev.	20.22	20.22	20.22	20.22	20.22	20.22	20.22	20.22	20.22
	Depth	0.40	1.30	0.58	0.94	0.67	0.41	0.39	0.64	0.34
	Difference	0.00	**0.90**	**0.18**	**0.54**	**0.27**	**0.01**	**-0.01**	**0.24**	**-0.06**
Admin Bldg 179	WSEL	19.51	19.39	19.71	19.09	19.72	19.78	19.73	19.69	19.86
	Ground El.	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70
	Depth	2.81	2.69	3.01	2.39	3.02	3.08	3.03	2.99	3.16
	Difference	0.00	**-0.12**	**0.20**	**-0.42**	**0.21**	**0.27**	**0.22**	**0.18**	**0.35**
Chlor Bldg 180	WSEL	19.67	No Flooding	19.84	No Flooding	19.93	19.92	19.88	19.89	19.98
	Ground El.	15.70	15.70	15.70	15.70	15.70	15.70	15.70	15.70	15.70
	Depth	3.97	No Flooding	4.14	No Flooding	4.23	4.22	4.18	4.19	4.28
	Difference	0.00	No Flooding	**0.17**	No Flooding	**0.26**	**0.25**	**0.21**	**0.22**	**0.31**
MBHS 123	WSEL	21.01	21.41	21.05	21.20	21.08	21.00	21.01	21.07	20.87
	FF elev.	20.86	20.86	20.86	20.86	20.86	20.86	20.86	20.86	20.86
	Depth	0.15	0.55	0.19	0.34	0.22	0.14	0.15	0.21	0.01
	Difference	0.00	**0.40**	**0.04**	**0.19**	**0.07**	**-0.01**	**0.00**	**0.06**	**-0.14**
Motel 6 186	WSEL	23.27	23.28	23.27	23.57	23.28	23.27	23.28	23.28	23.04
	FF elev.	21.75	21.75	21.75	21.75	21.75	21.75	21.75	21.75	21.75
	Depth	1.52	1.53	1.52	1.82	1.53	1.52	1.53	1.53	1.29
	Difference	0.00	**0.01**	**0.00**	**0.30**	**0.01**	**0.00**	**0.01**	**0.01**	**-0.23**
Morro Strand RV 184	WSEL	21.57	21.85	21.59	21.54	21.63	21.56	21.60	21.64	21.45
	FF elev.	20.34	20.34	20.34	20.34	20.34	20.34	20.34	20.34	20.34
	Depth	1.23	1.51	1.25	1.20	1.29	1.22	1.26	1.30	1.11
	Difference	0.00	**0.28**	**0.02**	**-0.03**	**0.06**	**-0.01**	**0.03**	**0.07**	**-0.12**
Morro Shores Inn 187	WSEL	25.23	25.23	25.23	25.48	25.23	25.23	25.24	25.23	25.24
	FF elev.	25.39	25.39	25.39	25.39	25.39	25.39	25.39	25.39	25.39
	Depth	-0.16	-0.16	-0.16	0.09	-0.16	-0.16	-0.15	-0.16	-0.15
	Difference	0.00	**0.00**	**0.00**	**0.25**	**0.00**	**0.00**	**0.01**	**0.00**	**0.01**
So. Dune Outlet 178	WSEL	19.27	19.30	19.59	19.03	19.60	19.65	19.61	19.60	19.73
	Ground El.	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00
	Depth	-0.73	-0.70	-0.41	-0.97	-0.40	-0.35	-0.39	-0.40	-0.27
	Difference		**0.03**	**0.32**	**-0.24**	**0.33**	**0.38**	**0.34**	**0.33**	**0.46**
Power Plant 353	WSEL	20.80	20.80	20.80	20.82	20.79	20.80	20.80	20.80	20.80
	Ground El.	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
	Depth	4.80	4.80	4.80	4.82	4.79	4.80	4.80	4.80	4.80
	Difference	0.00	**0.00**	**0.00**	**0.02**	**-0.01**	**0.00**	**0.00**	**0.00**	**0.00**

Discussion of Results

The results shown in the tables above reveal several significant findings related to flood hazards in the vicinity of the WWTP. The following set of comments applies to scenarios with the high flow (14,900 cfs) assumption.

- The increase in dune height at the end of Atascadero Road since 2001 has closed one of the surface outlets through the dunes. The outlet through the dunes to the north remains open and is an important outlet for floodwaters. The restriction to one dune outlet has raised the flood elevation at the WWTP by 0.13 foot at the WWTP Administration Building and somewhat less at other locations.
- The perimeter floodwall or full site fill (modeled as MB3) has a significant impact on

surrounding properties, raising flood elevations as much as 0.5 foot at the High School. This impact is due to the plant's low elevation on the floodplain, directly in the path of floodwaters as they make their way to the dunes. Blocking that path with fill or an impermeable floodwall will raise floodwater elevations elsewhere.

- Restoring the outlet in the dune at the end of Atascadero Street (modeled as MB4) will decrease flood levels at the plant site, but will do little to mitigate the impact of the full perimeter floodwall on other properties.
- Flood protection of individual buildings and facilities (modeled as MB5) shows a minimal impact on surrounding properties (i.e. only 0.05 foot rise at MBHS). This scenario is based on the proposed site plan which includes construction of new facilities and demolition of retired structures.
- The construction of a full height flood barrier along the north bank of Morro Creek in Keiser Park (modeled as MB6) will provide some flood protection for all properties on the north bank, but will not eliminate flooding. Floodwaters from the Atascadero Road underpass will continue to cause flooding at the WWTP site, though flood elevations will be lessened by approximately 0.3 foot at the WWTP. Though this scenario was modeled and initially considered as a viable option, its cost and difficulty of construction has removed it from consideration.
- The placement of the full height flood barrier on the north side of the park (MB7&8), allowing the park to flood, reduces impact to the Power Plant, but raises flood levels at the two motels on Atascadero Road. Based on this impact, this wall is also not recommended.
- Protection of a reduced plant footprint (MB9) significantly reduces but does not eliminate the impact on surrounding properties. Impact at the high school is reduced from 6 inches to less than 1.5 inches relative to full site protection.
- Moving portions of the plant to existing high ground to the south of the WWTP is modeled in MB10-12, showing that the least flood impact occurs with a total plant footprint of 5.5 acres, 2/3 of which is located on existing high ground. The 7.3-acre scenario (MB11) also shows a very low level of flood impact on neighboring properties.
- Though not shown on the above table, it was discovered that overtopping of the banks of Morro Creek at Keiser Park occur when the flow in the creek exceeds 3,500 cfs. This is somewhat greater than the 10% chance flood (10-year flood) and would explain why flooding from this direction has been experienced at the WWTP site in recent memory.
- Floodwall height for all perimeter walls will be approximately 5.5 feet tall. Height of fill would be similar. This includes 1 foot of freeboard as required by ordinance for both walls and fill.

The analyses based on a smaller peak flow (11,600 cfs) lead to these findings:

- The overall flood depth in the vicinity of the plant is reduced 6 inches on average.
- Flood impacts for the various scenarios are reduced, but not eliminated. Protection of the entire site, for example, still raises flood levels at the school by 0.4 foot. The smaller footprint site with flood protection reduces impact at the school to less than an inch.
- The three models that use existing high ground (MB10b-12b), show that flood impacts at this flow rate are virtually insignificant.
- When combined with the recommended mitigation of reconstruction of Atascadero Road with an inverted crown, the overall project impact will be favorable, reducing or nearly eliminating flooding at select locations (MB13b)
- Protective floodwall and fill height requirements would be reduced by 6 inches from 5.5 to 5 feet.

Our analysis shows that flooding during the 100-year flood is likely to occur over the entire site with floodwaters originating from both Morro Creek to the south and from the Atascadero Road underpass to the east. Because of the limited capacity of Morro Creek, storms of lesser magnitude

will also cause flooding from these same sources. The limited capacity of the underground drainage system does little to reduce flood risk from large storm events. Various methods of flood protection and flood reduction will have different levels of impact on the site itself and on nearby properties. These methods are discussed in the following section.

FLOOD PROTECTION AND FLOOD REDUCTION METHODS

There are essentially two approaches that may be applicable for addressing drainage and flooding when designing the WWTP expansion. One approach is flood protection or floodproofing and the second approach is through flood reduction. These two approaches can be used together for the greatest reduction in flood risk. A description of how these methods would be specifically implemented in and around the WWTP are described below.

- **Flood Protection:** This approach acknowledges that flooding occurs and measures are taken to floodproof the improvements needing protection. Floodproofing can be done on individual buildings and critical components or the entire site could be floodproofed with a perimeter wall.
    - Floodproofing of individual components involves such measures as provision of watertight seals for doors and windows of buildings, elevation of electrical components above flood level, and/or constructing floodwalls around critical areas (such as the headworks and sludge beds). This allows floodwaters to move freely through the site, with little impact on the surrounding neighborhood. The major disadvantage of individual component floodproofing is that human movement between and entry to sealed buildings and walled areas is not possible during flood stage. Also, the cumulative wear-and-tear on a building's external components as a result of recurring inundation may render a floodproofing strategy infeasible. The cost of repeated service interruption and of frequent cleanup activities, as well as the effects of having to repeatedly implement a flood emergency plan, must be assessed.
    - A perimeter flood wall around the entire plant would provide a higher level of protection. Such a wall would include a watertight gate for vehicular access and use existing drain pipes to drain the site from internal runoff. Once the gate is closed, internal movement between buildings is possible, though entrance and exit from the plant would have to be curtailed. The biggest drawback to this approach would be the impact on flood levels for adjacent properties, especially the high school, where flood levels would rise as much as 6 inches.
    - Building the plant on imported fill or existing high ground, elevated a foot above the calculated flood level, would provide the highest level of protection as it eliminates the need for closing gates in anticipation of a flood. Impact on surrounding properties depends on the location of the new plant. Importing fill to raise the existing site would have the greatest impact on surrounding properties, while moving all or part of the plant to the south on existing high ground would minimize impact. The hydraulic model shows the level of impact for several different plan footprint configurations.
- **Flood reduction**: This approach seeks to improve drainage in the vicinity of the WWPT site so that flooding is reduced or eliminated. Considering the mechanisms of flooding, the opportunities for reducing flooding are:
    - Atascadero Road Overflow: As this is one of the paths of major floods, the improvement of flow along Atascadero Road would benefit all properties on the north side of Morro Creek. The current road is constructed with 6 inch curb faces along much of its length, but the inconsistent road section leaves the road with very little flood carrying capacity. Converting this road to one that conveys flow in the center of the street in an inverted crown section would significantly increase flow capacity to approximately 150 cfs which

would reduce or eliminate flooding in smaller storms. For the greatest effectiveness, the reconstruction of the road with an inverted crown should be accompanied by an increase in the culvert size from the end of Atascadero Road through the dunes. This would improve the area drainage, but would still be dependant on city maintenance to keep the storm drain beach outfall uncovered from sand.

- Dune Outlet Improvements: Surface outlet improvements through the dunes could have a beneficial impact on the plant site, especially in smaller floods. An improved dune outlet would not have a significant beneficial effect during larger floods, especially on buildings further away from the dunes. One drawback to this alternative is the likely difficulty in obtaining authorization to construct improvements in this area, which is adjacent to Snowy Plover habitat. The land itself, however, is jointly owned by the City of Morro Bay and Cayucos Sanitary District and is covered with ice plant, a non-native species. There may be an opportunity for improvements in exchange for eradication of this exotic plant and revegetation of the dunes with native vegetation. Another issue is the danger of wave runup. Though FEMA has predicted a wave runup elevation of 11.4 feet (NAVD 88) in the 1% chance (100-year) event, anecdotal information indicates that waves reach the base of dunes (~ 10 feet NAVD) annually. There has been at least one observation of a wave overtopping the dunes at the former outlet where the elevation was approximately 17 feet at the time of the observation. Any improvement of a surface opening in the dunes must account for the risk of storm surge and wave runup.
- On-site Drainage: Improvements that would be of benefit in smaller storms would be to increase the size of the storm drain from the plant to the outfall. Another alternative to a gravity storm drain is the installation of a storm water pumping station, which would allow for a higher outlet. However, a pump station sized to handle plant drainage would be overwhelmed during periods of inundation from upstream overflow. Rebuilding the plant on raised fill will eliminate the need for any of these measures.
- Creek Overflow (from Southeast): This flooding comes from an 800-foot reach of Morro Creek, along the low banks upstream of the Morro Dunes RV Park and downstream of the highway. One flood reduction option is to construct a berm to reduce flows that overtop the bank at this location. A FEMA certified levee may not be feasible, but a smaller non-erodable berm designed to keep smaller flows from overtopping may be a reasonable alternative. Another option is to increase the capacity of the creek by cutting a bypass channel through the meander just downstream of Keiser Park. However, there are many concerns with this – environmental, property ownership, extensive excavation, and hydraulic feasibility. If pursued, the creek modifications could be combined with a creek habitat enhancement strategy to address environmental concerns. The flood barrier on the bank would likely be much easier to permit since it does not involve work directly in the creek. This section of the creek is a large source of flood risk, and addressing it could be very helpful for reducing flooding, not only on the WWTP, but also for all properties on that side of the creek

RECOMMENDATIONS

Based on these findings, we recommend the following actions to address flooding issues at the WWTP site. The recommendations are grouped according to type of flooding.

To address 100-year flooding issues:

- Construct the new WWTP facilities on higher ground. Construction on elevated fill provides the highest level of protection and least amount of operational inconveniences.
- Construct all or part of the new facilities on City owned land to the south of the current site that is already elevated, modeled in the analysis as MB10 through 12. Construction at this location will have the least adverse flood impact on neighboring properties. An illustration of one of these scenarios (MB11) is shown in Exhibit 6.

- Reconstruct Atascadero Road with an inverted crown. This will reduce flooding for all properties along the road and nearly eliminate flooding at the high school for all but the most extreme storm events.
- The City floodplain management ordinance and funding agencies require that WWTP improvements be protected from flooding to the level of one foot above the 100-year flood elevation. Because of the potential reduction of flood levels relative to the current FIRM, we recommend that a Letter of Map Revision (LOMR) be applied for, including new hydrology and new hydraulic analyses. The LOMR process typically takes 3 to 6 months for complex situations such as this.

