

FINAL
ENVIRONMENTAL IMPACT REPORT ADDENDUM

COLORADO LAGOON RESTORATION PROJECT
CITY OF LONG BEACH
LOS ANGELES COUNTY, CALIFORNIA

LSA

September 2010

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LOS ANGELES COUNTY, CALIFORNIA

Submitted to:

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LIST OF ABBREVIATED TERMS

AASHTO	American Association of State Highway and Transportation Officials
AC	Acre/Acres
ADA	Americans With Disabilities Act
BASIN	South Coast Air Basin
BMPS	Best Management Practices
CCC	California Coastal Commission
CDP	Coastal Development Permit
CEQA	California Environmental Quality Act
CFP	California Fully Protected
CHL	California Historical Landmarks
CITY	City of Long Beach
CPTED	Crime Prevention Through Environmental Design
CWA	Clean Water Act
CY	Cubic Yard/Cubic Yards
DDT	Dichloro-Diphenyl-Trichlorethane
DPW	Department of Public Works
EA	Environmental Assessment
EFH	Essential Fish Habitat
EIR	Environmental Impact Report
FEMA	Federal Emergency Management Agency
FOCL	Friends of the Colorado Lagoon
FT	Feet/Foot
GHG	Greenhouse Gas
GIS	Geographic Information System
GPD	Gallons Per Day
GPM	Gallons Per Minute
HCP	Habitat Conservation Plan
I-405	Interstate 405
I-605	Interstate 605
I-710	Interstate 710
JWPCP	Joint Water Pollution Control Plant
LACSD	Sanitation District Of Los Angeles County
LAGOON	Colorado Lagoon
LBPD	Long Beach Police Department
LBUSD	Long Beach Unified School District
LBWD	Long Beach Water Department
MI	Mile/Miles
MMRP	Mitigation and Monitoring Reporting Program

MSL	Mean Sea Level
NCCP	Natural Community Conservation Plan
NGVD	National Geodetic Vertical Datum
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
OEHHA	Office of Environmental Health Hazard Assessment
PAH	Polycyclic Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyls
PHI	California Points of Historical Interests
POLB	Port of Long Beach
RCB	Reinforced Concrete Box
RWQCB	Regional Water Quality Control Board
SCAG	California Association of Governments
SCAQMD	South Coast Air Quality Management District
SUSMP	Standard Urban Stormwater Mitigation Plan
SWPPP	Stormwater Pollution Prevention Plan
TAD	Termino Avenue Drain
TADP	Termino Avenue Drain Project
TMDL	Total Maximum Daily Loads
TMP	Traffic Management Plan
USACE	United States Army Corps of Engineers

1.0 INTRODUCTION

1.1 PURPOSE AND SCOPE

The Colorado Lagoon (Lagoon) is an approximately 11.7-acre (ac) tidal water body that is connected to Alamitos Bay and the Pacific Ocean through an underground tidal culvert to Marine Stadium. The Lagoon serves three main functions: hosting estuarine habitat, providing public recreation (including swimming), and retaining and conveying storm water drainage. The deteriorated ecological health of the Lagoon has been established for the past several decades. The purpose of the proposed project is to restore the site's ecosystem, improve the estuarine habitat, provide enhanced recreation facilities, improve water and sediment quality, and manage storm water.

The City of Long Beach (City) proposed a comprehensive restoration plan for the lagoon (Colorado Lagoon Restoration Feasibility Study, Moffat & Nichol, February 2005). As Lead Agency, the City prepared a Draft Environmental Impact Report (EIR) for the proposed project and released the document for public review in May 2008. The City Planning Commission certified the EIR, approved the Mitigation Monitoring and Reporting Program, adopted Findings and a Statement of Overriding Considerations, and approved the project with conditions, on September 4, 2008. The City Council upheld the certification and denied an appeal on October 14, 2008.

This Addendum to the certified 2008 EIR addresses potential environmental impacts of the Colorado Lagoon Restoration Project (proposed project) and completes the necessary environmental analysis as required pursuant to provisions of the California Environmental Quality Act (CEQA), Public Resources Code Section 21000 et seq., and State CEQA Guidelines. This document is an Addendum to the previously certified EIR for the Colorado Lagoon Restoration Project. These two documents, together with the other environmental documents incorporated by reference herein, serve as the environmental review of the Colorado Lagoon Restoration Project, as revised. The Colorado Lagoon Restoration Project reviewed in this Addendum includes revisions to the certified 2008 EIR previously approved by the City Planning Commission and City Council and includes the following requested entitlements and approvals needed to adopt the revised plan:

- Approval of this Addendum to the certified Colorado Lagoon Restoration Project EIR to address potential environmental effects of changes made to the project, including new alternatives, since the original City approval and EIR certification in October 2008.
- Approval of discretionary actions as listed in Section 2.2 of this Addendum.

Pursuant to provisions of CEQA and State CEQA Guidelines, the City is the Lead Agency charged with the responsibility of deciding whether to approve the revised proposed Colorado Lagoon Restoration Project. As part of its decision-making process, the City is required to review and consider potential environmental effects that could result from construction and operation of the proposed project. The certified 2008 EIR found the following effects of project development to be significant unavoidable impacts:

- Air Quality: Construction emissions;
- Air Quality: Cumulative emissions;
- Air Quality: Objectionable odors; and
- Noise: Construction noise in excess of City's daytime exterior noise standards.

The scope of City review of the proposed Colorado Lagoon Restoration Project and other related project components is limited by provisions set forth in CEQA and the State CEQA Guidelines. It is limited to examining environmental effects associated with differences between the project as currently revised and the project reviewed in the certified 2008 EIR. Pursuant to CEQA and State CEQA Guidelines, the City has prepared this Addendum to provide City decision-makers with a factual basis for evaluating the specific environmental impacts associated with the Colorado Lagoon Restoration Project. This Addendum will also determine whether there are changes in circumstances or new information of substantial importance that would require preparation of a subsequent or supplemental EIR.

According to Section 21166 of CEQA and Section 15162 of State CEQA Guidelines, a subsequent EIR is not required for the proposed changes unless the City determines on the basis of substantial evidence that one or more of the following conditions are met:

1. Substantial changes are proposed in the project that require major revisions of the previous EIR due to involvement of new significant environmental effects or a substantial increase in severity of previously identified significant effects;
2. Substantial changes have occurred with respect to circumstances under which the project is undertaken that will require major revisions of the previous EIR due to involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
3. New information of substantial importance, which was not known and could not have been known with exercise of reasonable diligence at the time the previous EIR was certified, shows any of the following:
 - The project will have one or more significant effects not discussed in the previous EIR;
 - Significant effects previously examined will be substantially more severe than identified in the previous EIR;
 - Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or
 - Mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives.

Under State CEQA Guidelines, Section 15163, if any of the conditions noted above are present but only minor additions or changes would be necessary to make the previous EIR adequate to apply to the project in the changed situation, a supplemental EIR may be prepared.

Section 15164 of State CEQA Guidelines states that an Addendum to an EIR shall be prepared “if some changes or additions are necessary, but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred.” Thus, if none of the above conditions are met, the City may not require preparation of a subsequent or supplemental EIR. Rather, the City can decide that no further environmental documentation is necessary or can require an Addendum be prepared. Therefore, the City finds that an Addendum to the previously certified Final EIR is appropriate. The rationale and the facts for this finding are provided in the body of this Addendum.

This Addendum reviews changes to the project and to existing conditions that have occurred since the 2008 EIR was certified and compares environmental effects of development of the revised project with those of the original project previously disclosed. It also reviews new information of substantial importance that was not known and could not have been known with exercise of reasonable diligence at the time the 2008 EIR was certified and evaluates whether there are new or more severe significant environmental effects associated with changes in circumstances under which project development is being undertaken. It further examines whether, as a result of any changes or any new information, a subsequent or supplemental EIR may be required. This examination includes an analysis of provisions of Section 21166 of CEQA and Section 15162 of the State CEQA Guidelines and their applicability to the project.

1.1.1 Evaluation of Environmental Impacts

This Addendum compares anticipated environmental effects of the project as revised with those disclosed in the certified 2008 EIR to review whether any conditions set forth in Section 15162 of the State CEQA Guidelines requiring preparation of a subsequent or supplemental EIR are met. Potential environmental effects of the project are addressed for each of the following areas:

- Aesthetics;
- Air Quality;
- Biological Resources;
- Cultural and Paleontological Resources;
- Geology and Soils;
- Hazards and Hazardous Materials;
- Hydrology and Water Quality;
- Land Use;
- Noise;
- Public Services and Utilities;
- Recreation; and
- Transportation and Circulation.

Chapter 2.0 of this Addendum contains a description of the proposed project as revised. Chapter 3.0 contains analyses and explanations of potential environmental impacts of proposed revised Master

Plan 3A. The analyses will provide the City with a basis for its determination that no subsequent or supplemental EIR will be required for the project.

1.2 PREVIOUS APPROVALS

The Lagoon is an approximately 11.7 ac tidal water body¹ that is connected to Alamitos Bay and the Pacific Ocean through an underground tidal culvert to Marine Stadium. The Lagoon is located in a park setting and is owned and maintained as a City park by the City Department of Parks, Recreation, and Marine.

The City is approximately 20 miles (mi) south of downtown Los Angeles and is adjacent to the Pacific Ocean. The Lagoon, Marina Vista Park, and Marine Stadium (which comprise the proposed project site) are located in the southeastern portion of the City. The Lagoon lies northwest of the mouth of the San Gabriel River and is north of Marine Stadium and Alamitos Bay. The Lagoon is primarily accessible from East Appian Way and East Colorado Street via Park Avenue from East 7th Street. However, many local streets provide access to the Lagoon and its surrounding areas. Regional access to the project site is provided by Interstate 405 (I-405), Interstate 605 (I-605), and Interstate 710 (I-710) to the north and west. Figure 1.1 shows the project location.

On September 4, 2008, the Long Beach Planning Commission approved the proposed project, including the following actions:

1. Local Coastal Program Amendment to update the existing and proposed conditions at the Lagoon;
2. Zoning Code Amendment to refine the definition of “passive park”;
3. California Coastal Development Permit for improvements in the Coastal Zone;
4. Local Coastal Development Permit for improvements in the local Coastal Zone;
5. Site Plan Review of proposed improvements;
6. Stormwater Pollution Prevention Plan (SWPPP);
7. Standard Urban Stormwater Mitigation Plan (SUSMP);
8. City Water Department Permit for the diversion of the sewer system;
9. Certification of the EIR;
10. Adoption of a Mitigation Monitoring and Reporting Program;
11. Adoption of Findings; and
12. Adoption of a Statement of Overriding Considerations.

On October 14, 2008, the Long Beach City Council held a public hearing and upheld the Planning Commission EIR certification pursuant to an appeal filed on the Commission action.

¹ Lagoon water body acreage was estimated by LSA Associates, Inc. (LSA) geographic information systems (GIS) based on a 2006 aerial photo and varies with the tides.