To address smaller, more frequent flooding:

- Drainage along Atascadero Road should be improved. The options listed below could be implemented individually or in combination:
  - Increasing the size of the 24 inch culvert through the dunes at the end of the street
  - Reestablishment of a surface flow path to the ocean through the dunes at the end of the street.
  - Reconstruction of Atascadero Road with an inverted crown will increase street capacity from a few cfs to approximately 150 cfs, which is very significant for small storms.
  - Atascadero Road could be managed as a flood conveyance facility with appropriate warning signs for traffic and parking limitations.
- Raising the WWTP site with fill will alleviate most of the inconveniences of smaller floods on the operation of the plant, but will not improve the flooding situation for neighboring properties. We recommend that one or more of the measures to alleviate smaller flooding be implemented to mitigate the small impact that the new plant will have on the floodplain.

APPENDIX

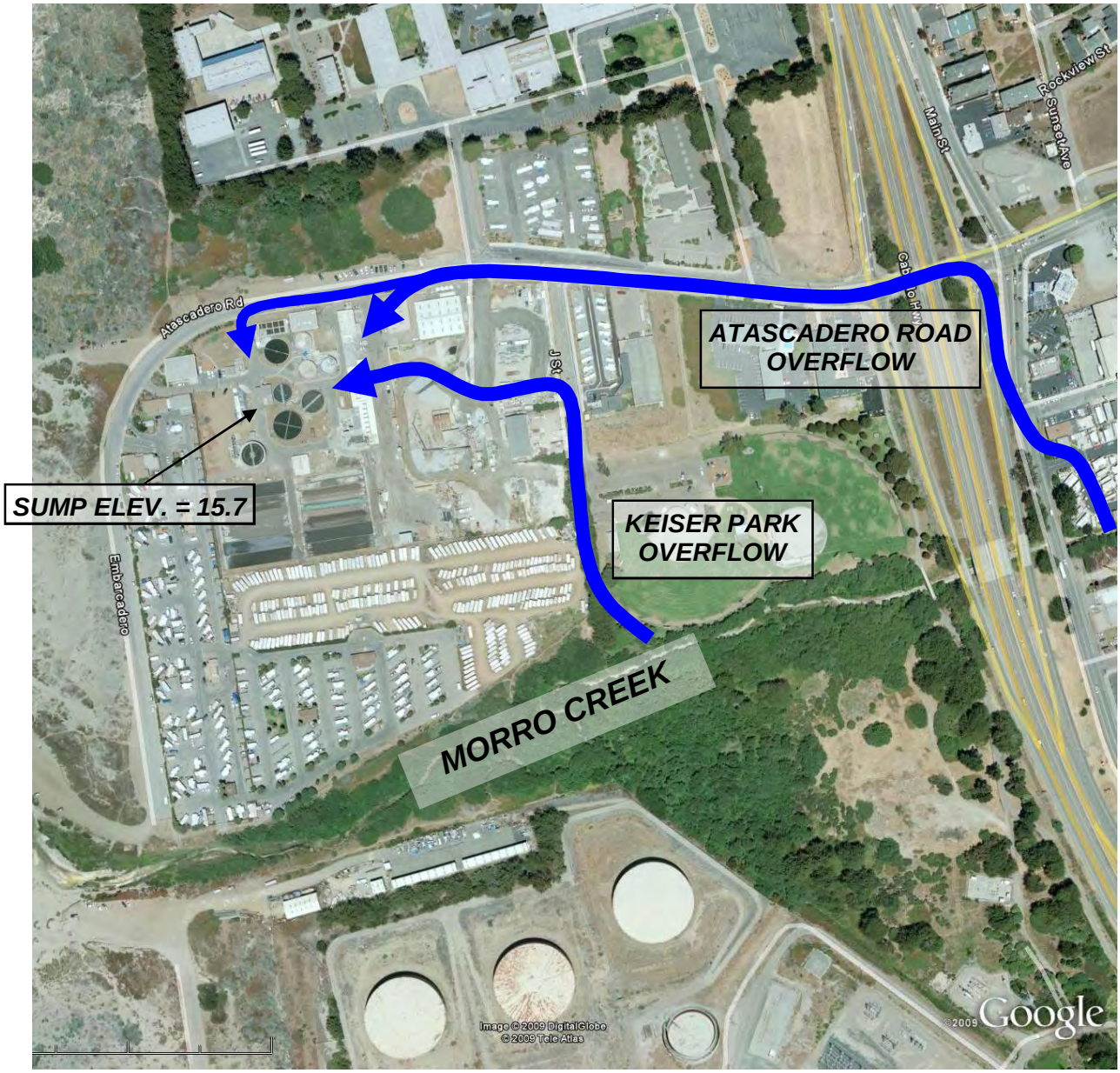
MORRO BAY CAYUCOS SANITARY DISTRICT WASTEWATER TREATMENT PLANT
FLOOD HAZARD ANALYSIS
LOCATION MAP

EXHIBIT 1

MORRO BAY CAYUCOS SANITARY DISTRICT WASTEWATER TREATMENT PLANT
FLOOD HAZARD ANALYSIS
EXISTING DRAINAGE SYSTEM

SURFACE
UNDERGROUND

EXHIBIT 2.1



The MBCWWTP is vulnerable to flooding from overflows of Morro Creek coming from two directions as shown. Hydraulic modeling predicts that these overflows occur when flows in Morro Creek exceed approximately 3,500 cfs, which is slightly larger than the FEMA 10% chance (10-year) flood. Flooding from these sources has been experienced in 1995 and 2004.

MORRO BAY CAYUCOS SANITARY DISTRICT WASTEWATER TREATMENT PLANT
FLOOD HAZARD ANALYSIS
MORRO CREEK OVERFLOW PATHS

EXHIBIT 2.2

MAP SCALE 1" = 500'

250 0 500 1000 FEET

0 0 150 300 METERS

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0813F

FIRM

FLOOD INSURANCE RATE MAP

SAN LUIS OBISPO COUNTY, CALIFORNIA
AND INCORPORATED AREAS

PANEL 813 OF 2050

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
MORRO BAY, CITY OF	060307	0813	F
SAN LUIS OBISPO COUNTY	060304	0813	F

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

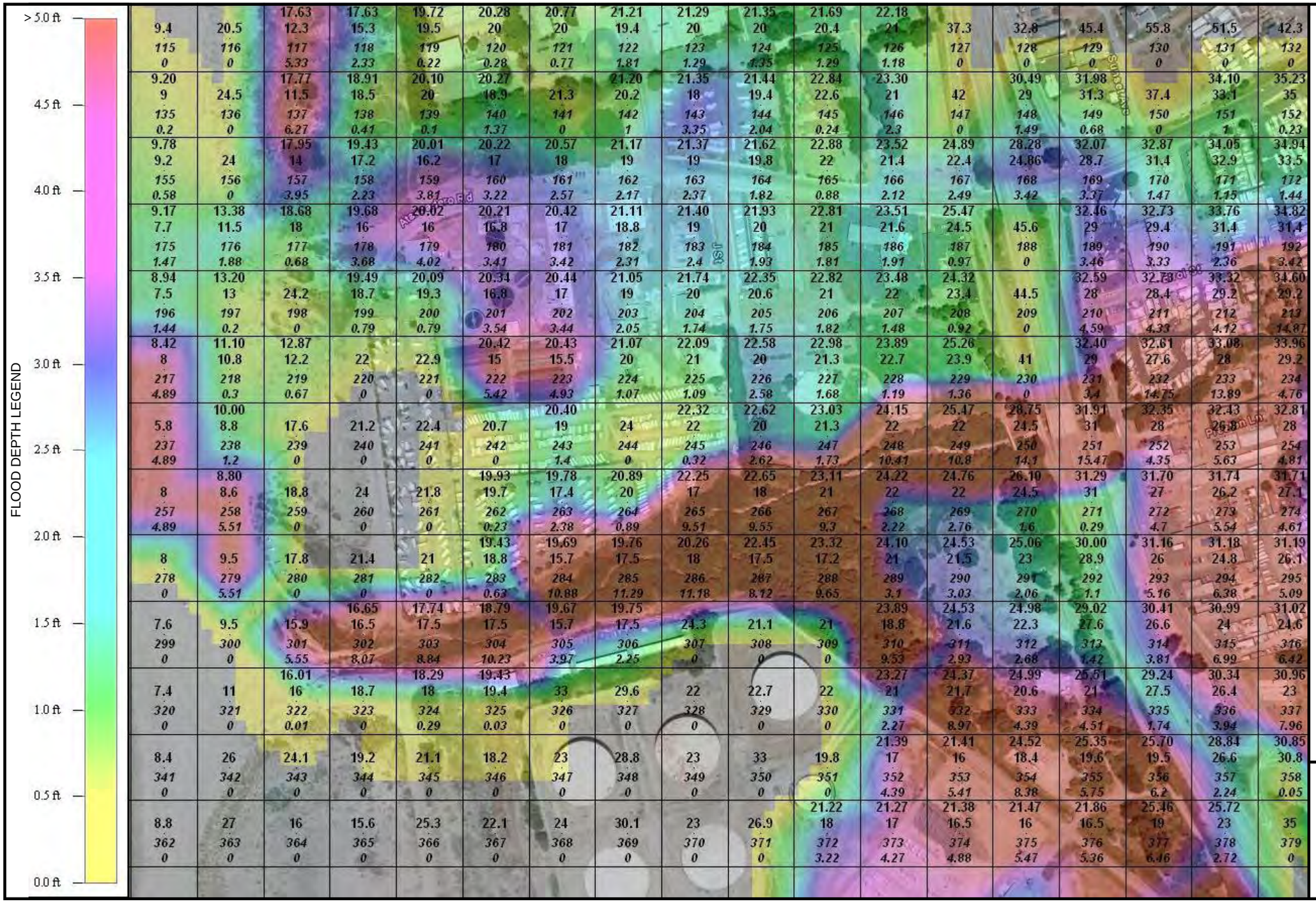
MAP NUMBER
06079C0813F

EFFECTIVE DATE
AUGUST 28, 2008

Federal Emergency Management Agency

EXHIBIT 3

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT version 2.0. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. Further information about National Flood Insurance Program flood hazard maps is available at http://msc.fema.gov/.



MORRO BAY CAYUCOS SANITARY DISTRICT WASTEWATER TREATMENT PLANT
FLOOD HAZARD ANALYSIS
100-YEAR FLOOD ELEVATIONS-2001 DUNE CONDITIONS

WALLACE GROUP

ELEVATIONS ARE IN FEET NAVD88

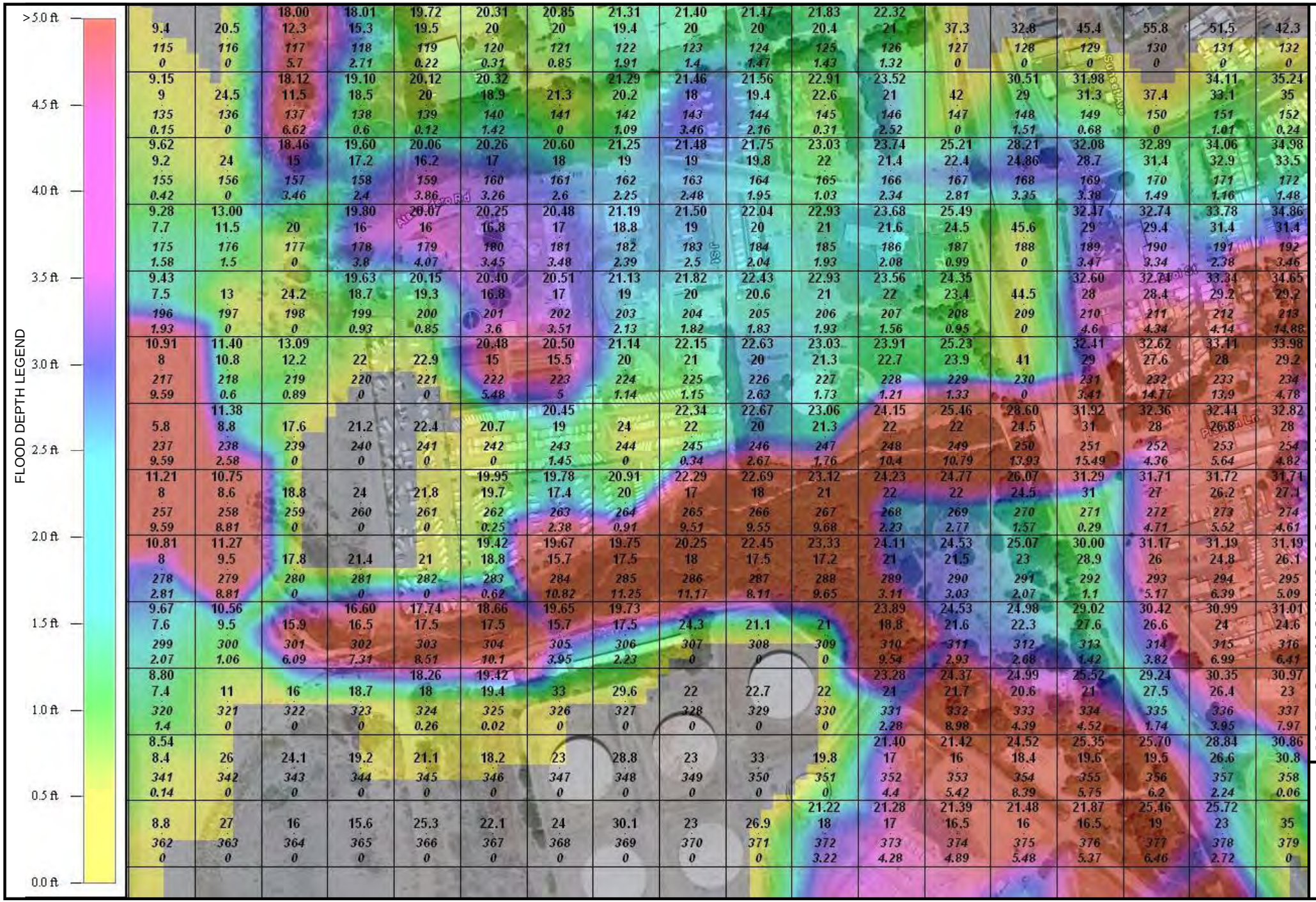
LEGEND

MAX WATER SURFACE ELEVATION
GRID ELEVATION
GRID NUMBER
MAX FLOOD DEPTH

20.99
19
203
1.99

Q100 = 14,900 CFS

MB1
EXHIBIT 4.1



MORRO BAY CAYUCOS SANITARY DISTRICT WASTEWATER TREATMENT PLANT
FLOOD HAZARD ANALYSIS
100-YEAR FLOOD ELEVATIONS-EXISTING CONDITIONS

ELEVATIONS ARE IN FEET NAVD88

WALLACE GROUP

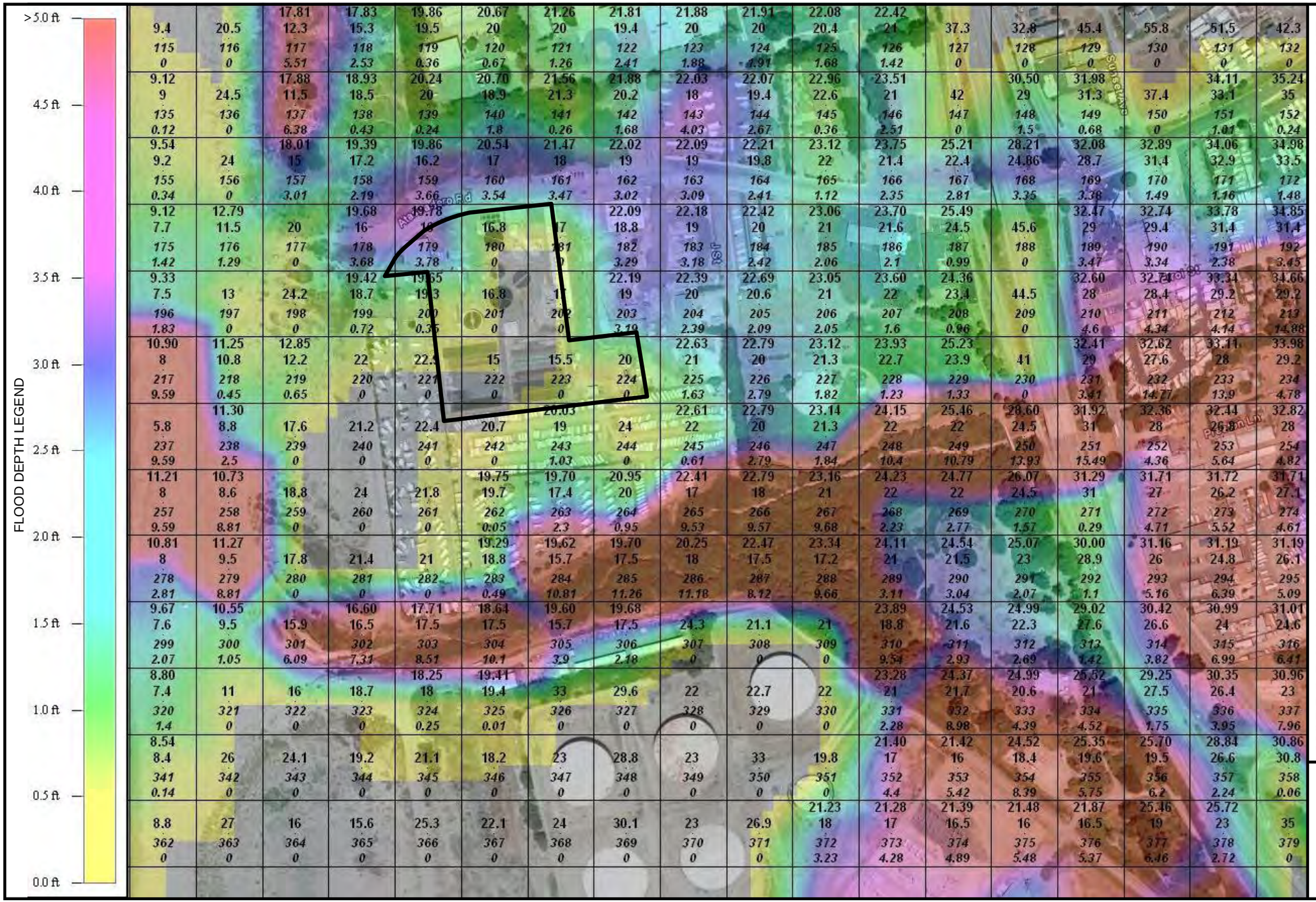
LEGEND

MAX WATER SURFACE ELEVATION
GRID ELEVATION
GRID NUMBER
MAX FLOOD DEPTH

20.99
19
203
1.99

Q100 = 14,900 CFS

MB2
EXHIBIT 4.2



MORRO BAY CAYUCOS SANITARY DISTRICT WASTEWATER TREATMENT PLANT
FLOOD HAZARD ANALYSIS
100-YEAR FLOOD ELEVATIONS-WITH FULL PLANT PROTECTION

ELEVATIONS ARE IN FEET NAVD88

WALLACE GROUP

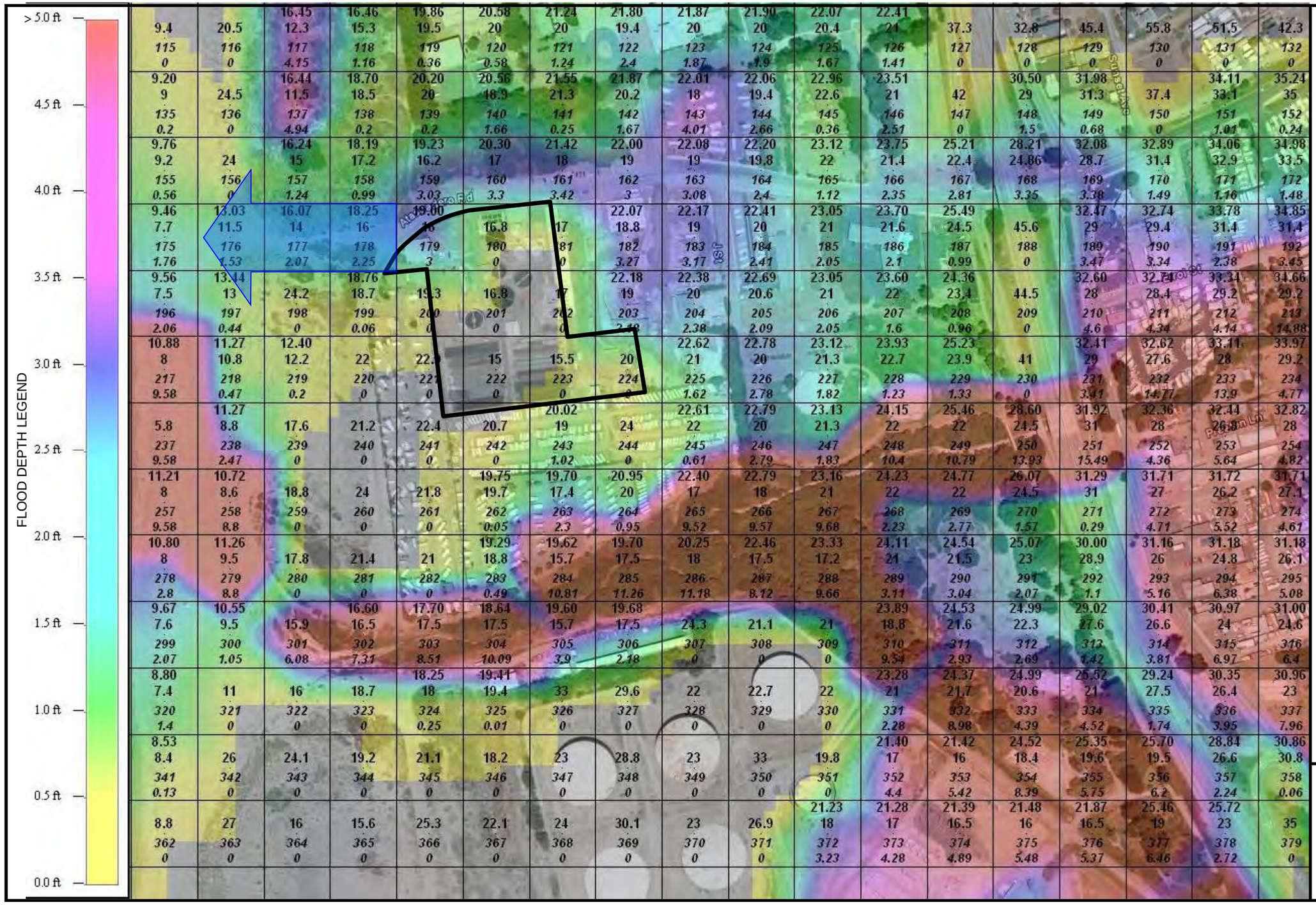
LEGEND

MAX WATER SURFACE ELEVATION
GRID ELEVATION
GRID NUMBER
MAX FLOOD DEPTH

20.99
19
203
1.99

Q100 = 14,900 CFS

MB3
EXHIBIT 4.3



MORRO BAY CAYUCOS SANITARY DISTRICT WASTEWATER TREATMENT PLANT
FLOOD HAZARD ANALYSIS
100-YEAR FLOOD ELEVATIONS-WITH FULL PLANT PROTECTION AND 200' WIDE DUNE BREACH

WALLACE GROUP

ELEVATIONS ARE IN FEET NAVD88

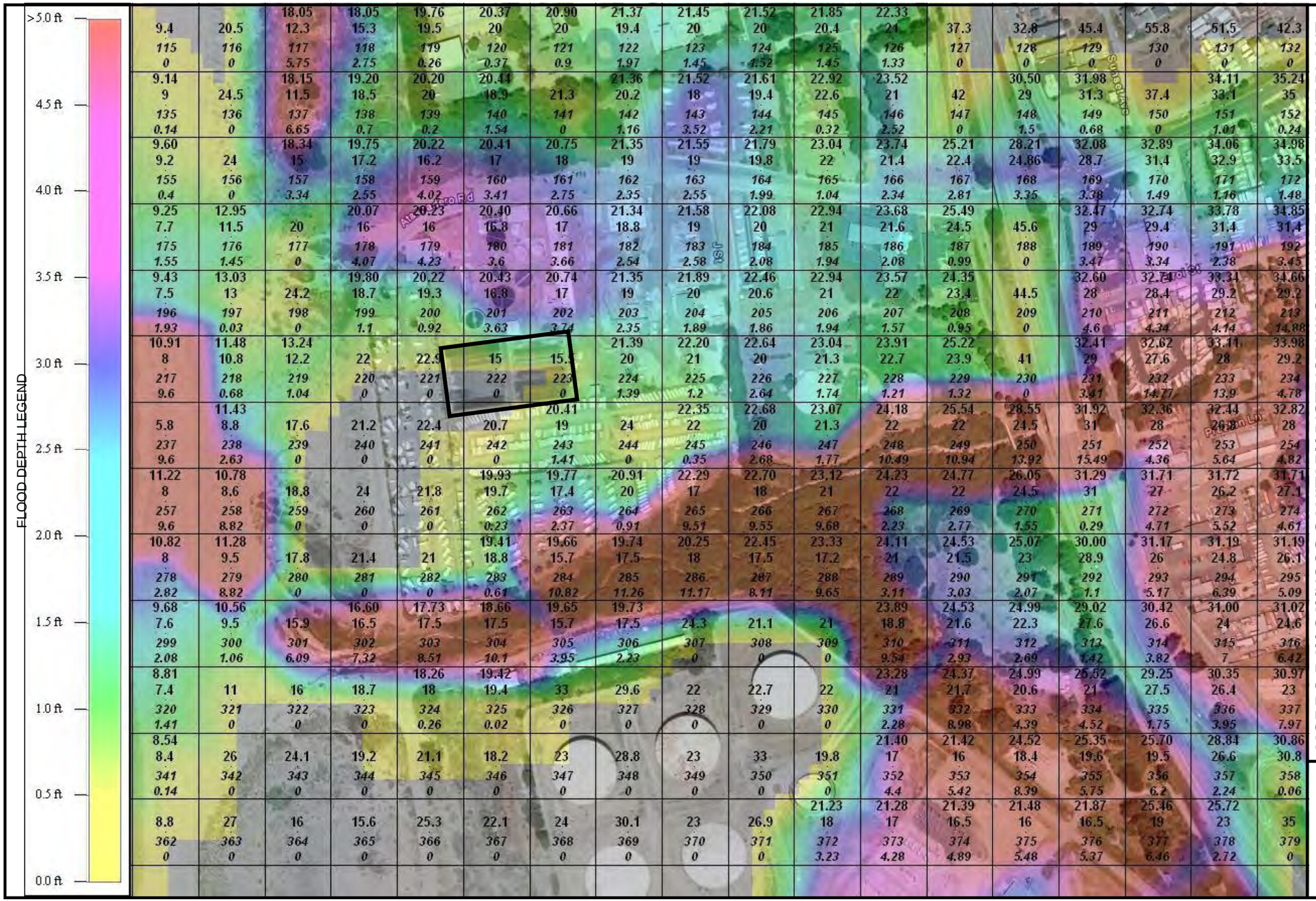
LEGEND

MAX WATER SURFACE ELEVATION
GRID ELEVATION
GRID NUMBER
MAX FLOOD DEPTH

20.99
19
203
1.99

Q100 = 14,900 CFS

MB4
EXHIBIT 4.4



MORRO BAY CAYUCOS SANITARY DISTRICT WASTEWATER TREATMENT PLANT
FLOOD HAZARD ANALYSIS
100-YEAR FLOOD ELEVATIONS-WITH SLUDGE-BED WALL AND COMPONENT FLOODPROOFING