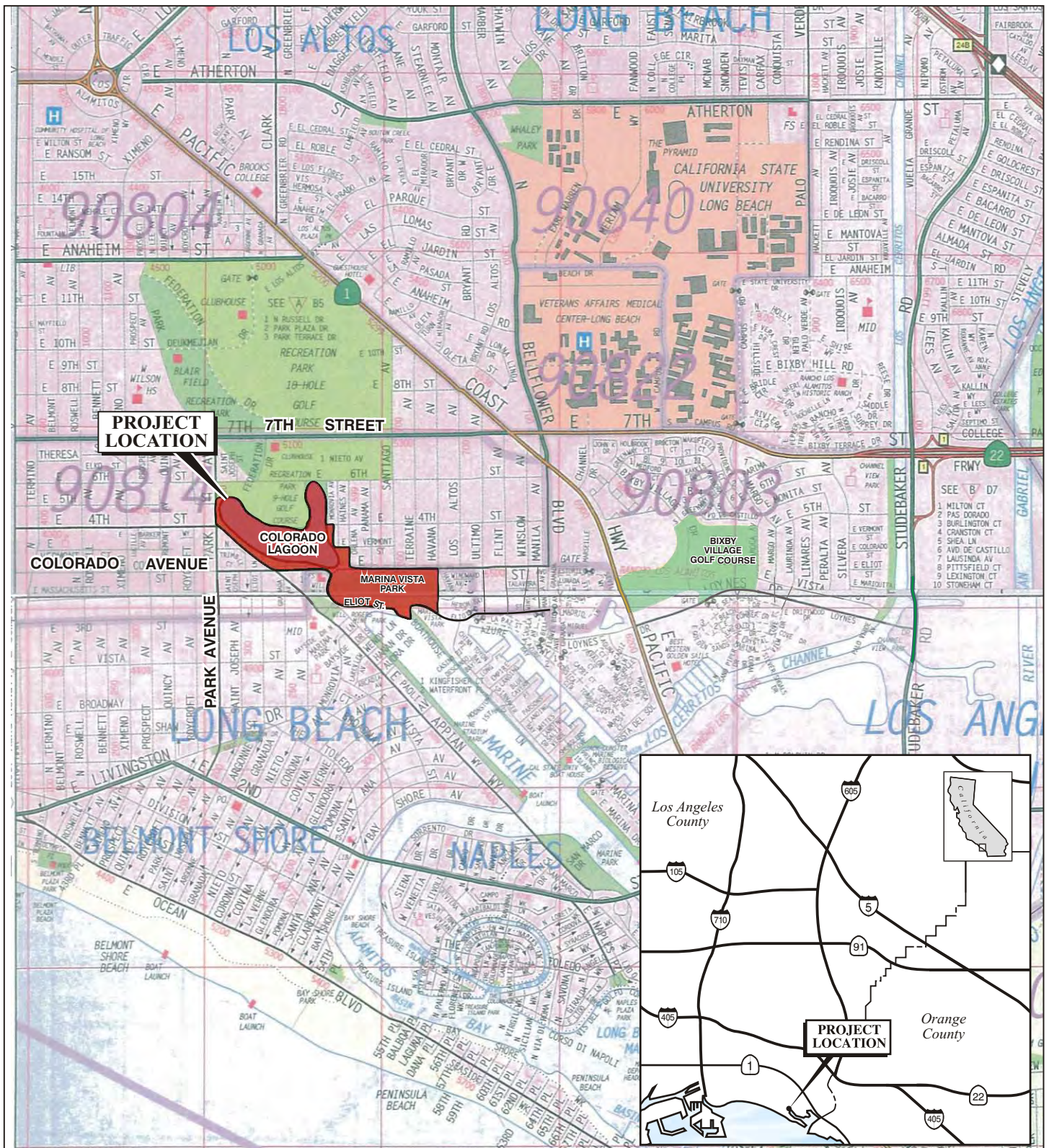


FIGURE 1.1

Colorado Lagoon Estuary Restoration Project
Project Location

1.3 FINDINGS OF THIS ADDENDUM

The City is the Lead Agency for the proposed project. The City has determined that analyses of project environmental effects are best provided through use of an Addendum because none of the conditions set forth in Public Resource Code Section 21166 or Section 15162 of the State CEQA Guidelines requiring preparation of a subsequent or supplemental EIR has been met.

1. There are no substantial changes to the project that would require major revisions of the certified 2008 EIR due to new significant environmental effects or a substantial increase in severity of impacts identified in the certified 2008 EIR;
2. No substantial changes have occurred in the circumstance under which the project is being undertaken that will require major revisions to the certified 2008 EIR to disclose new significant environmental effects or that would result in a substantial increase in severity of impacts identified in the certified 2008 EIR; and
3. There is no new information of substantial importance, which was not known at the time the 2008 EIR was certified, indicating that:
 - The project will have one or more significant effects not discussed in the certified 2008 EIR;
 - There are no impacts that were determined to be significant in the certified 2008 EIR that would be substantially more severe;
 - There are no additional mitigation measures or alternatives to the project that would substantially reduce one or more significant effects identified in the certified 2008 EIR; and
 - There are no additional mitigation measures or alternatives that were rejected by the project proponent considerably different from those analyzed in the certified 2008 EIR that would substantially reduce any significant impact identified in that EIR.

The complete evaluation of potential environmental effects of the project, including rationale and facts supporting City findings, is contained in Chapter 3.0 of this Addendum.

1.4 FORMAT OF THIS ADDENDUM

This Addendum has been organized into three chapters, as described below:

- **Chapter 1.0: Introduction**
 - Chapter 1.0 includes a description of the purpose and scope of the Addendum, previous environmental documentation, project approvals, findings of the Addendum, and existing documents to be incorporated by reference.
- **Chapter 2.0: Project Description**
 - Chapter 2.0 describes the location and setting of the site, the necessary City discretionary actions to implement project modifications, and an overview of the proposed master plan revisions. Those proposed master plan revisions that have the potential to have a physical effect on the environment are addressed in Chapter 3.0 of this Addendum.

- **Chapter 3.0: Comparative Evaluation of Environmental Impacts**

- Chapter 3.0 addresses project changes with the potential to have a physical effect on the environment and includes analyses of impacts of the revised project compared with impacts analyzed in the certified 2008 EIR. This comparative analysis has been undertaken pursuant to provisions of CEQA to provide City decision-makers with a factual basis for determining whether proposed project revisions, changes in circumstances, or new information since the 2008 EIR was certified require additional environmental review or preparation of a subsequent or supplemental EIR.

- **Appendix A: Mitigation Monitoring and Reporting Program**

- Appendix A contains the Mitigation Monitoring and Reporting Program (MMRP). No changes to the mitigation measures are warranted as a result of proposed project modifications.

1.5 EXISTING DOCUMENTS TO BE INCORPORATED BY REFERENCE

As permitted in Section 15150 of the State CEQA Guidelines, this Addendum has referenced several technical studies, analyses, and reports. Information from the documents that have been incorporated by reference has been briefly summarized in the appropriate section(s) of this Addendum. Documents incorporated by reference are available for review at the City of Long Beach, Department of Development Services, 333 West Ocean Boulevard, 5th Floor, Long Beach, California 90802. Attn: Craig Chalfant.

Documents incorporated by reference include, but are not limited to:

- *Final Environmental Impact Report, Colorado Lagoon Restoration Project.* City of Long Beach. August 2008.
- *Alternatives Analysis Report, Phase 2 Study, Colorado Lagoon Restoration Project.* Moffat & Nichol. June 2010.
- *Regional Water Quality Control Board Total Maximum Daily Load Program.*
http://www.swrcb.ca.gov/water_issues/programs/tmdl/background.shtml#current
- *Final Treatment of Colorado Lagoon Sediments.* Kinnetic Laboratories, Inc. June 2010.

1.6 CONTACT PERSONS

The Lead Agency for the Addendum for the proposed revisions to the Colorado Lagoon Restoration Project is the City of Long Beach. Questions about preparation of this Addendum, its assumptions, or its conclusions should be referred to:

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City of Long Beach
333 West Ocean Boulevard
Long Beach, California 90802
(562) 570-6368

2.0 PROJECT DESCRIPTION

2.1 PROJECT HISTORY

The Lagoon was once a part of the historic Los Cerritos Wetlands. In 1923, the low-lying tidelands of Alamitos Bay were dredged to form the Lagoon and Marine Stadium, which were used for recreational rowing. The City then purchased the Lagoon area and Recreation Park in the 1920s through general revenue bond funding. The 1932 Los Angeles Olympic Committee chose the Lagoon for diving trials and Marine Stadium for rowing events. High diving was performed from a three-story structure that was floating in the Lagoon. To prepare for the diving trials, the Lagoon was separated from Marine Stadium by a tide gate, which was installed to maintain adequate diving depth. In 1968, the City remodeled Marine Stadium for the Olympic rowing and canoeing team trials. Also, in the late 1960s, the area between what is now the north end of Marine Stadium and the south end of the Lagoon was filled and the existing underground box culvert was constructed, thereby further separating the Lagoon from Marine Stadium. This was undertaken as part of the construction for the then-proposed Pacific Coast Freeway. This “filled” area is now Marina Vista Park.

The deteriorated ecological health of the Lagoon has been established for the past several decades. In addition to tidal influence, the Lagoon receives inflow from 11 storm water drains. Since the Lagoon is a natural low point in the watershed, it accumulates pollutants deposited over the entire watershed that enter the storm drains by storm flows and dry weather runoff. Additionally, sediment deposition and marine growth have reduced the capacity of the culvert, resulting in a lack of tidal flushing at low tides and increased degradation of water quality.

The Lagoon’s watershed is 1,172 ac and composed of 773 ac of residential, 125 ac of commercial, 55 ac of institutional (schools), and 219 ac of open-space land uses. Urban runoff contains many pollutants such as heavy metals, pesticides, petroleum, hydrocarbons, nutrients, and bacteria. As a result, the Lagoon is listed in the 2002 and 2006 Federal Clean Water Act (CWA) Section 303(d) lists as an impaired water body for lead, zinc, sediment toxicity, chlordane, dichloro-diphenyl-trichloroethane (DDT), dieldrin, polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and bacteria. Beach advisory postings due to elevated bacteria levels are frequent.

The County Department of Public Works (DPW) is replacing and rerouting the Termino Avenue Drain (TAD) that currently drains to the Lagoon. The TAD is a major outfall structure at the Lagoon that consists of two side-by-side storm water drainage lines. The DPW project would extend and reroute the drain to empty into Marine Stadium, thereby bypassing the Lagoon. The Termino Avenue Drain Project (TADP) would also intercept three additional drainpipes that currently discharge into the Lagoon. While this project would benefit water quality within the Lagoon, additional measures, as included in the City’s Colorado Lagoon Restoration Project, would provide more complete and long-term benefits to water quality, habitat restoration, and recreation enhancements.