ELEVATIONS ARE IN FEET NAVD88

LEGEND

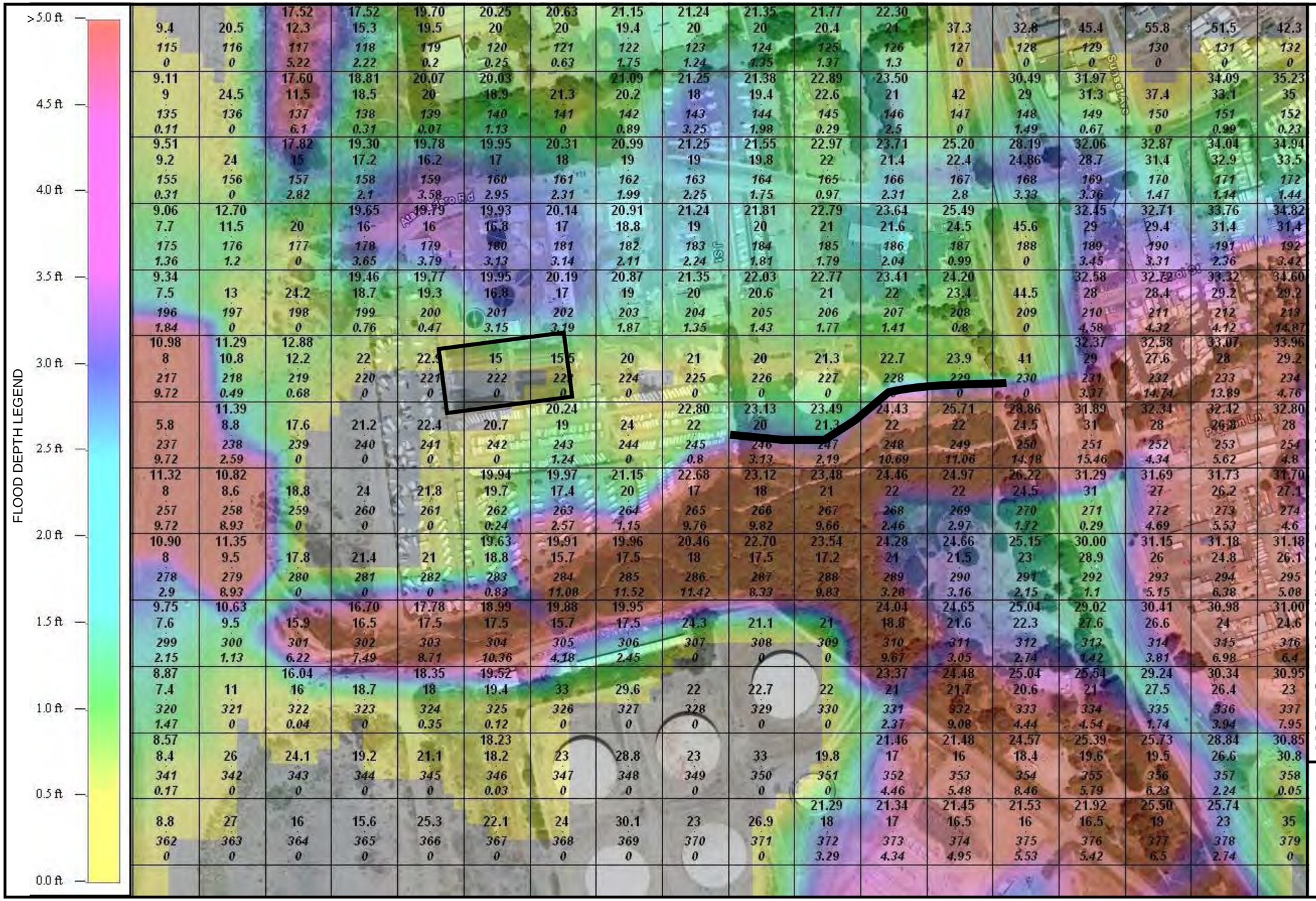
MAX WATER SURFACE ELEVATION
GRID ELEVATION
GRID NUMBER
MAX FLOOD DEPTH

20.99
19
203
1.99

WALLACE GROUP

Q100 = 14,900 CFS

MB5
EXHIBIT 4.5



MORRO BAY CAYUCOS SANITARY DISTRICT WASTEWATER TREATMENT PLANT
FLOOD HAZARD ANALYSIS
100-YEAR FLOOD ELEVATIONS-WITH SLUDGE-BED WALL, COMPONENT FLOODPROOFING AND CREEK FLOOD BARRIER

WALLACE GROUP®

ELEVATIONS ARE IN FEET NAVD88

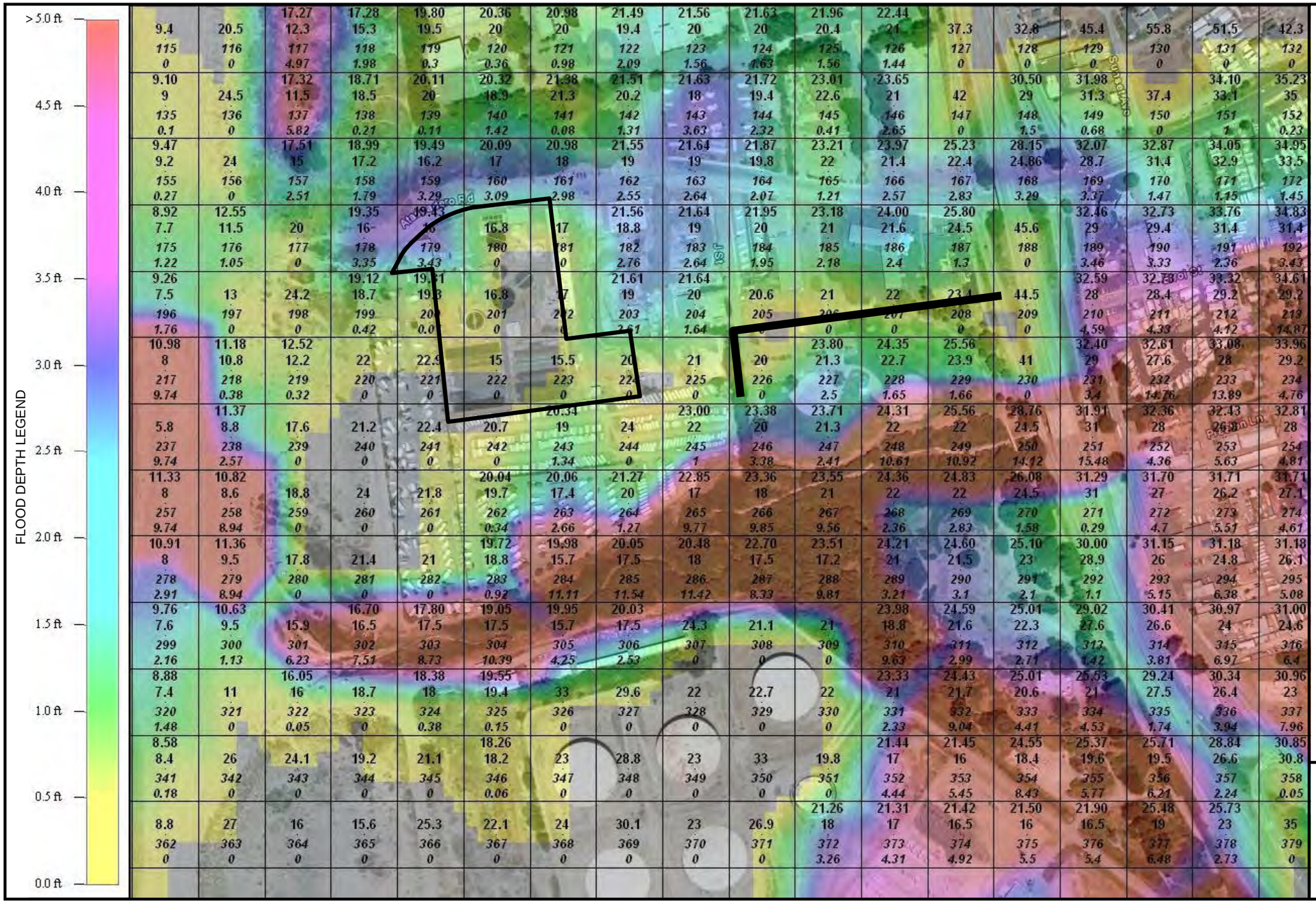
LEGEND

MAX WATER SURFACE ELEVATION
GRID ELEVATION
GRID NUMBER
MAX FLOOD DEPTH

20.99
19
203
1.99

Q100 = 14,900 CFS

MB6
EXHIBIT 4.6



MORRO BAY CAYUCOS SANITARY DISTRICT WASTEWATER TREATMENT PLANT
FLOOD HAZARD ANALYSIS
100-YEAR FLOOD ELEVATIONS-WITH FULL PLANT PROTECTION AND FLOOD BARRIER

WALLACE GROUP

ELEVATIONS ARE IN FEET NAVD88

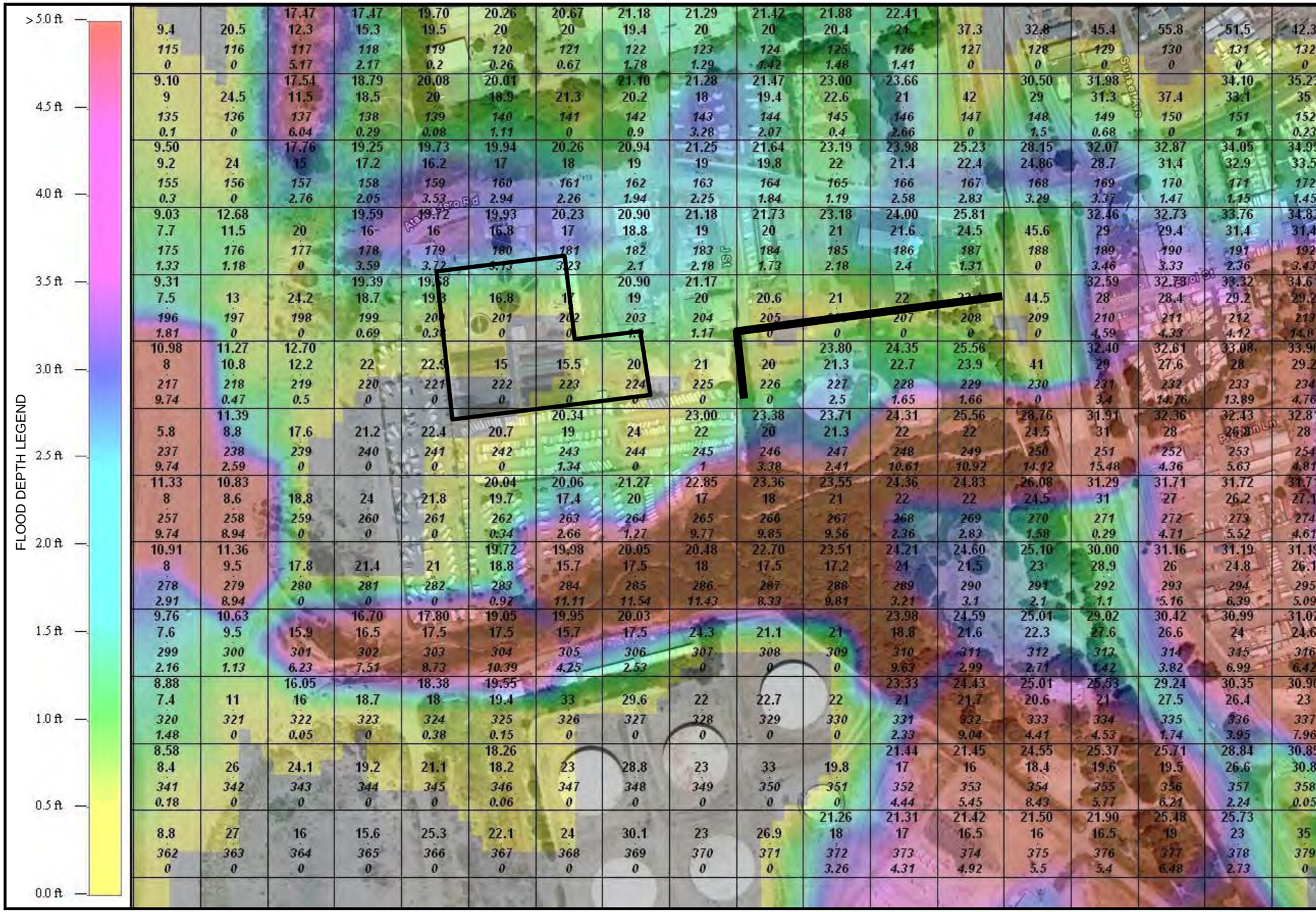
LEGEND

MAX WATER SURFACE ELEVATION
GRID ELEVATION
GRID NUMBER
MAX FLOOD DEPTH

20.99
19
203
1.99

Q100 = 14,900 CFS

MB7
EXHIBIT 4.7



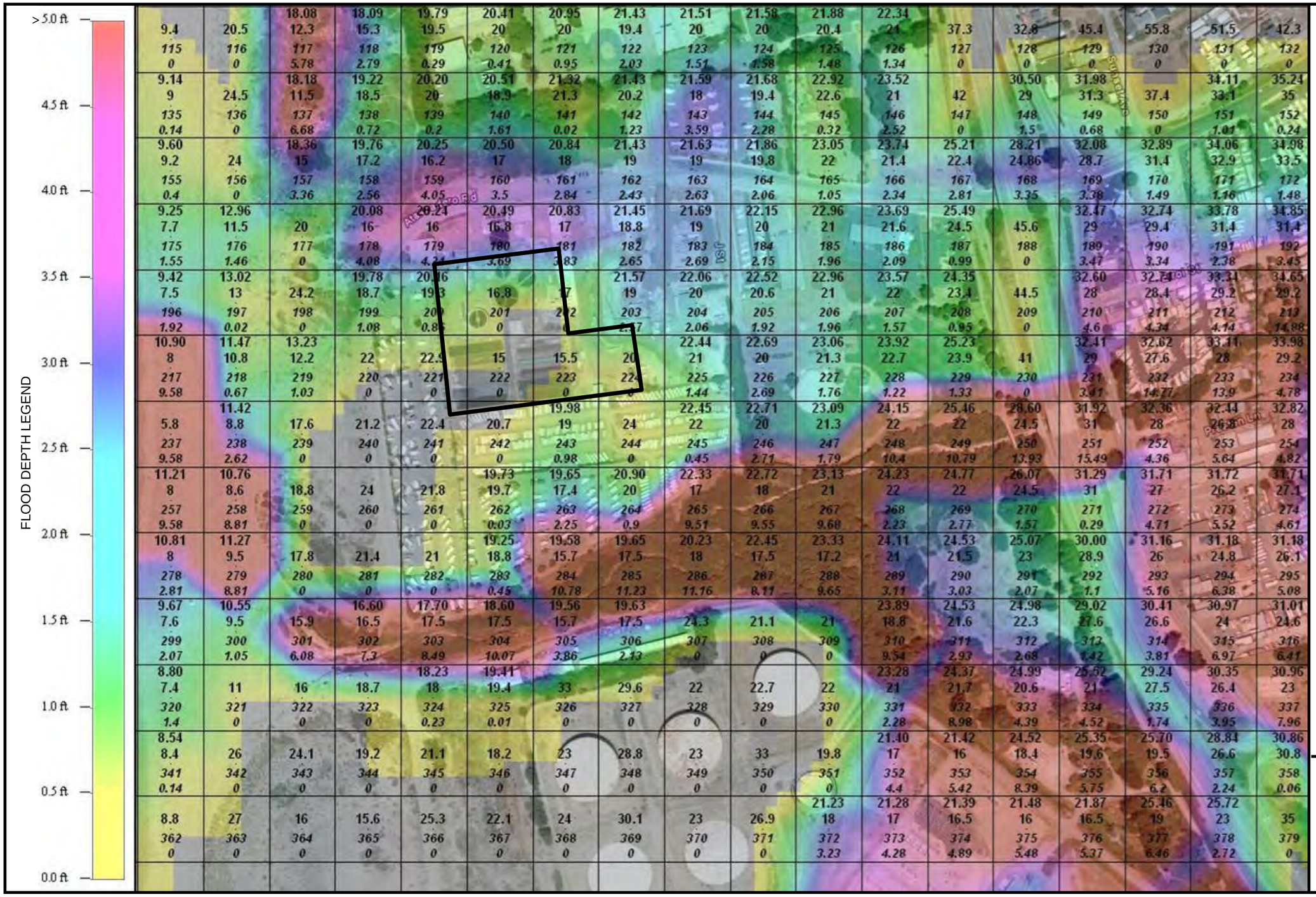
MORRO BAY CAYUCOS SANITARY DISTRICT WASTEWATER TREATMENT PLANT
FLOOD HAZARD ANALYSIS
100-YEAR FLOOD ELEVATIONS-WITH REDUCED FOOTPRINT PROTECTION, AND PARK FLOOD BARRIER

ELEVATIONS ARE IN FEET NAVD88

WALLACE GROUP

Q100 = 14,900 CFS

MB8
EXHIBIT 4.8



MORRO BAY CAYUCOS SANITARY DISTRICT WASTEWATER TREATMENT PLANT
FLOOD HAZARD ANALYSIS
100-YEAR FLOOD ELEVATIONS-WITH REDUCED FOOTPRINT PROTECTION

WALLACE GROUP

ELEVATIONS ARE IN FEET NAVD88

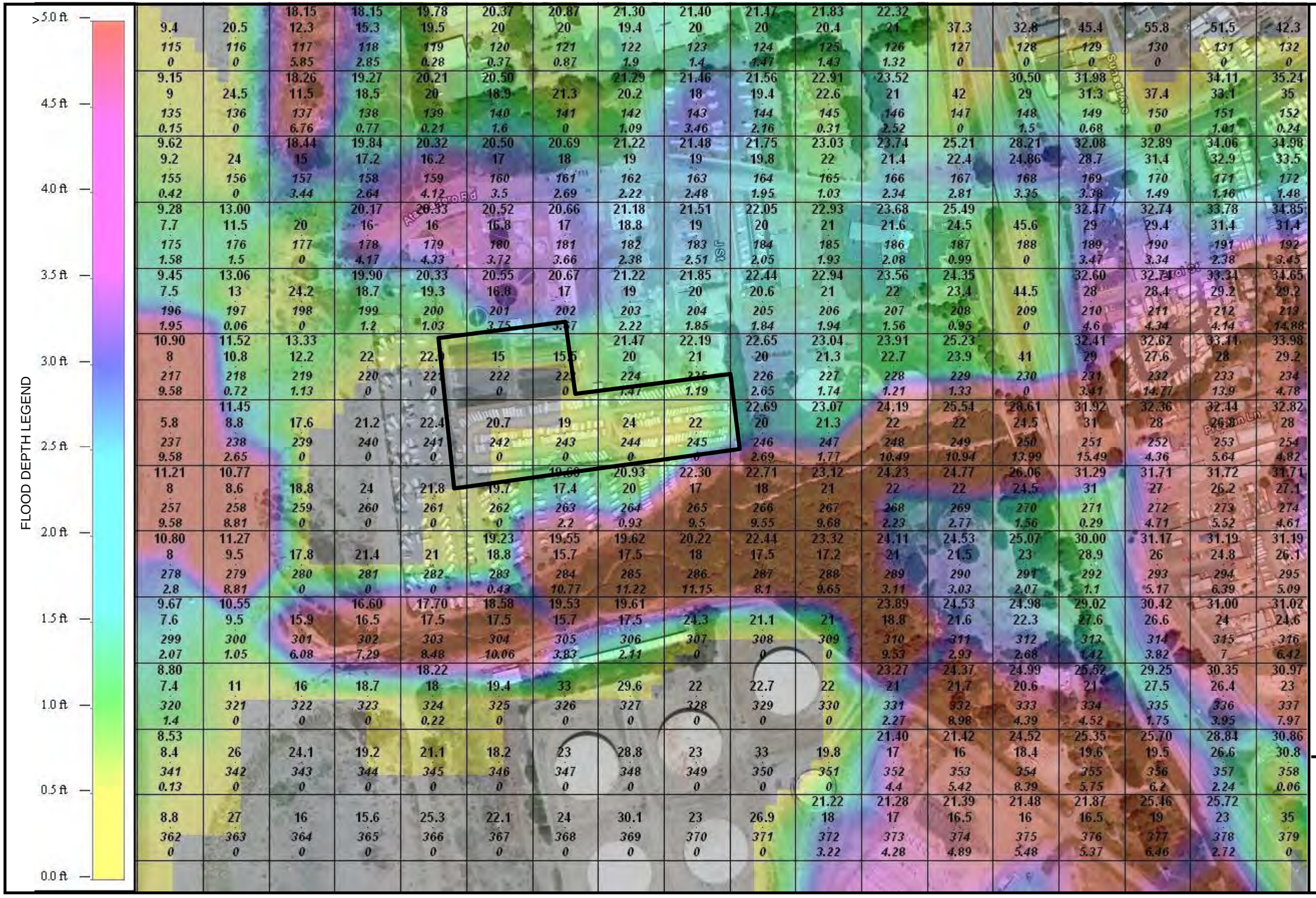
LEGEND

MAX WATER SURFACE ELEVATION
GRID ELEVATION
GRID NUMBER
MAX FLOOD DEPTH

20.99
19
203
1.99

Q100 = 14,900 CFS

MB9
EXHIBIT 4.9



MORRO BAY CAYUCOS SANITARY DISTRICT WASTEWATER TREATMENT PLANT
FLOOD HAZARD ANALYSIS
100-YEAR FLOOD ELEVATIONS-WITH 5.5-ACRE FOOTPRINT PROTECTION

WALLACE GROUP

ELEVATIONS ARE IN FEET NAVD88

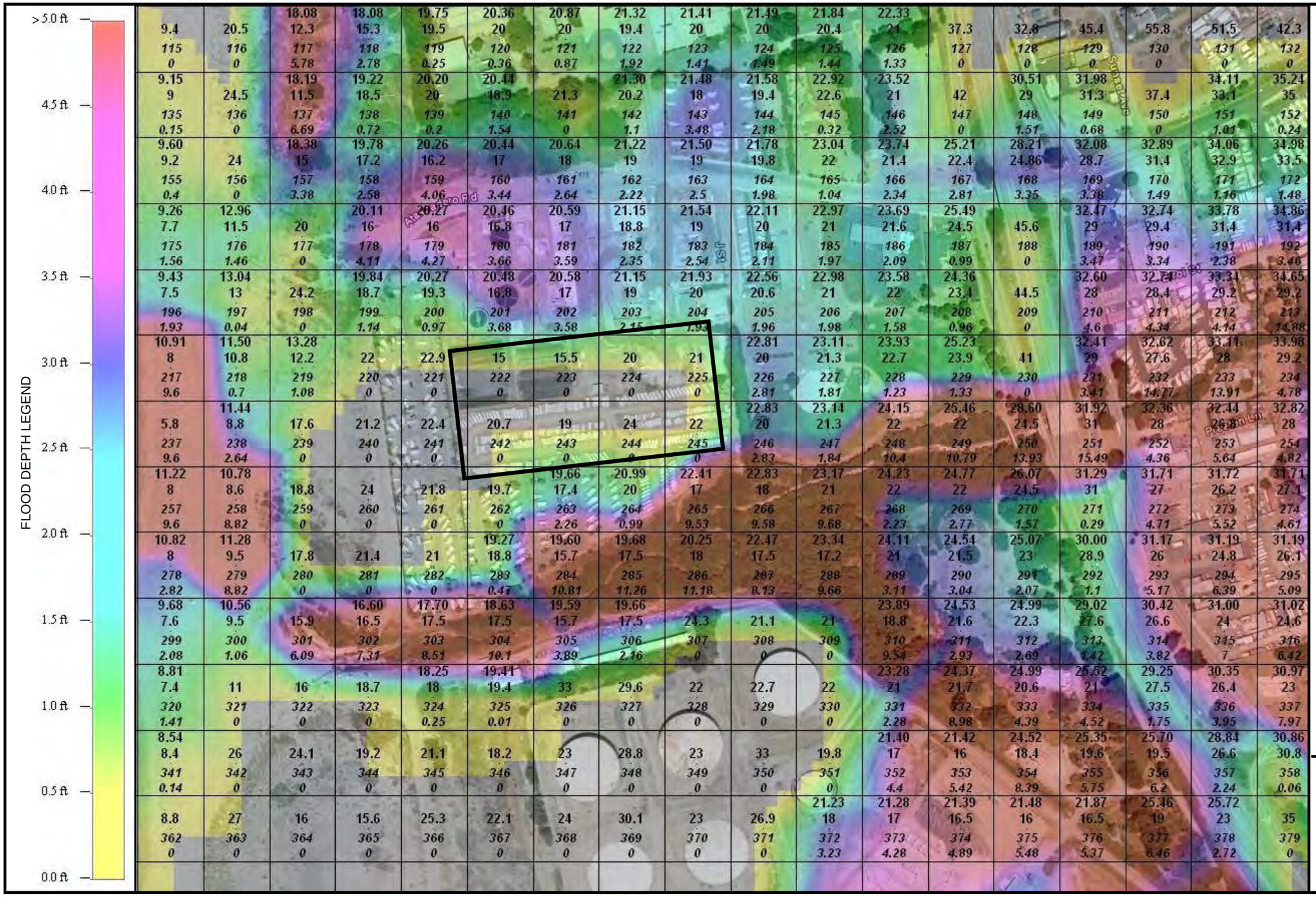
LEGEND

MAX WATER SURFACE ELEVATION
GRID ELEVATION
GRID NUMBER
MAX FLOOD DEPTH

20.99
19
203
1.99

Q100 = 14,900 CFS

MB10
EXHIBIT 4.10



MORRO BAY CAYUCOS SANITARY DISTRICT WASTEWATER TREATMENT PLANT
FLOOD HAZARD ANALYSIS
100-YEAR FLOOD ELEVATIONS-WITH 7.3-ACRE FOOTPRINT PROTECTION

WALLACE GROUP

ELEVATIONS ARE IN FEET NAVD88

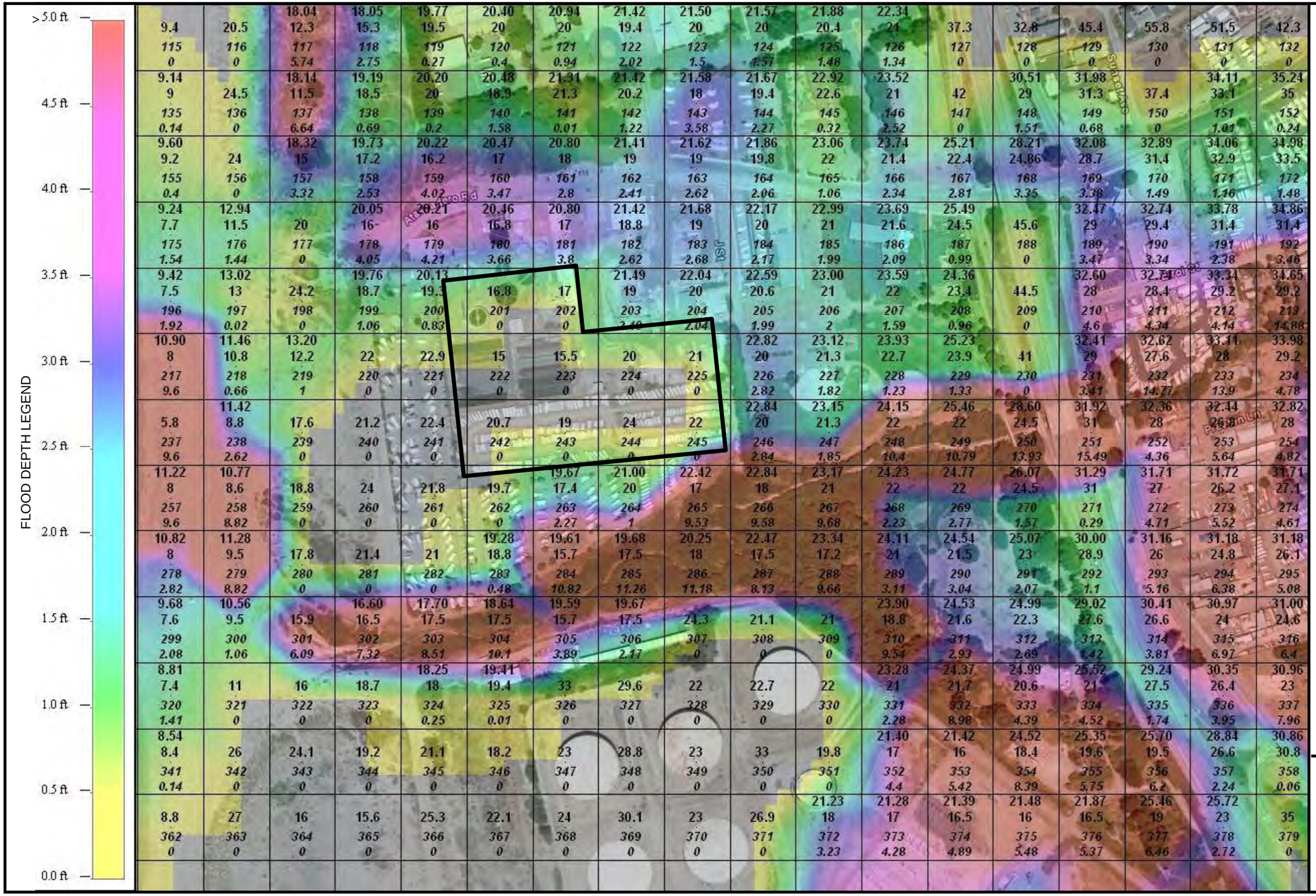
LEGEND

MAX WATER SURFACE ELEVATION
GRID ELEVATION
GRID NUMBER
MAX FLOOD DEPTH

20.99
19
203
1.99

Q100 = 14,900 CFS

MB11
EXHIBIT 4.11



MORRO BAY CAYUCOS SANITARY DISTRICT WASTEWATER TREATMENT PLANT
FLOOD HAZARD ANALYSIS
100-YEAR FLOOD ELEVATIONS-WITH 9.1-ACRE FOOTPRINT PROTECTION