The City certified an Environmental Impact Report (EIR) for the Colorado Lagoon Restoration Project in October 2008. Since that time, the City has obtained a Coastal Development Permit (CDP) from the California Coastal Commission (CCC) and a Water Quality Certification from the Regional

Water Quality Control Board (RWQCB). The United States Army Corps of Engineers (USACE) issued a Nationwide Permit Authorization for the restoration component of the overall project, and will issue a Letter of Permission for the non-recreational components (i.e., beach nourishment and viewing platform).

2.2 PREVIOUS AND PROPOSED DISCRETIONARY ACTIONS BY THE CITY OF LONG BEACH

On September 4, 2008, the Long Beach Planning Commission approved the proposed project, including the following actions:

1. Local Coastal Program Amendment to update the existing and proposed conditions at the Lagoon;
2. Zoning Code Amendment to refine the definition of “passive park”;
3. California Coastal Development Permit for improvements in the Coastal Zone;
4. Local Coastal Development Permit for improvements in the local Coastal Zone;
5. Site Plan Review of proposed improvements;
6. Stormwater Pollution Prevention Plan (SWPPP);
7. Standard Urban Stormwater Mitigation Plan (SUSMP);
8. City Water Department Permit for the diversion of the sewer system;
9. Certification of the EIR;
10. Adoption of a Mitigation Monitoring and Reporting Program;
11. Adoption of Findings; and
12. Adoption of a Statement of Overriding Considerations.

On October 14, 2008, the Long Beach City Council held a public hearing and upheld the Planning Commission EIR certification pursuant to an appeal filed on the Commission action.

Planning Commission actions needed to approve the revised project include:

1. Approval of this Addendum to the certified 2008 EIR to address potential environmental effects of the changes made to the project and alternatives since the original City approval and EIR certification in 2008.

The Initial Study prepared as part of the certified 2008 EIR process determined that several environmental effect of the proposed project would not be significant: Agricultural Resources and Housing and Population. These effects are discussed briefly in Chapter 2.0, Introduction of the certified 2008 EIR. The revisions in the project do not necessitate a change in these determinations, since the site is not used for agricultural purposes or designated as significant farmland, and no housing units are located on the project site. Therefore, these effects are not addressed further in this Addendum.

In March 2010, the State CEQA Guidelines were updated. Among other revisions, Appendix G of the State CEQA Guidelines was amended to include the following questions:

- Would the project generate greenhouse gas (GHG) emissions, either directly or indirectly, that may have a significant impact on the environment?
- Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?

The update to the State CEQA Guidelines are addressed in Chapter 3.0.

2.3 PROPOSED PROJECT ADDRESSED IN ADDENDUM

2.3.1 Approved Project Objectives

Pursuant to Section 15124 of the CEQA Guidelines, the description of the proposed project in the certified 2008 EIR contains a statement of the objectives sought for development of the proposed project.

The Lagoon Restoration Project is a comprehensive plan for enhancement of the Lagoon, which is owned and maintained by the City Department of Parks, Recreation, and Marine. The City is committed to preserving and improving the open space, recreational resource, and biodiversity that this area provides. The primary goals of the proposed project are to (1) create habitat that can successfully establish and support native plant and animal communities in the long term, (2) implement long-term water quality control measures, and (3) enhance the Lagoon's value as a recreational resource. The proposed project provides a framework to coordinate these various and potentially competing interests.

Specifically, the objectives of the approved project are to:

- Reduce and treat storm and dry weather runoff to minimize contamination of water and sediment in the Lagoon.
- Improve water quality by increasing the Lagoon's circulation and enhancing the tidal connection with Marine Stadium.
- Improve water quality by removing contaminated sediments.
- Restore and maintain the estuarine habitats.
- Balance flood control, water quality, and the recreation demands of the Lagoon.
- Enhance public enjoyment of the Lagoon.

Some of the proposed project changes are intended to further meet the project objectives. For example, by increasing the dredge quantity from 30,000 cubic yards (cy) to 72,000 cy, the City would be able to remove more of the contaminated sediments from the Lagoon to further the goal of improving water quality.

2.3.2 Proposed Project Changes

Changes to the Colorado Lagoon Restoration Project addressed in this Addendum include:

- An increase in the maximum total dredge quantity from 30,000 cy to 72,000 cy, including dredging in the northern arm;
- Consideration of four optional dredge methods, including one dry and three wet methods;
- A change in the mode of transportation and disposal destination for dredge material, from trucking to a landfill in the Bakersfield area to trucking or barging to a disposal site at the Port of Long Beach (POLB);
- Requirement to use cleaner (reduced air pollutant emissions) “Tier 2” construction equipment for dredging Options 2, 3, and 4, and “Tier 1” construction equipment for Alternative 1;
- Five alternatives for connecting the Lagoon to Marine Stadium through Marina Vista Park, including a second culvert, an Eliot Street Alignment, an open channel with culverts rather than bridges at the street crossings, an expanded channel concept; with one bridge and one culvert, and an expanded channel concept with two bridges; and,
- Elimination of the bird island component.

Table 2.A. summarizes the differences between the project analyzed in the 2008 EIR and the proposed revised project being analyzed in this Addendum.

Table 2.A: Comparison of Differences Between the Certified 2008 EIR and the Addendum to the Certified 2008 EIR

Project Analyzed in the Certified 2008 EIR	Project Analyzed in the Addendum to the Certified 2008 EIR	Change
Habitat and recreational improvements to Colorado lagoon, Marina Vista Park, and Marine Stadium composing 48.61 ac project area/park site.	Habitat and recreational improvements to Colorado lagoon, Marina Vista Park, and Marine Stadium composing 48.61 ac project area/park site.	No
Clean culvert and remove tidal gates, sill, and other structural impedances.	The culvert was cleaned and the tidal gates, sill, and other structural impedances were removed in June 2010. Additional culvert cleaning may be required in the future (i.e., 5 years).	Yes. Initial culvert cleaning has been conducted, but additional cleaning may be required in the future (i.e., 5 years).
Build open channel between Lagoon and Marine Stadium.	There are five design alternatives, each having various configurations of underground culverts and an earthen open channel.	Yes; five design alternatives are now proposed for the connection between the Lagoon and Marine Stadium.

Table 2.A: Comparison of Differences Between the Certified 2008 EIR and the Addendum to the Certified 2008 EIR

Project Analyzed in the Certified 2008 EIR	Project Analyzed in the Addendum to the Certified 2008 EIR	Change
Remove contaminated sediment in the western arm (16,000 cy).	Remove contaminated sediment in the western arm (approximately 26,000 cy hazardous and 3,000 cy non-hazardous).	Yes; increase from 16,000 cy to 29,000 cy.
Removal of existing restroom structure along north side of the Lagoon.	Removal of existing restroom structure along north side of the Lagoon.	No
Two dredge methods; one wet and one dry.	There are three wet and one dry optional dredge methods.	Yes; additional optional dredge methods have been added.
Transportation of dredge sediment to the Bakersfield area.	Transportation of dredge sediment to the Port of Long Beach.	Yes; change in disposal destination.
Remove sediment in the central Lagoon (5,500 cy).	Remove sediment in the central Lagoon (approximately 8,000 cy hazardous and 1,000 cy non-hazardous).	Yes; increase from 5,500 cy to 9,000 cy.
N/A	Remove sediment in the northern Lagoon (approximately 10,000 cy hazardous and 24,000 cy non-hazardous).	Yes; sediment was not proposed to be removed from the northern arm in the certified 2008 EIR.
N/A	Use of Tier 2 construction equipment for dredging Options 2, 3, and 4, and Tier 1 construction equipment for Option 1	Yes; Tier 1 or Tier 2 equipment are now proposed for the project based on dredging option.
Storm drain upgrades.	Storm drain upgrades.	No
Replace local hard drain outlets in the lagoon with a vegetated bioswale (2,500 cy).	Replace local hard drain outlets in the lagoon with a vegetated bioswale (2,500 cy).	No
Remove north parking lot access road and create side slope recontouring and revegetation.	Remove north parking lot access road and create side slope recontouring and revegetation.	No
Import and plant eelgrass in the Lagoon.	Import and plant eelgrass in the Lagoon.	No
Develop a bird island.	The bird island has been removed from the project.	Yes; bird island has been removed.
Construct walking trail around the Lagoon and open channel.	Construct walking trail around the Lagoon and open channel.	No

Table 2.A: Comparison of Differences Between the Certified 2008 EIR and the Addendum to the Certified 2008 EIR

Project Analyzed in the Certified 2008 EIR	Project Analyzed in the Addendum to the Certified 2008 EIR	Change
Reconfigure sports fields in Marina Vista Park.	Reconfigure sports fields in Marina Vista Park.	Yes; reconfiguration scenarios have changed with implementation of the five design alternatives for the connection between the Lagoon and Marine Stadium.
Implement trash management protocols.	Implement trash management protocols.	No
Implement bird management protocols.	Implement bird management protocols.	No
Modify sand nourishment practices.	Modify sand nourishment practices.	No
Construct two roadway bridges spanning the open channel at east Colorado Street and East Eliot Street. Demolish and replace two existing restroom structures. Construction of a walking trail along open channel.	<ul style="list-style-type: none"> • Alternative 1: Parallel/second underground culvert <ul style="list-style-type: none"> ○ Second underground culvert parallel to existing underground culvert; ○ No bridges; ○ No walking trail; ○ Existing culvert left in place for use; and ○ Demolish and replace two existing restroom structures. • Alternative 2: EIR-conforming open channel <ul style="list-style-type: none"> ○ Earthen open channel for entire connection between Colorado Lagoon and Marine Stadium; ○ Two bridges constructed at Colorado Street and Eliot Street; ○ Walking trail constructed along eastern side of channel approximately 10 ft wide with a 3–5 ft fence; ○ Most of existing culvert left in place for use; and ○ Demolish and replace two existing restroom structures. • Alternative 3: Combination open channel and culverts <ul style="list-style-type: none"> ○ Earthen open channel for part of connection between Colorado Lagoon and 	Yes; five alternative connections have been added.

Table 2.A: Comparison of Differences Between the Certified 2008 EIR and the Addendum to the Certified 2008 EIR

Project Analyzed in the Certified 2008 EIR	Project Analyzed in the Addendum to the Certified 2008 EIR	Change
	<p>Marine Stadium;</p> <ul style="list-style-type: none"> ○ Two new shorter underground culvert sections, one at each end of open channel; ○ No bridges; ○ Walking trail constructed along eastern side of channel approximately 10 ft wide with a 3–5 ft fence; ○ Existing culvert left in place for use; and ○ Demolish and replace two existing restroom structures. <ul style="list-style-type: none"> • Alternative 4: Combination open channel (maximum wetlands) and one culvert <ul style="list-style-type: none"> ○ Earthen open channel for part of connection between Colorado Lagoon and Marine Stadium with the width of the channel section maximized for habitat potential; ○ One new shorter underground culvert section; ○ One bridge constructed at Eliot Street; ○ Walking trail constructed along eastern side of channel approximately 10 ft wide with a 3–5 ft fence; ○ Existing culvert demolished; and ○ Demolish and replace two existing restroom structures. • Alternative 4a: same as Alternative 4, but with two bridges. 	

Project Change No. 1: An increase in the maximum total dredge quantity from 30,000 to 72,000 cy, including dredging in the northern arm. The Colorado Lagoon Restoration Project evaluated in the certified 2008 EIR consisted of dredging a maximum 30,000 cy from the Lagoon. Changes to the proposed revised project result in dredging an additional 42,000 cy from the Lagoon for a total of 72,000 cy (approximately 29,000 cy from the western arm and approximately 43,000 cy from the

central area and northern arm). Table 2.B summarizes the dredge quantities for the Lagoon. The primary reason for the increase in the dredge quantity are (1) additional comprehensive sediment testing has revealed that the distribution of contaminated sediments is more widespread than previously anticipated and (2) the Los Angeles Regional Water Quality Control Board recently established the National Oceanic and Atmospheric Administration's (NOAA) Effects-Range-Low values as the Colorado Lagoon's sediment quality targets.

Table 2.B: Dredge Quantities (cubic yards)

Lagoon Location	Hazardous	Non-Hazardous	Total
Western Arm			
Dredging	26,000		26,000
Side Slopes		3,000	3,000
Central Area			
Dredging	8,000		8,000
Side Slopes		1,000	1,000
Central Area/Northern Arm			
Dredging	10,000	20,000	30,000
Side Slopes		4,000	4,000
TOTAL			72,000

Project Change No. 2: Four optional dredge methods including one dry and three wet methods.

The proposed revised project has four options for dredging the Lagoon, including one dry and three wet methods: Mechanical Dredge and Truck Option, Mechanical Dredge Equipment and Barge Option, Non-Electric Hydraulic Equipment and Barge Option, and Dry Dredge and Barge Option. Each option is described in more detail below.

Option 1 (Mechanical Dredge and Truck Option). The intention of this option is to dredge the central and western areas of the Lagoon using mechanical dredge/excavation equipment (barge-based clamshell/excavator or land-based excavator) and truck the treated dredged material to the POLB. The City is also investigating the feasibility of using electric excavators to dredge the Lagoon. The dredge area would be isolated by a silt curtain, and closed "environmental" buckets would be used to maintain water quality. Clamshell/bucket-type dredging equipment would be used or temporary shore-perpendicular berms or piers would be built into the Lagoon to allow a land-based dredger to access depths not within reach from the Lagoon's shores. The dredge material would be temporarily stockpiled in the parking lot along the northern shore of the Lagoon until it is treated with cement and other chemical reagents and loaded onto trucks. Plastic tarps and containment structures would be placed under and around the stockpile areas to minimize runoff back into the Lagoon and surrounding areas.

The dredge material would be treated on site (at the Lagoon) through cement stabilization and solidification and the use of chemical reagents to stabilize the contaminants. The treatment process would occur with a pug mill that would mix the dredge material with cement lime and/or other chemical reagents to stabilize the sediments. Once the treatment is complete, the treated dredge material would be loaded onto trucks and transported to the POLB disposal site (an

approximately 24-mile [mi] roundtrip truck trip from the Lagoon). The trucked material would be put into the Slip 1 fill site at the POLB from dockside.

Option 2 (Mechanical Dredge Equipment and Barge Option). This option involves dredging activity using non-electric mechanical dredge/excavation equipment (barge-based clamshell or land-based excavator). The dredge area would be isolated by a silt curtain, and closed “environmental” buckets would be used to maintain water quality. The dredge material would be treated on site with cement, lime and other chemical reagents. Similar to Scenario 1, the treatment process would occur using a pug mill to mix the dredge material.

Option 2 differs from Option 1 in the mode of transport to the disposal site at the POLB. For Option 2, once the treatment process is complete, the treated dredge material would be loaded onto trucks and transported to Marine Stadium (an approximately 2 mi roundtrip truck trip from the Lagoon). The treated dredge material would be transferred from the trucks onto a barge/scow located at Marine Stadium. From there, the barge would transport treated dredge material to the POLB disposal site (an approximately 20 mi roundtrip barge trip from Marine Stadium).

Option 3 (Non-Electric Hydraulic Equipment and Barge Option). This option would result in the dredging of the Lagoon using non-electric hydraulic dredge equipment. Dredged material would be piped through an underground culvert to either the Marine Stadium barge or a land-based treatment facility. It is anticipated that the piping of the dredge material would require the use of a diesel-fueled booster pump and that the pug mill operation would be powered with a diesel-fueled generator. Once the piped dredge material reaches the Marine Stadium barge or land-based treatment facility, the dredge material would be dewatered. This process may include a flocculation process, where a chemical reagent (e.g., coagulants or flocculants) is added to the dredge material and causes the separation of sediment and water to occur. Water resulting from the dewatering process would be treated prior to discharge into the Marine Stadium/Colorado Lagoon. Sediment resulting from the dewatering process would be treated and loaded onto a barge located at the northwest end of Marine Stadium. From there, the barge would transport treated dredge material to the POLB disposal site (an approximately 20 mi roundtrip barge trip from Marine Stadium to POLB).

Option 4 (Dry Dredge and Barge Option). This option would utilize the dry dredge method that would install a temporary coffer dam to isolate the west and central areas of the Lagoon. The dredge area would be drained of water, and the bottom sediment would be dewatered. An excavator would be used to remove the dry sediment, which would be temporarily stockpiled in the parking lot along the Lagoon’s north shore and the southwest shore of the Lagoon. Plastic tarps and containment structures would be placed under and around the stockpile area to minimize runoff back into the Lagoon and surrounding areas.

Dredging activities would be carried out using a non-electric mechanical excavator. It is anticipated that the dewatering of the west arm and central Lagoon would require the use of diesel-fueled pumps to dewater groundwater. Similar to Options 1 and 2, the dredge material would be treated on site. This option specifies the use of a diesel generator at the treatment site.

Once the treatment process is complete, the treated dredge material would be loaded onto trucks and trucked to Marine Stadium, where it would be transferred from the trucks onto a barge/scow located at the northwest end of Marine Stadium and transported to the POLB disposal site.

Project Change No. 3: A change in the mode of transportation and disposal destination for dredge material, from trucking to a landfill in the Bakersfield area to trucking or barging to a disposal site at the POLB. The certified 2008 EIR analyzed the transportation of contaminated sediment by truck either to the POLB or to the Kettleman Hills Landfill in Kings County, California. Phase 1 of the proposed project evaluated in the certified 2008 EIR also included several components that would require materials to be transported by truck and disposed of at Class III landfills such as Puente Hills Landfill, which is the closest Class III landfill. Phase 2 of the proposed project evaluated in the certified 2008 EIR also included excavated soil to be disposed of at a Class III landfill.

The proposed revised project includes only the transport of dredge material by trucking or barging the material to a disposal site at the POLB. Contaminated sediment is no longer proposed to be trucked to Kettleman Hills. The disposal site is being determined through appropriate consultation with Contaminated Sediment Task Force/Dredged Materials Management Team.¹

Project Change No. 4: Requirement to use Tier 2 construction equipment for dredging Options 2, 3, and 4 and Tier 1 construction equipment for Option 1. The certified 2008 EIR did not include the requirement of Tier 1 or Tier 2 construction equipment; however, as a result of the analysis included in the Environmental Assessment (EA) pursuant to the National Environmental Policy Act prepared for the project by the USACE (includes a portion of the dredging for federal funding), Tier 1 construction equipment is required for use of Alternative 1 dredge method and Tier 2 construction equipment is required for use of Options 2 through 4 dredge methods (descriptions of dredge alternative are described earlier in this section). An EA was prepared for the federal funding portion of the project which included 32,500 cy of dredged material from the western arm and central area of the Lagoon. The USACE was the lead federal agency and NOAA was a cooperating agency.

In order to result in reduced equipment emissions, Tier 1 and Tier 2 standards are met through advanced engine design, with no or only limited use of exhaust gas aftertreatment (oxidation catalysts). The first federal standards (Tier 1) for new non-road (or off-road) diesel engines were adopted in 1994 for engines over 37 kilowatt (kW) (50 horsepower [hp]), to be phased-in from 1996 to 2000. In 1996, a Statement of Principles (SOP) pertaining to non-road diesel engines was signed between EPA, California ARB and engine makers. On August 27, 1998, the EPA signed the final rule reflecting the provisions of the SOP. The 1998 regulation introduced Tier 1 standards for equipment under 37 kW (50 hp) and increasingly more stringent Tier 2 and Tier 3 standards for all equipment with phase-in schedules from 2000 to 2008.²

¹ The Coastal Commission and the Los Angeles Regional Water Quality Control Board (RWQCB) established a multi-agency Contaminated Sediments Task Force (Task Force) in response to SB 673 signed into law in October 1997. The Task Force is responsible for the long-term management plan for dredging and disposal of contaminated sediments in the Los Angeles area. The Task Force includes representatives from the U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, California Coastal Commission, Los Angeles RWQCB, California Department of Fish and Game, Port of Long Beach, Port of Los Angeles, City of Long Beach, Los Angeles County Beaches and Harbors, Heal the Bay, and other interested parties.

² <http://www.dieselnet.com/standards/us/nonroad.php>.

The improved emission standards apply to new equipment that is manufactured for use in the United States, but that older equipment may remain in use for a long period of time. The City is committing to specifying that all of the equipment used by its contractor meet the improved emissions standards

Project Change No. 5: Five alternatives for connecting the Lagoon to Marine Stadium through Marina Vista Park. This component consists of constructing a new connection from the Lagoon through Marina Vista Park to Marine Stadium in generally the same alignment as the existing culvert. Five design alternatives are proposed including a second culvert, an Eliot Street Alignment, an open channel with culverts rather than bridges at the street crossings, and an expanded channel concept. Creating this new connection would improve tidal flushing by increasing the tidal range and result in a corresponding improvement in water and habitat quality. In addition, it would provide improved flood flow conveyance. The certified 2008 EIR included an open channel design with two bridges. In 2008, the City Council deferred action on approval of the Phase 2 Marina Vista Park component of the project.

Five design alternatives have been defined to provide the connection between the Lagoon and Marine Stadium, each having various configurations of underground culverts and an earthen open channel.

Common Design Criteria for All Alternatives. In general, all alternatives were designed to result in similar improvements to Colorado Lagoon, i.e., similar tidal exchanges, and to provide similar sports field capabilities at Marina Vista Park. Specifically, the alternatives all need to accommodate a youth soccer field (225 ft by 135 ft), an adult soccer field (300 ft by 180 ft), and an adult softball/youth baseball field (275 ft radius from home plate) within Marina Vista Park.

The underground culvert designs were based primarily on two criteria: a) culvert cross-sectional size large enough and elevation appropriate to provide a full tide range/tidal exchange with Colorado Lagoon; and b) top of new culvert(s) no higher than the existing culvert so that impacts to underground utilities would not be significant. The latter assumes that all existing utilities run above the existing culvert; this assumption is based on available knowledge of the existing utility depths from City of Long Beach GIS files and the existing culvert's as-built drawings.