WALLACE GROUP

ELEVATIONS ARE IN FEET NAVD88

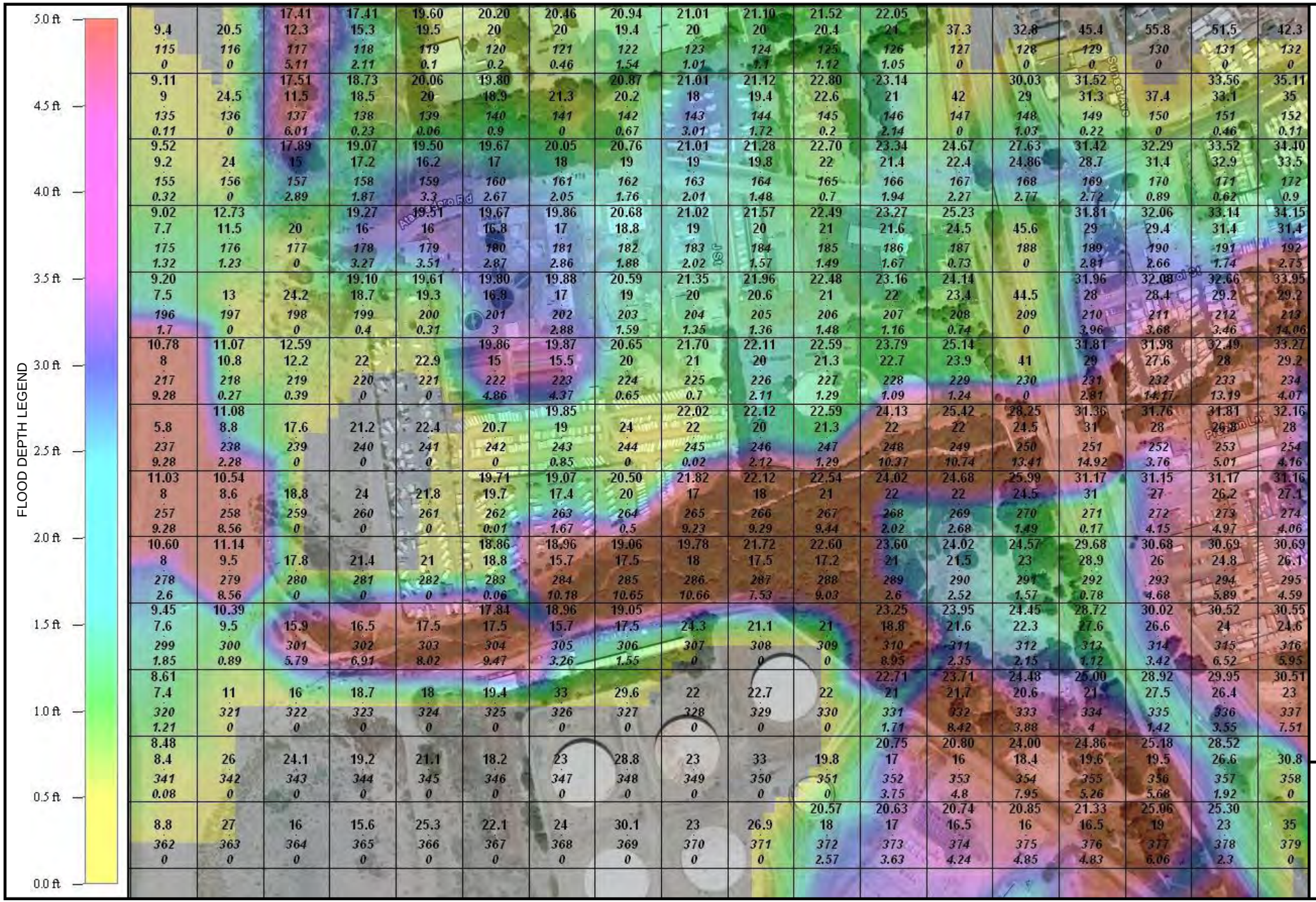
LEGEND

MAX WATER SURFACE ELEVATION
GRID ELEVATION
GRID NUMBER
MAX FLOOD DEPTH

20.99
19
203
1.99

Q100 = 14,900 CFS

MB12
EXHIBIT 4.12



MORRO BAY CAYUCOS SANITARY DISTRICT WASTEWATER TREATMENT PLANT
FLOOD HAZARD ANALYSIS
100-YEAR FLOOD ELEVATIONS-EXISTING CONDITIONS

WALLACE GROUP

ELEVATIONS ARE IN FEET NAVD88

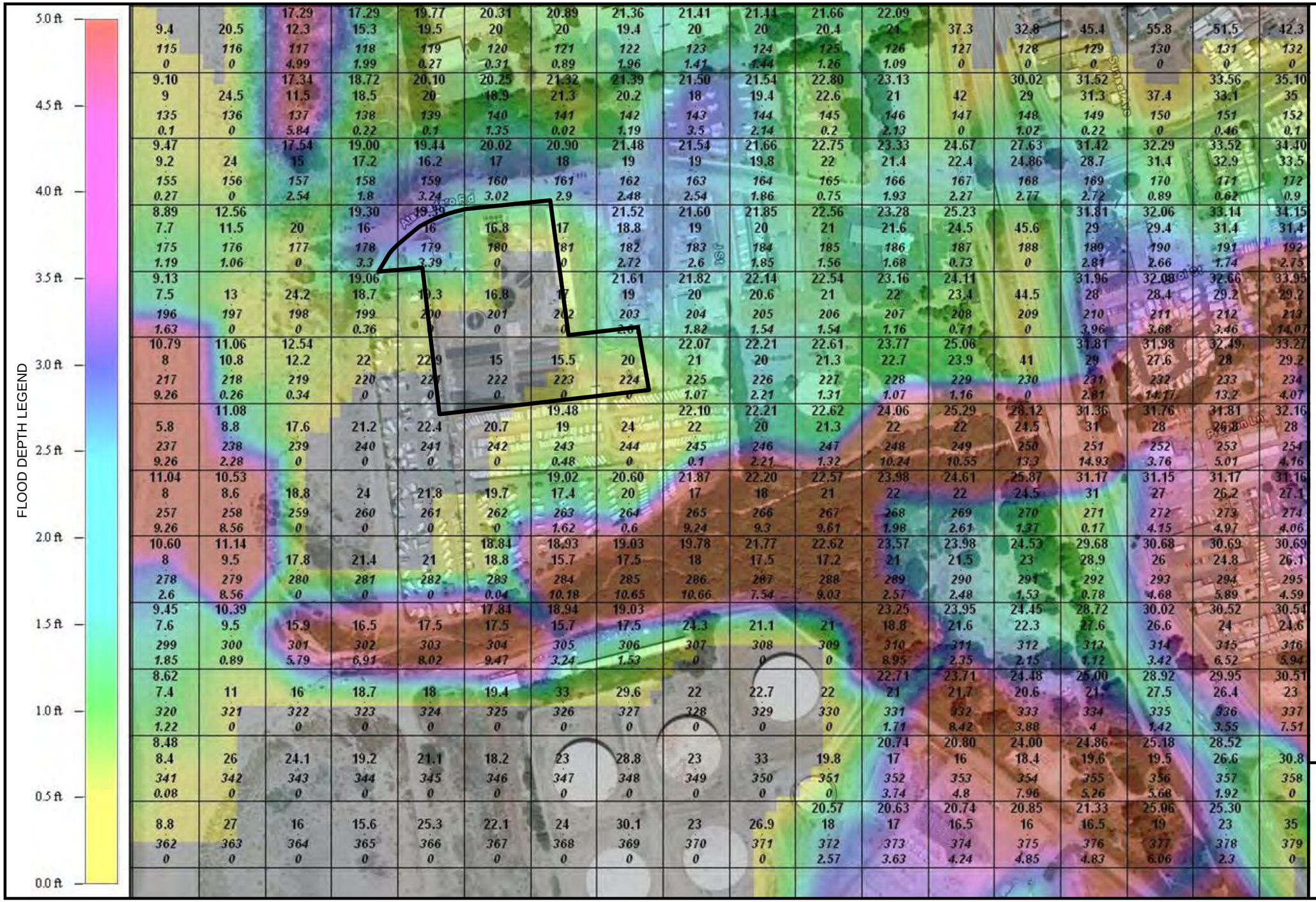
LEGEND

MAX WATER SURFACE ELEVATION
GRID ELEVATION
GRID NUMBER
MAX FLOOD DEPTH

20.99
19
203
1.99

Q100 = 11,600 CFS

MB2b
EXHIBIT 4.2b



MORRO BAY CAYUCOS SANITARY DISTRICT WASTEWATER TREATMENT PLANT
FLOOD HAZARD ANALYSIS
100-YEAR FLOOD ELEVATIONS-WITH FULL PLANT PROTECTION

WALLACE GROUP®

ELEVATIONS ARE IN FEET NAVD88

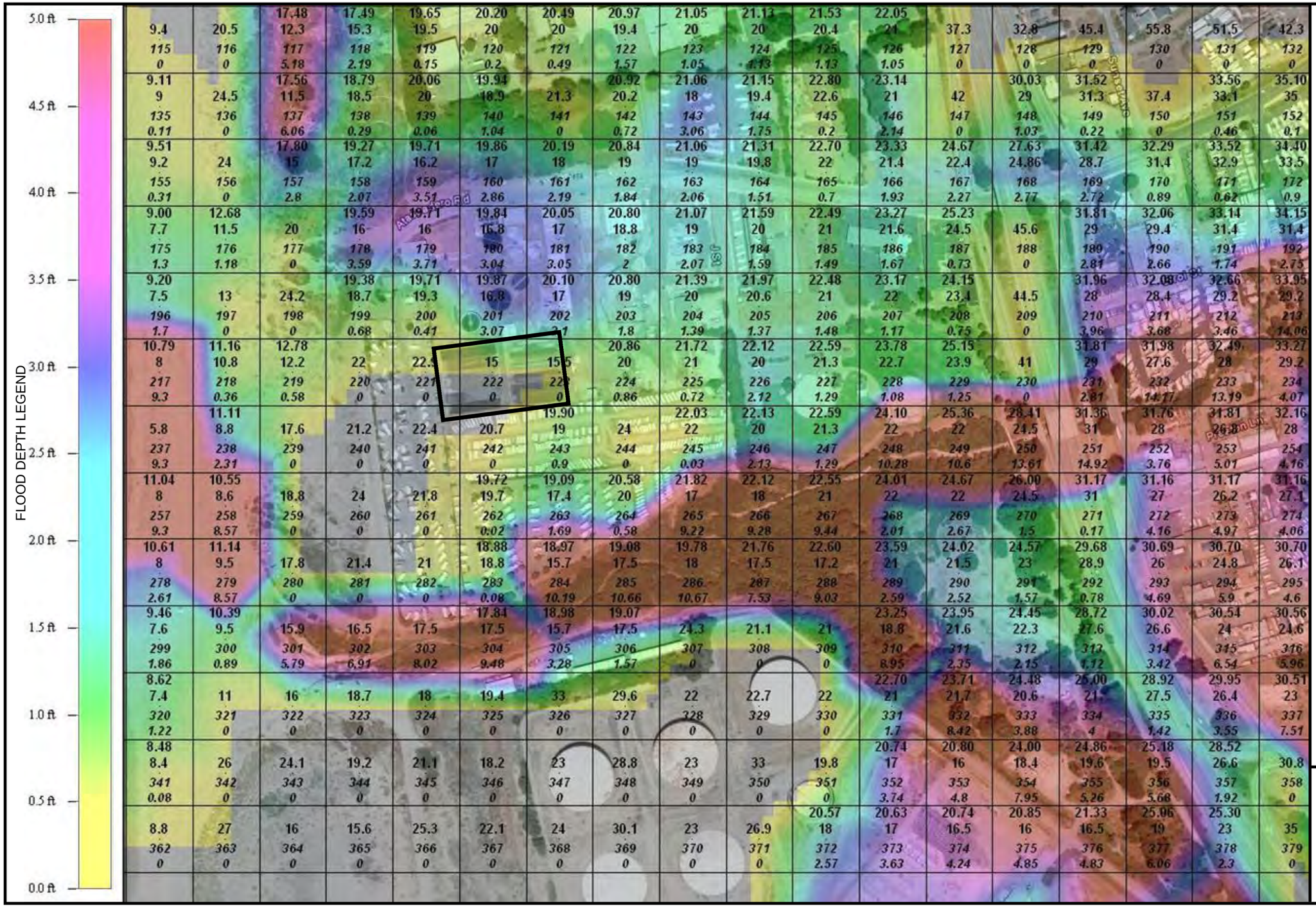
LEGEND

MAX WATER SURFACE ELEVATION
GRID ELEVATION
GRID NUMBER
MAX FLOOD DEPTH

20.99
19
203
1.99

Q100 = 11,600 CFS

MB3b
EXHIBIT 4.3b



MORRO BAY CAYUCOS SANITARY DISTRICT WASTEWATER TREATMENT PLANT
FLOOD HAZARD ANALYSIS
100-YEAR FLOOD ELEVATIONS-WITH SLUDGE-BED WALL AND COMPONENT FLOODPROOFING

WALLACE GROUP

ELEVATIONS ARE IN FEET NAVD88

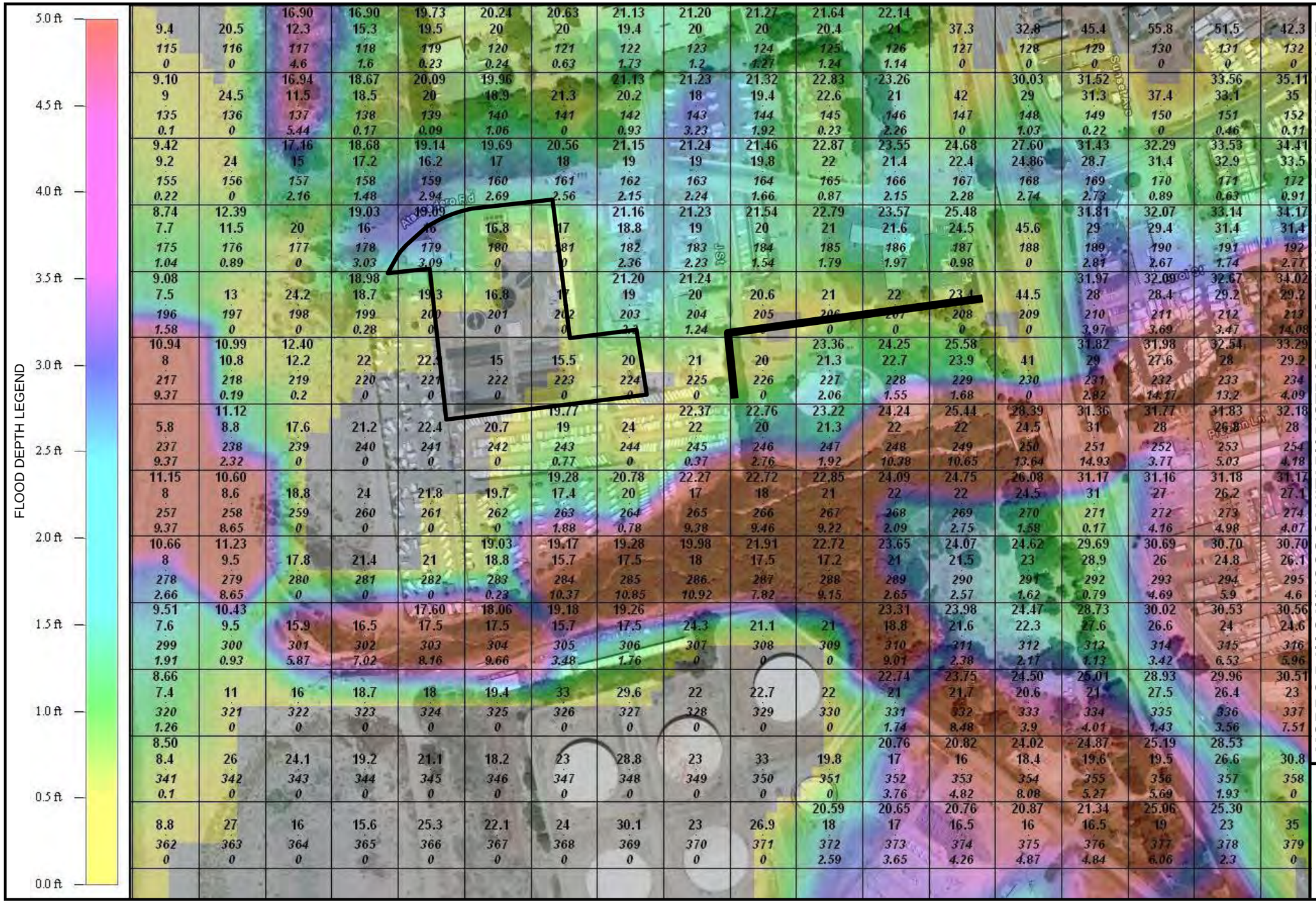
LEGEND

MAX WATER SURFACE ELEVATION
GRID ELEVATION
GRID NUMBER
MAX FLOOD DEPTH

20.99
19
203
1.99

Q100 = 11,600 CFS

MB5b
EXHIBIT 4.5b



MORRO BAY CAYUCOS SANITARY DISTRICT WASTEWATER TREATMENT PLANT
FLOOD HAZARD ANALYSIS
100-YEAR FLOOD ELEVATIONS-WITH FULL PLANT PROTECTION AND PARK FLOOD BARRIER

WALLACE GROUP

ELEVATIONS ARE IN FEET NAVD88

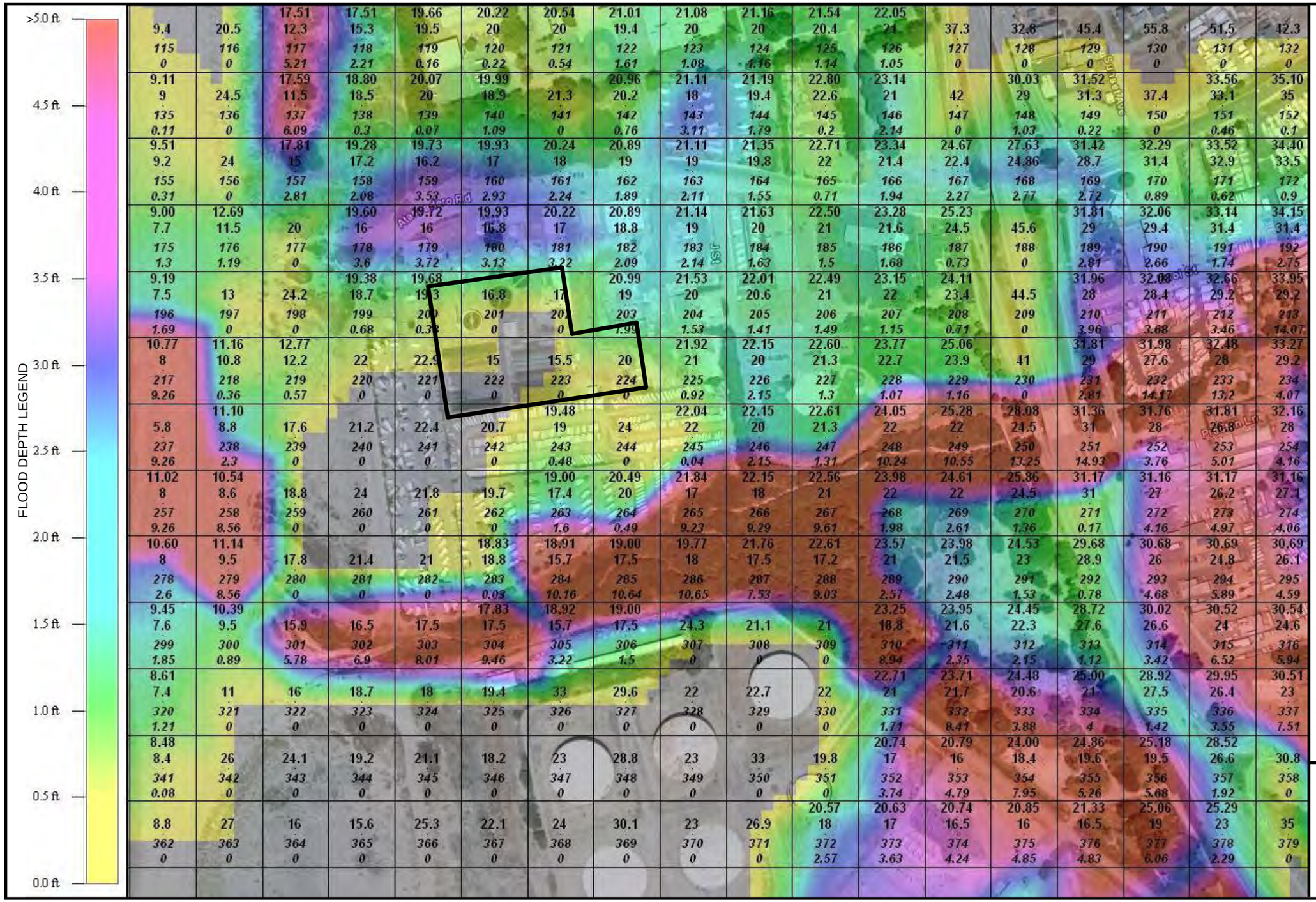
LEGEND

MAX WATER SURFACE ELEVATION
GRID ELEVATION
GRID NUMBER
MAX FLOOD DEPTH

20.99
19
203
1.99

Q100 = 11,600 CFS

MB7b
EXHIBIT 4.7b



MORRO BAY CAYUCOS SANITARY DISTRICT WASTEWATER TREATMENT PLANT
FLOOD HAZARD ANALYSIS
100-YEAR FLOOD ELEVATIONS-WITH REDUCED FOOTPRINT PROTECTION

WALLACE GROUP®

ELEVATIONS ARE IN FEET NAVD88

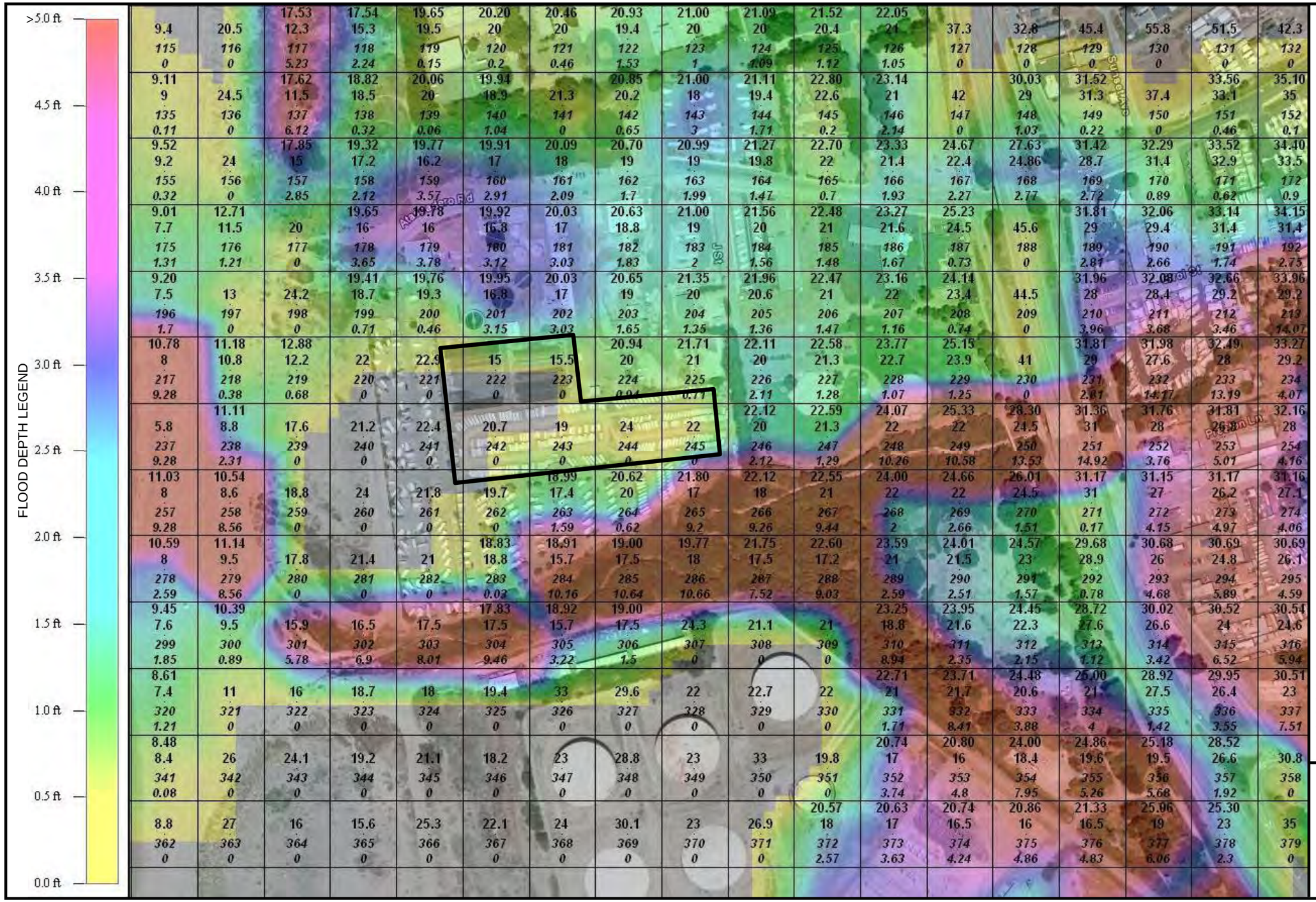
LEGEND

MAX WATER SURFACE ELEVATION
GRID ELEVATION
GRID NUMBER
MAX FLOOD DEPTH

20.99
19
203
1.99

Q100 = 11,600 CFS

MB9b
EXHIBIT 4.9b



MORRO BAY CAYUCOS SANITARY DISTRICT WASTEWATER TREATMENT PLANT
FLOOD HAZARD ANALYSIS
100-YEAR FLOOD ELEVATIONS-WITH 5.5-ACRE FOOTPRINT PROTECTION