The open channel design alternatives, depth, and cross-section (geometry perpendicular to flow) were driven by multiple (and sometimes conflicting) criteria. The intent was to align the open channel along Eliot Street so as to not divide the grassy area of Marina Vista Park into two separate parts, i.e., the goal was to retain a large contiguous grassy area for recreational sporting activities. In addition, the channel was offset to the east of Eliot Street in order to minimize the loss of mature coral (*Erythrina* sp.) trees along that section of Eliot Street.

The depth of the open channel was designed to be as shallow as possible so to minimize the channel's top width (and thus footprint impact to Marina Vista Park). At the same time, the channel depth must be sufficient to provide a full tide range/tidal exchange with Colorado Lagoon and have the potential to support eelgrass growth.

The cross-sectional areas of the open channel designs have to be large enough to support a full tidal exchange with Colorado Lagoon and to provide low channel velocities. (Velocity is inversely proportional to cross-sectional area for a given flow.) Channel velocities are key for determining appropriate and feasible vegetation types and for selecting channel-lining materials, as well as for human safety considerations. A larger cross-section is achieved by steeper slopes (as well as a wider bottom). In contrast, the slopes of the banks need to be shallow for stability, and to support wetland vegetation growth in appropriate elevation zones. The basic design for all open channel cross-sections, except under the bridges, was: a) a flatter sloped bottom to support eelgrass (bottom slope of 15:1 [horizontal:vertical]); b) flatter slopes (5:1 to 15:1) for the vegetated marsh zones; and c) relatively steeper slopes (3:1) for the mudflat and upland transition zones, in order to minimize the channel's top width. The open channel sections under the bridges were designed with steeper slopes (1.5:1) to minimize the channel's top width and thus minimize the length and cost of the bridge(s).

The specific features and infrastructure changes required to implement each of the alternatives are described in further detail in the sections below. These changes are based on conceptual design layouts and may need to be modified/refined upon completion of more detailed engineering plans.

Alternative 1: Second/Parallel Underground Culvert. This alternative is to construct a second underground culvert, which would be aligned parallel to the existing underground culvert.

An approximately 880-foot long underground reinforced concrete box (RCB) culvert would be constructed on the west side of the existing culvert, and in a parallel alignment with the existing culvert, as depicted in Figure 2.1. The new culvert would be 20 feet wide and 8 feet high, with an invert elevation of -6.5 feet National Geodetic Vertical Datum 29 (NGVD29). The cross-section of the new culvert, as well as the existing culvert, is provided in Appendix A. New headwalls/wingwalls at both ends of the new culvert (i.e., in Colorado Lagoon and Marine Stadium) would also be constructed.

As part of the overall park improvement, public restrooms located within Marina Vista Park to the north and south of Eliot Street would be removed and two new restrooms would be constructed in nearby locations. Approximately 15 ornamental (nonnative) trees, of which 10 are palm trees, would need to be removed. New trees could be planted in other areas of the park to compensate for this loss. A storm drain along Colorado Street would be modified to discharge into the new culvert. Installation of the new culvert would require excavation along its alignment and would result in approximately 72,000 cy of excess material. It is anticipated that some of this material could possibly be used to level out the sports field areas within Marina Vista Park. Following installation of the culvert, the grass at Marina Vista Park would need to be replanted.

The existing culvert structure would remain in place for continued use.

A walking trail or bridges would be constructed with this alternative.



FIGURE 2.1

Colorado Lagoon Restoration Project EIR Addendum
Channel Connection Option 1

Alternative 2: Open Channel with Bridges. This alternative is an earthen open channel along the entire connection between Colorado Lagoon and Marine Stadium. The maximum width of the open channel is approximately 100 feet. Bridges would be constructed along both Eliot Street and Colorado Street. This alternative is similar to the design of the proposed project open channel in the EIR, except with a different channel alignment (along Eliot Street). The existing culvert may be left in place for continued use, if appropriate.

An approximately 1,160-foot long earthen open channel would be constructed between Colorado Lagoon and Marine Stadium, along the west side of Marina Vista Park, as depicted in Figure 2.2. The new channel would have a varying cross-section (varying slopes) and a bottom elevation of -6.5 feet NGVD29. The channel lining would be clay or silt, except in the channel sections under the bridges, which would have rock slope protection. If the culvert is left in place, the channel under the Colorado Street bridge would be slightly narrower in cross-section than at Eliot Street since the Colorado Street tidal and storm flows would be split between the open channel and existing culvert, whereas the Eliot Street open channel must have the capability for the entire flow volumes.

Bridges would be constructed over the channel along Eliot Street and Colorado Street. The tops of the bridges would need to be higher than the existing street elevations due to the design high water level within the channel. Federal Emergency Management Agency (FEMA) base flood elevation for the area was used (+6 ft NGVD29), along with an estimated 50-year sea level rise of 1.5 feet and a freeboard of 2 feet, to calculate a bridge soffit elevation of +9.5 feet NGVD29. With a bridge thickness of approximately 2 feet, this results in a bridge surface elevation of +11.5 feet NGVD29, versus the existing Eliot Street and Colorado Street elevations of +6.5 feet NGVD29, i.e., the bridge would need to be approximately five feet higher than the street. If the freeboard of 2 feet is not required, this would reduce the elevation difference to only 3 feet. Streets would have to be modified to rise as gradual slope approaches to each end of the bridge.

Approximately 380 feet of the south end of the existing culvert, as well as the culvert's headwall structure at Marine Stadium, would be demolished. A new headwall would be constructed where the existing culvert intersects with the open channel. If it is necessary to remove the entire culvert, an additional 500 feet of culvert would be removed. Combined with the approximately 380 feet of the south end of the existing culvert, a total of approximately 880 feet of culvert would be removed.

At the top of the channel banks, where the existing elevation is below +8 feet NGVD29, a low earthen berm/dike (one to two feet high) would be installed to protect the surrounding areas from flooding due to storm events and sea level rise. A walking trail would be constructed along the top of the channel on its east side. Preliminarily, it is assumed that this trail would be up to 10 feet wide to provide access for maintenance vehicles. A fence (approximately 3 to 5 feet high) and low shrub buffer may also be installed on this side of the channel, between the trail and the adjacent grassy park area. The low shrub buffer and potentially a fence may also be installed along the top of the channel on its west side.

The two existing public restrooms located within Marina Vista Park, to the north and south of Eliot Street, would need to be removed and two new restrooms would be constructed in nearby locations. Approximately 23 ornamental (nonnative) trees, of which 10 are palm trees, would

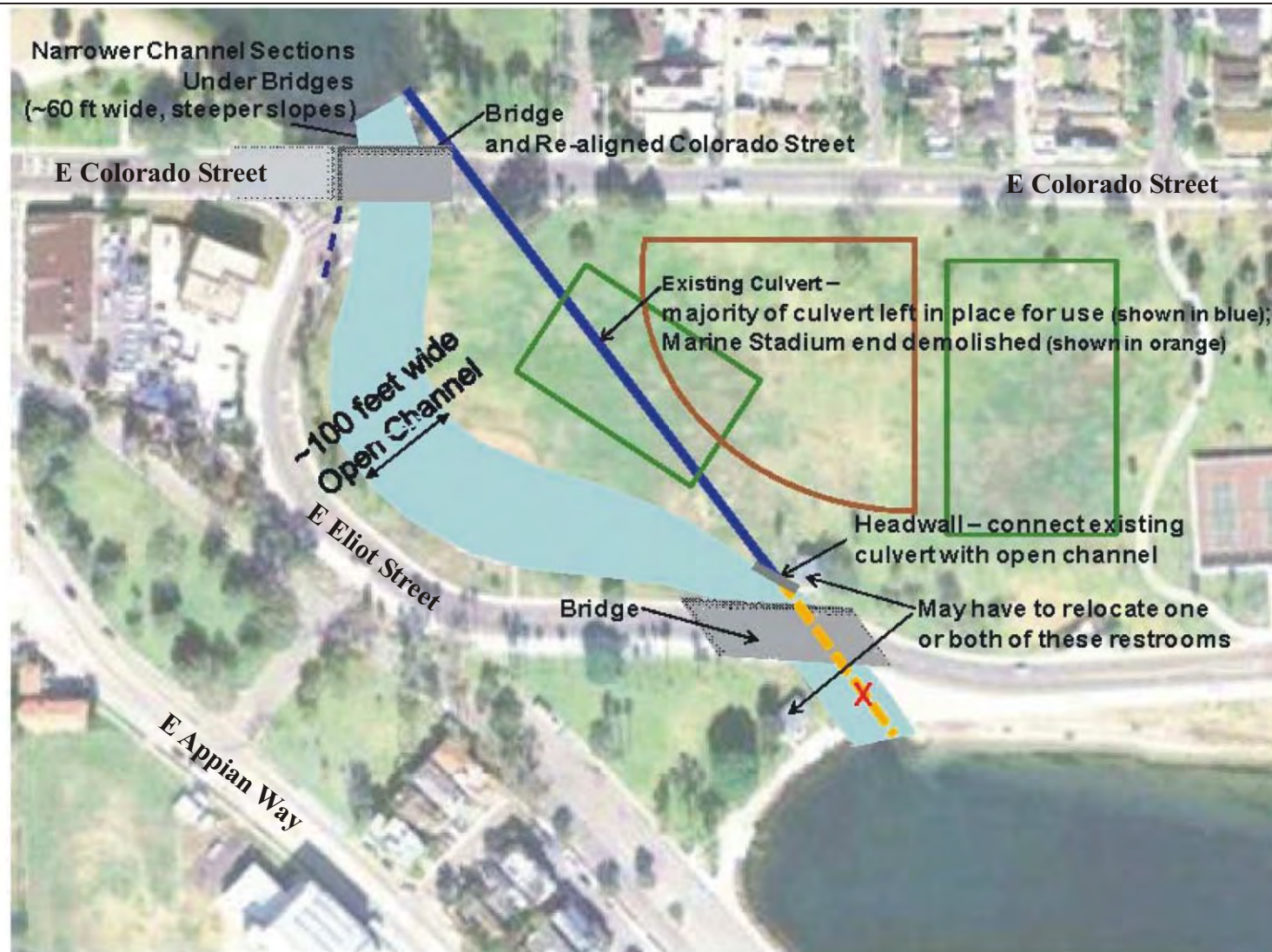


FIGURE 2.2

need to be removed. New trees could be planted in other areas of the park to compensate for this loss. The sidewalk along the northwest end of Marine Stadium, within the footprint of the open channel, would have to be rerouted to the sidewalk on the bridge.

Multiple utilities (oil, gas, sewer, water) along Colorado Street and Eliot Street would need to be rerouted on the bridges. Based on preliminary information, it is assumed that a new lift station would be needed for a sewer main line along Colorado Street. A storm drain along Colorado Street would also need to be modified to discharge into the open channel and a sewer line at the south end of the open channel would need to be relocated.