WALLACE GROUP®

ELEVATIONS ARE IN FEET NAVD88

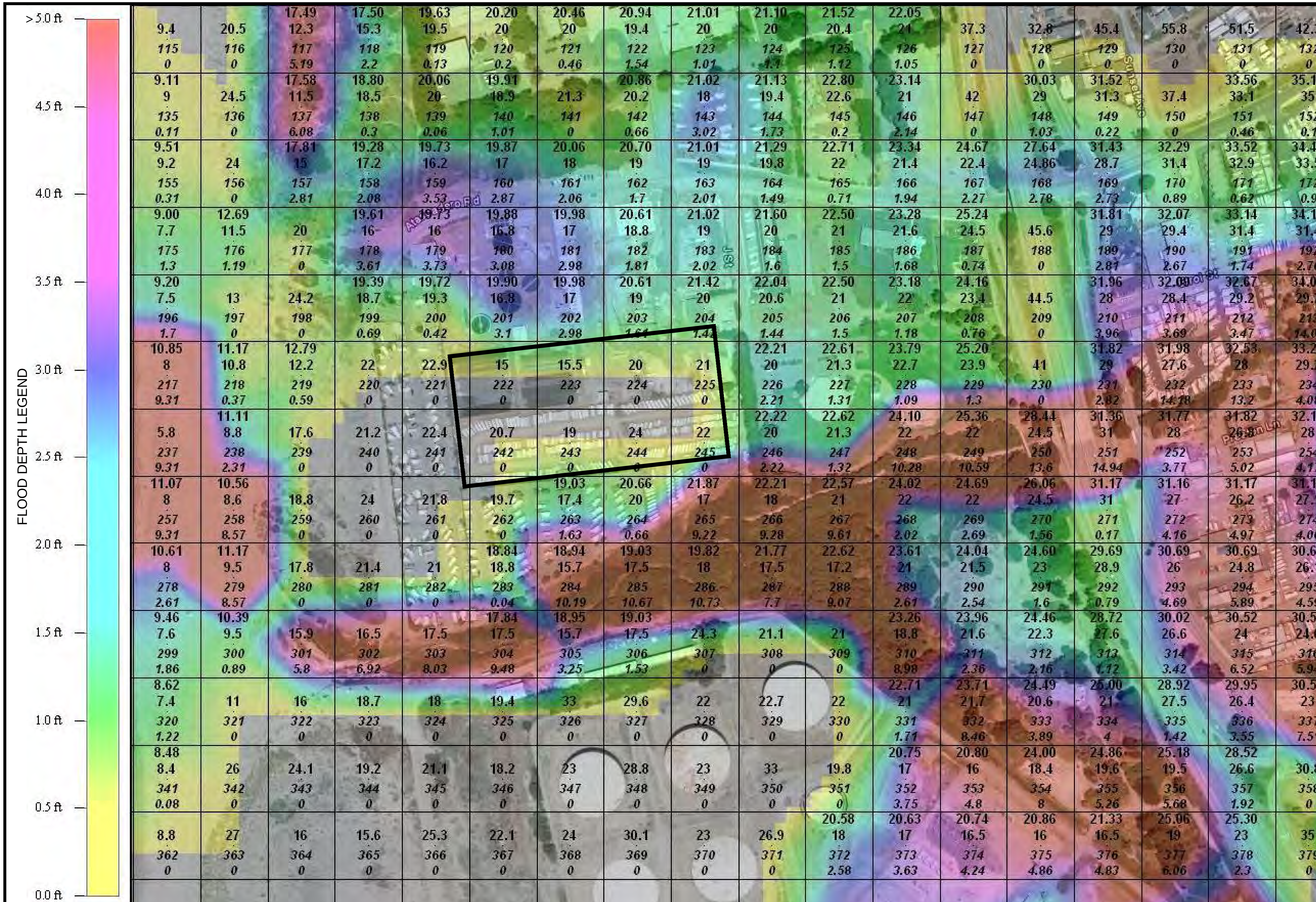
LEGEND

MAX WATER SURFACE ELEVATION
GRID ELEVATION
GRID NUMBER
MAX FLOOD DEPTH

20.99
19
203
1.99

Q100 = 11,600 CFS

MB10b
EXHIBIT 4.10b



MORRO BAY CAYUCOS SANITARY DISTRICT WASTEWATER TREATMENT PLANT
FLOOD HAZARD ANALYSIS
100-YEAR FLOOD ELEVATIONS-WITH 7.3-ACRE FOOTPRINT PROTECTION

WALLACE GROUP

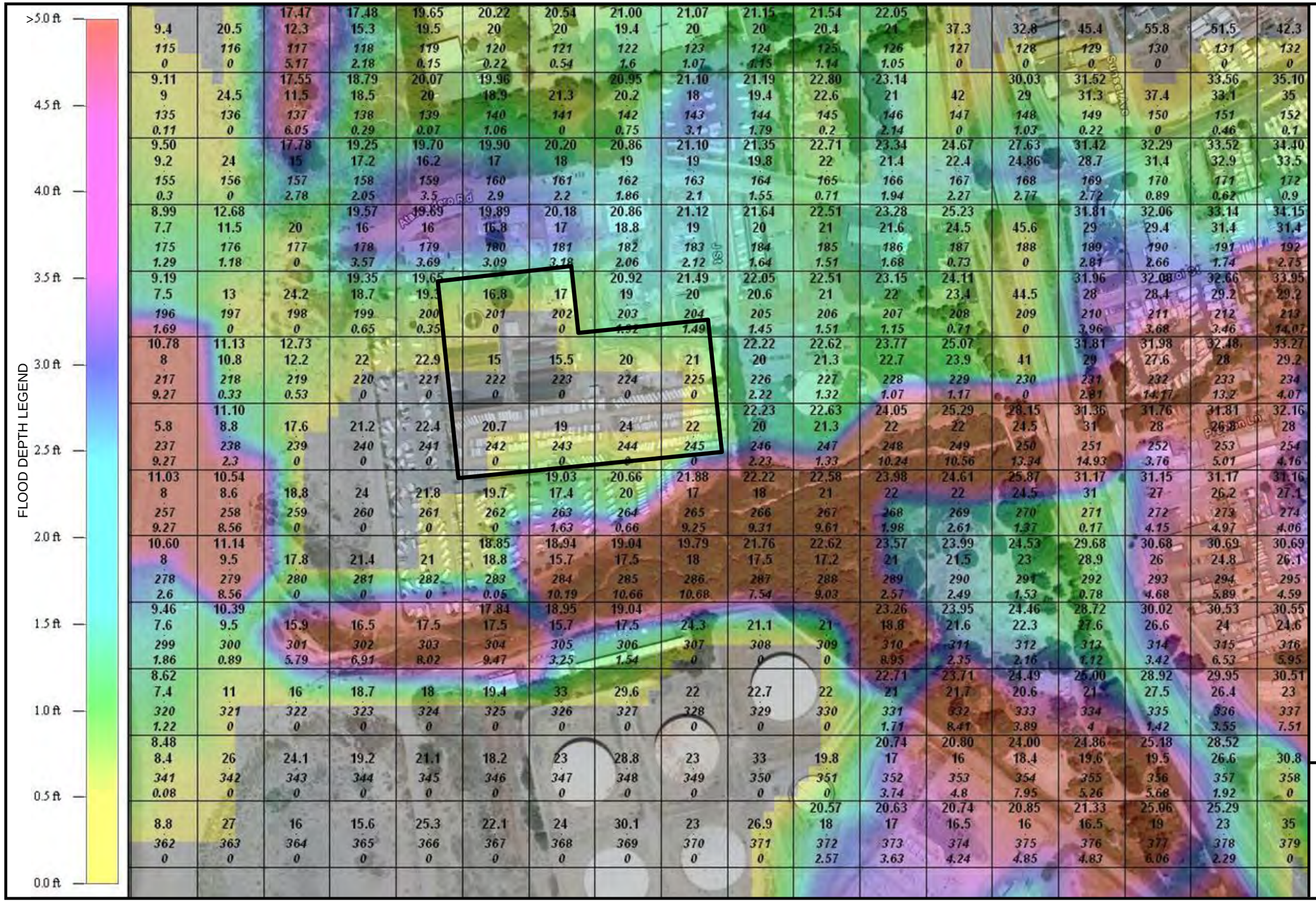
ELEVATIONS ARE IN FEET NAVD88

LEGEND

MAX WATER SURFACE ELEVATION — 20.99
GRID ELEVATION — 19
GRID NUMBER — 203
MAX FLOOD DEPTH — 1.99

Q100 = 11,600 CFS

MB11b
EXHIBIT 4.11b



MORRO BAY CAYUCOS SANITARY DISTRICT WASTEWATER TREATMENT PLANT
FLOOD HAZARD ANALYSIS
100-YEAR FLOOD ELEVATIONS-WITH 9.1-ACRE FOOTPRINT PROTECTION

WALLACE GROUP®

ELEVATIONS ARE IN FEET NAVD88

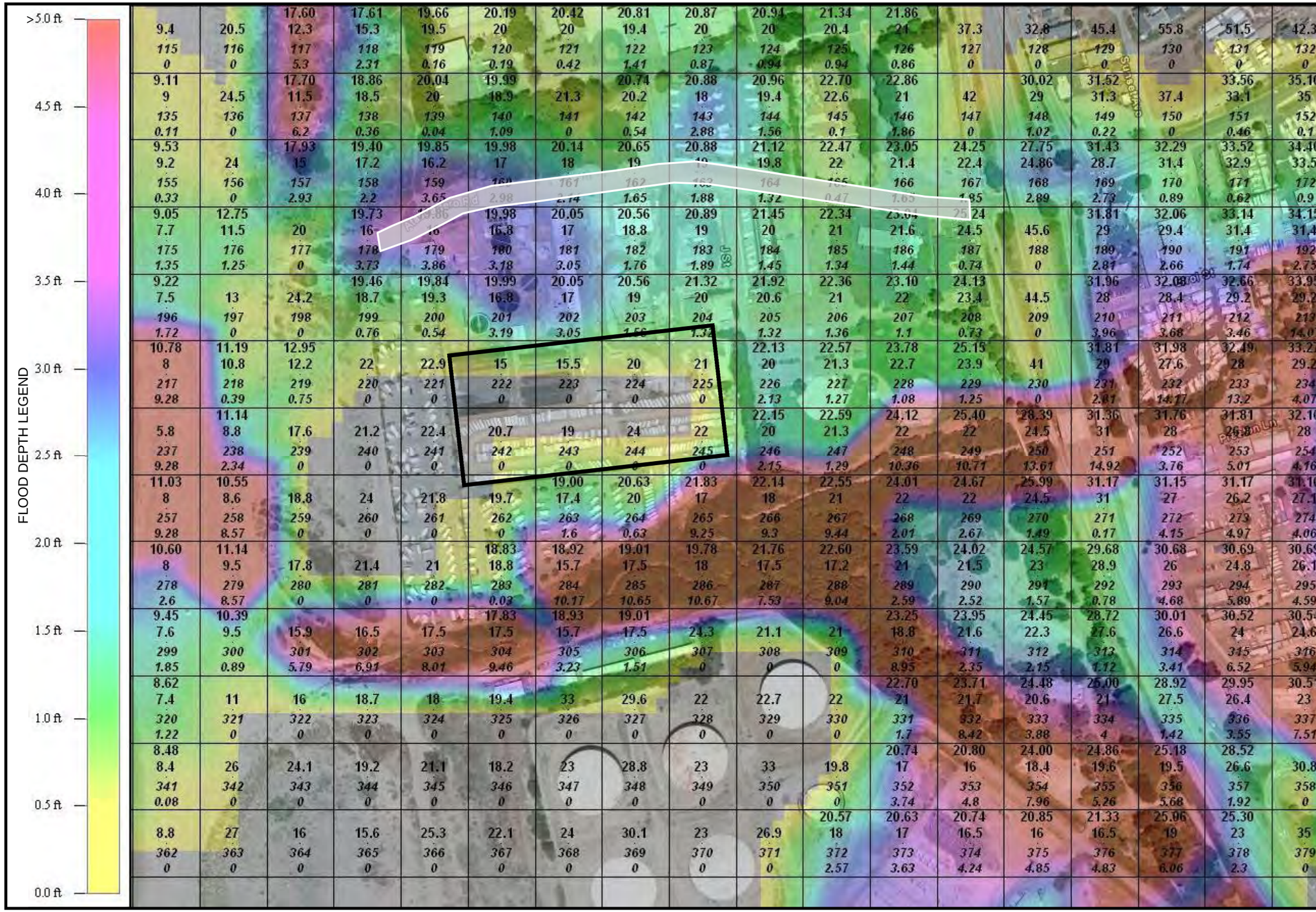
LEGEND

MAX WATER SURFACE ELEVATION
GRID ELEVATION
GRID NUMBER
MAX FLOOD DEPTH

20.99
19
203
1.99

Q100 = 11,600 CFS

MB12b
EXHIBIT 4.12b



MORRO BAY CAYUCOS SANITARY DISTRICT WASTEWATER TREATMENT PLANT
FLOOD HAZARD ANALYSIS
100-YEAR FLOOD ELEVATIONS-WITH 7.3-ACRE FOOTPRINT PROTECTION AND INVERTED CROWN MITIGATION MEASURE

WALLACE GROUP

ELEVATIONS ARE IN FEET NAVD88

LEGEND

MAX WATER SURFACE ELEVATION
GRID ELEVATION
GRID NUMBER
MAX FLOOD DEPTH

20.99
19
203
1.99

Q100 = 11,600 CFS

MB13b
EXHIBIT 4.13b

This flap gate in Morro Creek is the outlet to the storm drain system serving the south side of the WWTP

The storm drain outlet to the ocean is often blocked by sand, restricting the flow.

MORRO BAY CAYUCOS SANITARY DISTRICT WASTEWATER TREATMENT PLANT
FLOOD HAZARD ANALYSIS
PHOTOGRAPHS

EXHIBIT 5.1

The surface outlet through the dunes at the end of Atascadero Street is now closed due to sand accumulation and encroachment by non-native vegetation (ice plant) from the south.

The surface path for flood flows is to the north and parallel to the dunes until it reaches a small creek to the north.

MORRO BAY CAYUCOS SANITARY DISTRICT WASTEWATER TREATMENT PLANT
FLOOD HAZARD ANALYSIS
PHOTOGRAPHS

EXHIBIT 5.2

The surface outlet through the dunes at the end of Atascadero Street was much larger in the past, as shown in this photo from 1972

The outlet through the dunes is beginning to narrow, as shown in this photo from 1979

MORRO BAY CAYUCOS SANITARY DISTRICT WASTEWATER TREATMENT PLANT
FLOOD HAZARD ANALYSIS
PHOTOGRAPHS

EXHIBIT 5.3

The area outlined above encompasses an area of approximately 7.3 acres. The southern portion is currently existing high ground used for RV storage, while the northern portion, currently occupied by sludge beds and aggregate operations, would require imported fill to raise the area above the 100-year flood level. This scenario is modeled as MB11 and MB11b in the accompanying analysis.

MORRO BAY CAYUCOS SANITARY DISTRICT WASTEWATER TREATMENT PLANT
FLOOD HAZARD ANALYSIS
RECOMMENDED PLANT SITE FOOTPRINT

EXHIBIT 6