Installation of the new channel would require excavation along its alignment and would result in approximately 45,000 cy of excess material. An additional 1,500 cy of excess material would result if the existing culvert is removed. Some of this material could be used to build the earthen dike along the channel banks and possibly to level out the sports field areas within Marina Vista Park. Otherwise, it would be hauled to an appropriate off-site disposal site.

Alternative 3: Combination Open Channel and Culverts. This alternative is an earthen open channel along part of the connection between Colorado Lagoon and Marine Stadium. The maximum width of the open channel is approximately 125 feet, i.e., 25 percent wider than Alternative 2. The significant difference is that Alternative 3 does not include the construction of bridges. Instead, short culvert sections would be constructed under Eliot Street and Colorado Street, at either end of the open channel section. The existing culvert would be left in place for continued use.

An approximately 650-foot long earthen open channel would be constructed between Colorado Street and Eliot Street, along the west side of Marina Vista Park, as depicted in Figure 2.3. The new channel would have a varying cross-section and a bottom elevation of -6.5 feet NGVD29. The channel lining would be clay or silt, except at the channel sections at the culvert ends, which would need to have rock lining for slope and scour protection.

New underground RCB culverts would be constructed at either end of the open channel. The culvert at the Colorado Lagoon end would be approximately 140 feet long and the culvert at the Marine Stadium end would be approximately 180 feet long. The new culverts would each be 28 feet wide and 8 feet high, with invert elevations of -7.0 feet NGVD29. New headwalls/wingwalls would be constructed at the ends of the new culverts (i.e., in Colorado Lagoon and Marine Stadium and at the open channel transitions).

The existing culvert would be protected in place if deemed appropriate after consultation with the Resource Agencies. If deemed appropriate the existing culvert would be removed in its entirety.. The only impact to the existing culvert would be the relocation/reconstruction of two storm drains that discharge into the existing culvert from its west side may be necessary.

At the top of the channel banks, where the existing elevation is below +8 feet NGVD29, a low earthen berm (1–2 feet high) would be installed to protect the surrounding areas from flooding due to storm events and sea level rise. A walking trail would be constructed along the top of the channel on its east side. Preliminarily, it is assumed that this trail would be up to 10 feet wide to

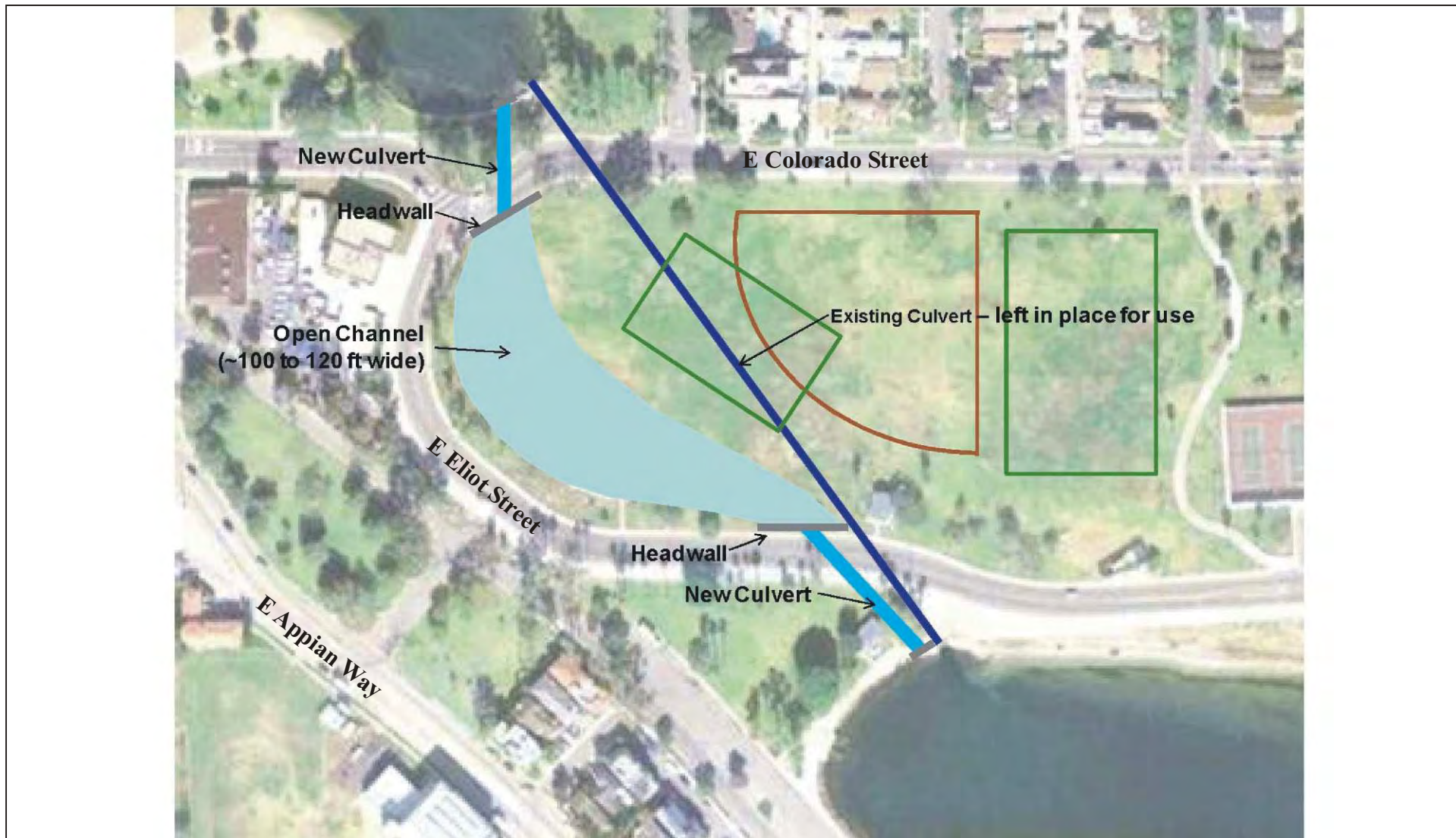


FIGURE 2.3

provide access for maintenance vehicles. A fence (approximately 3 to 5 feet high) and low shrub buffer may also be installed on this side of the channel, between the trail and the adjacent grassy park area. The low shrub buffer and potentially a fence may also be installed along the top of the channel on its west side.

The two existing public restrooms located within Marina Vista Park, to the north and south of Eliot Street, would be removed and two new restrooms would be constructed in nearby locations. Removal of approximately 20 ornamental (nonnative) trees, of which 10 are palm trees, would be required to implement this alternative. New trees could be planted in other areas of the park to compensate for this loss. A storm drain along Colorado Street would need to be modified to discharge into the northern culvert segment.

Installation of the new channel and culverts would require excavation along their alignments and would result in approximately 30,000 cy of excess material. An additional 1,500 cy of excess material would result if the existing culvert is removed. Some of this material could be used to build the earthen dike along the channel banks and possibly to level out the sports field areas within Marina Vista Park. Otherwise, it would be hauled to an appropriate off-site disposal site.

Alternative 4: Combination Open Channel (Maximum Wetlands) and One Culvert. This alternative is an earthen open channel along part of the connection between Colorado Lagoon and Marine Stadium. The maximum width of the open channel is approximately 230 feet, i.e., over twice as wide as Alternative 2. Under this option, only one bridge (along Eliot Street) was included in the concept. A short culvert section would be constructed under Colorado Street, at the north end of the open channel section. The existing culvert would be demolished.

An approximately 850-foot long earthen open channel would be constructed between Colorado Street and Marine Stadium, along the west side of Marina Vista Park, as depicted in Figure 2.4. The new channel would have a varying cross-section and a bottom elevation of -7.0 feet NGVD29. The channel lining would be clay or silt, except along the channel sections under the bridge and at the culvert ends, which would need to have rock lining for slope and scour protection.

A new underground RCB culvert would be constructed at the Colorado Lagoon end of the open channel. The new culvert would be approximately 135 feet long, 28 feet wide, and 8 feet high, with an invert elevation of -7.0 feet NGVD29. New headwalls/wingwalls would be constructed at both ends of the new culvert (i.e., in Colorado Lagoon and at the open channel transition).

The section of the existing culvert that is within the alignment of the new channel would be demolished. The other section of the existing culvert would be either demolished/removed or capped.

A bridge would be constructed over the channel along Eliot Street. The top of the bridge would need to be higher than the existing street elevations due to the design high water level within the channel. The FEMA base flood elevation for the area was used (+6 ft NGVD29), along with an estimated 50-year sea level rise of 1.5 feet and a freeboard of 2 feet, to calculate a bridge soffit elevation of +9.5 feet NGVD29. With a bridge thickness of approximately 2 feet, this results in a

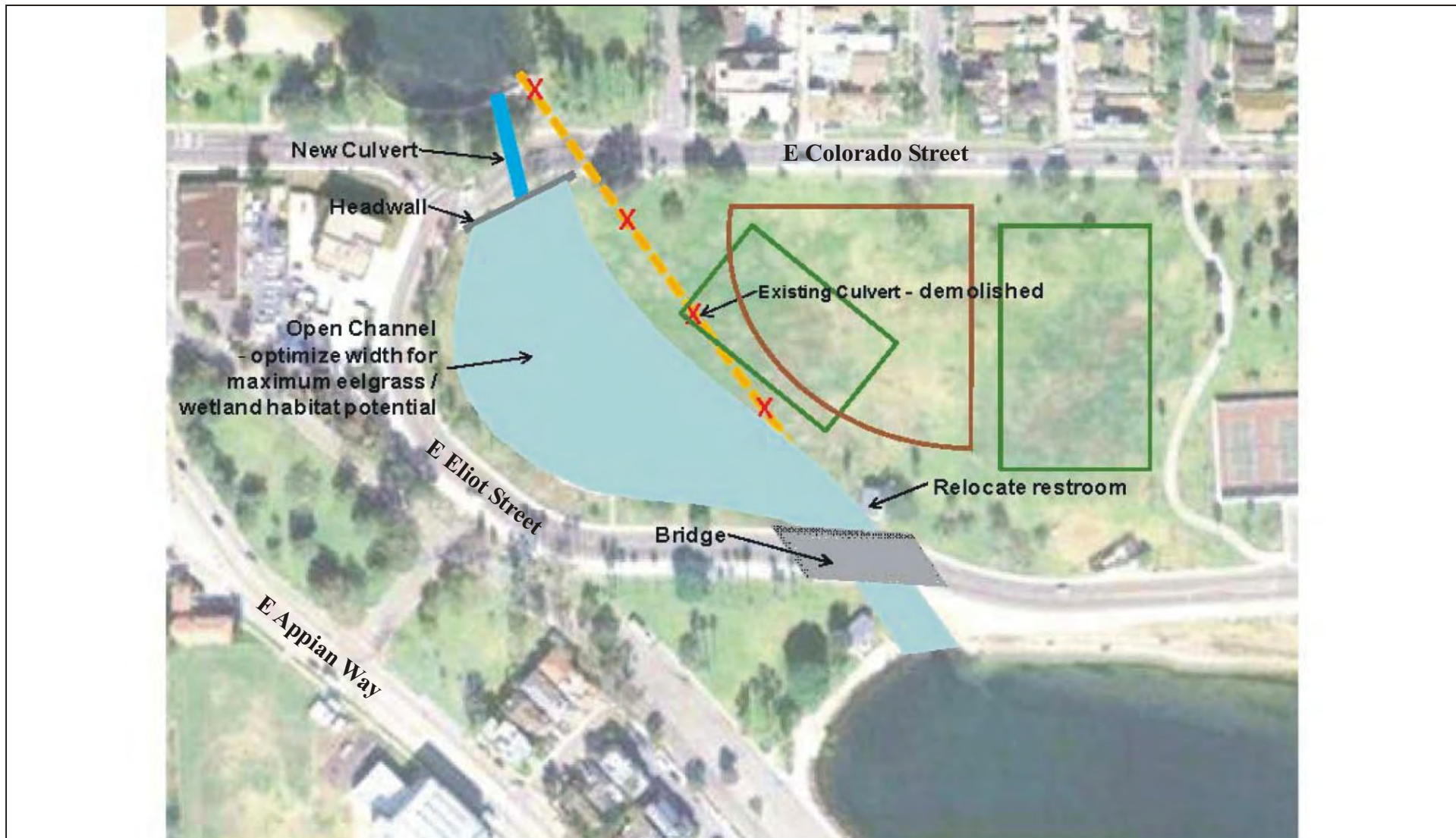


FIGURE 2.4

bridge surface elevation of +11.5 feet NGVD29, versus the existing Eliot Street elevation of +6.5 feet NGVD29, i.e. the bridge would need to be approximately five feet higher than the street. If the freeboard of 2 feet is not required, this would reduce the elevation difference to only three feet. Streets would have to be modified to rise as gradual slope approaches to each end of the bridge.

At the top of the channel banks, where the existing elevation is below +8 feet NGVD29, a low earthen berm (one to two feet high) would be installed to protect the surrounding areas from flooding due to storm events and sea level rise. A walking trail would be constructed along the top of the channel on its east side. Preliminarily, it is assumed that this trail would be up to 10 feet wide to provide access for maintenance vehicles. A fence (approximately 3 to 5 feet high) and low shrub buffer may also be installed on this side of the channel, between the trail and the adjacent grassy park area. The low shrub buffer and potentially a fence may also be installed along the top of the channel on its west side.

The two existing public restrooms located within Marina Vista Park, to the north and south of Eliot Street, would be removed and two new restrooms would be constructed in nearby locations. Removal of approximately 20 ornamental (nonnative) trees, of which 10 are palm trees, would be required to implement this alternative. New trees could be planted in other areas of the park to compensate for this loss. The sidewalk along the northwest end of Marine Stadium, within the footprint of the open channel, would have to be rerouted to the sidewalk on the bridge.

An oil line along Eliot Street would be rerouted on the bridge. A storm drain along Colorado Street would be modified to discharge into the northern culvert segment and storm drain along Eliot Street would be modified to discharge into the southern end of the open channel. A sewer line at the south end of the open channel would need to be relocated.

Installation of the new channel and culvert would require excavation along its alignment and would result in approximately 41,000 cy of excess material. An additional 1,500 cy of excess material would result if the existing culvert is removed. Some of this material could be used to build the earthen dike along the channel banks and possibly to level out the sports field areas within Marina Vista Park. Otherwise, it would be hauled to an appropriate off-site disposal site.

Alternative 4a. An Alternative 4a was defined as a result of a request made to the City at a meeting with representatives of the Resource Agencies. This Alternative 4a has a similar open channel to Alternative 4, except at the channel's north end where the underground culvert is replaced with a bridge. Alternative 4a has an open channel along its entire length, a maximum open channel width of 230 feet, and two bridges, as depicted in Figure 2.5. Compared to Alternative 4, Alternative 4a would result in additional area suitable for habitat creation; however, the cost is higher because of the necessity of a second bridge.

Project Change No. 6: Elimination of the bird island component. A bird island was proposed in the certified 2008 EIR to provide a safe refuge for roosting birds. However, the bird island has been removed from the project due to two reasons: (1) the recent delisting of the California brown pelican as a State and Federal threatened species and (2) as a result of informal consultation pursuant to Section 7 of the Federal Endangered Species Act (FESA) between the USACE and the National



FIGURE 2.5

Marine Fisheries Service (NMFS), the NMFS requested elimination of the bird island because it may adversely affect essential fish habitat (EFH) resulting from impacts associated with overwater structures (letter from National Oceanic and Atmospheric Administration (NOAA)/NMFS to Ken Wong, USACE, dated November 25, 2009).

2.4 COMPARISON OF APPROVED AND REVISED PROJECTS

The purpose of this Addendum is to inform decision-makers and the general public of any significant adverse environmental effects associated with the proposed/revised site plan for the Colorado Lagoon Restoration Project and to articulate differences between the project as currently revised and the project reviewed in the certified 2008 EIR. Pursuant to CEQA and State CEQA Guidelines, the City has prepared this Addendum to determine whether there are changes in circumstances or new information of substantial importance that would require preparation of a subsequent or supplemental EIR.

2.5 PROJECT FUNDING

Implementation of the project is being funded by several sources and funding has been broken up into several parts. Part 2.1 of project funding is associated with dredging of the western arm of the Lagoon. Funding partners for Part 2.1 include the State Coastal Conservancy, USACE, State Water Resources Control Board, and the Rivers and Mountains Conservancy.

3.0 COMPARATIVE EVALUATION OF ENVIRONMENTAL IMPACTS

3.1 AESTHETICS

3.1.1 Existing Environmental Setting

Please refer to Section 4.1 of the certified 2008 EIR for a summary of the existing environmental setting related to Aesthetics.

As stated in the certified 2008 EIR, the project site includes the Colorado Lagoon Park, Marina Vista Park, and a small portion of adjacent parkland at Marine Stadium. The Lagoon area includes an approximately 11.7 ac tidal water body¹ that is connected to Alamitos Bay and the Pacific Ocean through an underground tidal culvert to Marine Stadium. The project area is owned and maintained as City parkland by the City Department of Parks, Recreation, and Marine.

According to the certified 2008 EIR, the area surrounding the proposed project is composed primarily of park and recreational land, residential development, and small areas of commercial and institutional land uses. Recreation Park, which is a City park, is adjacent to the Lagoon on the north. A chain link fence separates the Lagoon project site from the Recreation Park 9-hole golf course along the west side of the north arm of the Lagoon and along the existing north parking lot to the existing restroom. The chain link fence does not separate the Recreation Park golf course from the project site around the west arm of the Lagoon, which is west of the restroom. Developed neighborhoods, which are largely composed of residential land uses, are located to the south, east, and west. Small areas of commercial and institutional development are located to the south of the Lagoon and to the west of Marina Vista Park. In addition, Marine Stadium, which is a recreational water body, is located adjacent to the south of Marina Vista Park.

3.1.2 Certified 2008 EIR

Please refer to Section 4.1 of the certified 2008 EIR for analyses of the potential effects of the proposed project related to Aesthetics.

The certified 2008 EIR concluded that the proposed project would not disrupt existing scenic vistas or viewsheds visible on or from the project site. There are no scenic vistas located on site or in the surrounding vicinity that have been designated by the City or other agency in an adopted policy or plan. Implementation of the proposed project as analyzed in the certified 2008 EIR would result in the creation of a new scenic vista from the north arm of the Lagoon facing south.

The certified 2008 EIR concluded that the proposed project would result in potentially significant impacts to visual character and quality of the project site during construction. The Lagoon's

¹ Lagoon water body acreage varies with tides and was estimated by LSA Associates, Inc. using Geographic Information System (GIS) data based on a 2006 aerial photo.

appearance during dredging and slope recontouring would be of a partially dewatered lagoon water body and barren lagoon slopes while the banks are recontoured and then revegetated. Additionally, heavy construction equipment would be visible on site throughout the dredging activities and construction of the Marine Stadium connection. The certified 2008 EIR concluded that with implementation of Mitigation Measure AES-1, which would shield views of the project site from sensitive viewers during construction activities, potential impacts to visual character and quality would be reduced to less than significant levels.

As stated in the certified 2008 EIR, the post-project character of the Lagoon would be enhanced by the drain removal, marsh and shrub installation, change from existing hardscape-landscaping to natural native landscaping, and reduction of litter and would improve the aesthetic character and quality of the Lagoon.

Furthermore, the certified 2008 EIR concluded that the proposed project would result in less than significant impacts to scenic resources. None of the roadways surrounding the project site is a designated State scenic highway or roadway and there are no scenic rock outcroppings located within the project limits.

The proposed project as analyzed in the certified 2008 EIR would remove and replace three existing restroom structures located on either side of Eliot Street. The new restroom structures would be designed to include safety lighting, slightly increasing the lighting on the structures compared to the existing structures. Implementation of Mitigation Measure AES-2 would reduce impacts from light and glare associated with the exterior lighting of the structures and reduce potential impacts to less than significant levels.

In summary, the certified 2008 EIR concluded that with implementation of mitigation measures (refer to Appendix A), there would be no significant adverse impacts related to Aesthetics resulting from implementation of the proposed project.

3.1.3 Project Changes

Changes to the Colorado Lagoon Restoration Project addressed in this Addendum include:

- An increase in the maximum total dredge quantity from 30,000 to 72,000 cy, including dredging in the northern arm;
- Four optional dredge methods including one dry and three wet methods;
- A change in the mode of transportation for dredge material, from trucking to a landfill in the Bakersfield area to trucking or barging to a disposal site at the POLB;
- Requirement to use Tier 2 construction equipment for dredging Options 2, 3, and 4 and Tier 1 construction equipment for Option 1;
- Five alternatives for connecting the Lagoon to Marine Stadium through Marina Vista Park, including a second culvert, an Eliot Street Alignment, an open channel with culverts rather than bridges at the street crossings, an expanded channel concept with one bridge and one culvert, and an expanded channel concept with two bridges; and

- Elimination of the bird island component.

Please refer to Chapter 2.0 for more information regarding the project changes.

The certified 2008 EIR concluded that the effect of the proposed project on public viewing areas of the Lagoon toward Marine Stadium is considered positive due to the increased long-range view and introduction of a naturalized channel with native plants. Changes to the proposed project include consideration of five alternative Marine Stadium connections. Implementation of Alternative 1, an underground culvert, would not result in a naturalized channel with native plants; however, following installation of the underground channel, the disturbed area would be revegetated and restored to pre-construction conditions. Therefore, implementation of Alternative 1 would result in less than significant impacts to public viewing areas of the Lagoon and would not change the conclusions of the certified 2008 EIR.

The certified 2008 EIR concluded that the construction of two vehicular bridges at East Colorado Street and East Eliot Street, which would be slightly above grade with the existing street and would be developed with open railings, would not have a substantial adverse effect on views of the project site. Changes to the proposed project include consideration of five alternative Marine Stadium connections. Alternatives 1 and 3 do not include bridges; therefore, there would be little to no change to the existing appearance of the road crossing of the culvert, and the visual impact would be less than those evaluated for the project in the certified 2008 EIR. Alternative 2 is the only alternative that includes the construction of two vehicular bridges at East Colorado Street and East Eliot Street. Alternative 4 includes the construction of one vehicular bridge at East Eliot Street. As a result of the project design modifications, the proposed bridges would be constructed at a slightly higher elevation than the existing street elevations due to the design high water level within the channel but would still be developed with open railings. Refer to Chapter 2.0 for specific information regarding the proposed bridges. The streets would have to be modified to rise as gradual slope approaches to each end of the bridges; however, this would not result in significant impacts to views of the project site. The bridges included in Alternatives 2, 4, and 4a would be slightly higher in elevation compared to the bridges evaluated in the certified 2008 EIR; however, the changes in vertical elevation are limited to approximately 5 ft and would not notably obstruct existing views or degrade the existing visual character of the project area. Therefore, the implementation of any of the five alternative Marine Stadium connections would result in impacts less than or similar to those evaluated for the proposed project in the certified 2008 and would not change the conclusions of the certified 2008 EIR.

Implementation of proposed project changes are anticipated to result in a longer construction period for Phase 1 (dredging) (an increase of 5 months resulting in a 15-month construction duration) due to an increase in the amount of dredging within the Lagoon, including the northern arm. Although the duration of the dredge period would be longer, the daily visual conditions on site would be essentially the same as described in the certified 2008 EIR. Implementation of Mitigation Measure AES-1, which requires the construction contractor to provide screened construction fencing around construction areas boundaries, would reduce impacts to residents and recreational users of the Recreation Park by shielding views of the project site from sensitive viewers during construction activities. With implementation of Mitigation Measure AES-1, impacts to the visual character and quality of the site resulting from construction of any dredging options evaluated in this Addendum would continue to be reduced to less than significant levels. The increase in construction duration does not change the conclusions of the certified 2008 EIR or require changes to Mitigation Measure AES-1.

The project evaluated in the certified 2008 EIR included a landscaped buffer that would be installed along the sides of the open channel that would contain a mixture of armor rock and native plantings that also would serve as a safety barrier by discouraging pedestrian access to the open channel. Additionally, the proposed project as analyzed in the certified 2008 EIR includes a meandering walking trail, which would be installed around portions of the Lagoon and along the eastern side of the open channel. Changes to the proposed project include consideration of five alternative Marine Stadium connections, one of which is an underground culvert (Alternative 1). Alternative 1 does not include installation of a landscaped buffer or a walking trail along the eastern side of the Marine Stadium connection. Therefore, implementation of Alternative 1 would not result in impacts to views of the project site associated with implementation of a landscape buffer or walking trail along the connection, and would be similar to existing conditions. Impacts to views of the project site associated with implementation of Alternatives 2, 3, 4, or 4a would be essentially the same as described in the certified 2008 EIR. Additional changes to the proposed project include the widening of the proposed walking trail from 8 ft to 10 ft. This relatively small change is not anticipated to result in substantive changes to views of the project site and does not change the conclusions of the certified 2008 EIR.

The certified 2008 EIR concluded that construction of an open channel would result in removal of the visible drain outlets on the south shore as part of this project. As a result, the shoreline of the Lagoon would be more aesthetically appealing as the storm drain structures would no longer protrude out of the water. Changes to the proposed project include consideration of five alternative Marine Stadium connections, one of which is an underground culvert (Alternative 1). Alternative 1 does not include construction of an open channel; however, the underground culvert would serve the same purpose of improving tidal flushing within the Lagoon and would include removal of the visible drain outlets on the south shore of the Lagoon. Therefore, the beneficial visual impact of implementation of Alternative 1 would be less than the effects associated with the project as proposed in the certified 2008 EIR. Implementation of Alternatives 2, 3, 4, or 4a would result in impacts similar to those evaluated for the proposed project in the certified 2008 EIR and would not change the conclusions of the certified 2008 EIR.

The project evaluated in the certified 2008 EIR included removal of ornamental nonnative trees as a result of the open channel construction and reconfiguration of the sports fields within Marina Vista Park. As identified in the certified 2008 EIR, implementation of Mitigation Measure BIO-13 would require that the trees be replaced with western sycamores (*Plantanus racemosa*), a native tree, at a ratio of 1:1 and invasive and exotic species be removed. Since Alternative 1 does not include construction of an open channel, meandering walking trail, or bridges, no ornamental nonnative trees would be removed; therefore, implementation of Alternative 1 would result in reduced impacts to existing trees compared to those evaluated for the proposed project in the certified 2008 EIR. Implementation of Alternatives, 3, 4, or 4a would result in impacts similar to those evaluated for the proposed project in the certified 2008 EIR and would not require changes to the conclusions of the certified 2008 EIR.

The project evaluated in the certified 2008 EIR included construction of a bird island to provide a safe refuge for roosting birds in the western arm of the Lagoon. As a result of project design modifications, the proposed bird island has been eliminated from the project due to two reasons: (1) the recent delisting of the California brown pelican as a State and Federal threatened species and (2)

as a result of Section 7 informal consultation between the USACE and NMFS, the NMFS requested elimination of the bird island because it may adversely affect essential fish habitat (EFH) resulting from impacts associated with overwater structures (letter from NOAA/NMFS to Ken Wong, USACE, on November 25, 2009). The project changes would result in no discernable changes to the construction impacts identified for the proposed project in the certified 2008 EIR.

Cumulative Aesthetic Impacts. The certified 2008 EIR concluded that the Colorado Lagoon Restoration Project, as analyzed, would not result in cumulative impacts to aesthetics. Based on the analysis and information presented above, there is no evidence that the revised Colorado Lagoon Restoration Project would result in more substantial or new significant cumulative impacts to aesthetics compared to those disclosed and analyzed in the certified 2008 EIR. Therefore, in consideration of all of the above, the revised Colorado Lagoon Restoration Project does not require any major changes to the certified 2008 EIR and would not result in any new significant cumulative environmental impacts related to aesthetics.

3.1.4 Findings Related to Aesthetics

No New Significant Effects Requiring Major EIR Revisions. Based on the foregoing analysis and information, there is no evidence that project modifications require a major change to the certified 2008 EIR. The revised Colorado Lagoon Restoration Project would not result in new significant environmental impacts related to aesthetics, nor is there a substantial increase in the severity of impacts described in the certified 2008 EIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available that indicate that there are substantial changes in circumstances pertaining to aesthetics that would require major changes to the certified 2008 EIR.

No New Information Showing Greater Significant Effects than the Certified 2008 EIR. This Addendum has analyzed all available relevant information to determine whether there is new information that was not available at the time the 2008 EIR was certified, indicating that a new significant effect not reported in that document may occur. Based on the information and analyses above, there is no substantial new information indicating that there would be a new significant impact related to aesthetics requiring major revisions to the certified 2008 EIR.

No New Information Showing Ability to Reduce Significant Effects in Previous EIR. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more significant impacts pertaining to aesthetics identified in and considered by the certified 2008 EIR.

3.2 AIR QUALITY

3.2.1 Existing Environmental Setting

Please refer to Section 4.2 of the certified 2008 EIR for a summary of the existing environmental setting related to air quality.

As stated in the certified 2008 EIR, the project site is located within the City of Long Beach, which is within the non-desert portion of Los Angeles County. Los Angeles County is part of the South Coast Air Basin (Basin) and is under jurisdiction of the South Coast Air Quality Management District (SCAQMD).

As stated in the certified 2008 EIR, a number of air quality modeling tools are available to assess air quality impacts of projects. In addition, certain air districts, such as the SCAQMD, have created guidelines and requirements to conduct air quality analyses. The SCAQMD's current guidelines, which are included in its CEQA Air Quality Handbook (April 1993), were adhered to in the assessment of air quality impacts for the proposed project.

3.2.2 Certified 2008 EIR

Please refer to Section 4.2 of the certified 2008 EIR for analyses of the potential effects of the proposed project related to Air Quality.

The certified 2008 EIR concluded that the construction-related, short-term construction air quality emissions would exceed the SCAQMD CEQA thresholds. The EIR also concluded that the project's emissions would not exceed the SCAQMD's short-term Localized Significance Thresholds (LST), the long-term CEQA thresholds, or result in a significant impact related to global climate change.

In summary, the certified 2008 EIR concluded that even with compliance with SCAQMD rules and regulations and the implementation of all feasible mitigation measures (refer to Appendix A), the proposed project would have significant unavoidable short-term construction air quality impacts (odors and nitrogen oxides [a precursor to ozone] emissions). While the adherence to SCAQMD rules and regulations would reduce these impacts, they would remain significant and adverse because the SCAQMD daily threshold would be exceeded.

3.2.3 Project Changes

Changes to the Colorado Lagoon Restoration Project addressed in this Addendum include:

- An increase in the maximum total dredge quantity from 30,000 to 72,000 cy, including dredging in the northern arm;
- Four optional dredge methods including one dry and three wet methods;
- A change in the mode of transportation and disposal destination for dredge material, from trucking to a landfill in the Bakersfield area to trucking or barging to a disposal site at the POLB;
- Requirement to use Tier 2 construction equipment for dredging Options 2, 3, and 4 and Tier 1 construction equipment for Option 1;

- Five alternatives for connecting the Lagoon to Marine Stadium through Marina Vista Park, including a second culvert, an Eliot Street Alignment, an open channel with culverts rather than bridges at the street crossings, an expanded channel concept with one bridge and one culvert, and an expanded channel concept with two bridges; and
- Elimination of the bird island component.

Please refer to Chapter 2.0 for more information regarding the project changes.

The certified 2008 EIR did not include the requirement of Tier 1 or Tier 2 construction equipment. As a result of the analysis included in the Environmental Assessment prepared by the USACE for the dredging portion of the project, Tier 1 construction equipment is required for use of Option 1 dredge method, and Tier 2 construction equipment is required for use of Option 2 through 4 dredge methods. In order to result in reduced equipment emissions, Tier 1 and Tier 2 standards are met through advanced engine design, with no or only limited use of exhaust gas aftertreatment (oxidation catalysts). Incorporation of Tier 1 and Tier 2 construction equipment would result in reduced construction emissions compared to the emissions from the same level of construction activity using standard construction equipment. The change in disposal destination results in a substantial reduction in vehicle miles traveled (VMT) for the dredge haul trips. This reduction in VMT results in a corresponding reduction in emissions compared to the haul trips evaluated in the certified 2008 EIR. These reductions in emissions partially offset the emissions from the increased amount of dredge removal.

The proposed project changes result in different construction phases and sub-phases than what was analyzed in the certified 2008 EIR. Table 3.A provides peak-day construction emissions by sub-phase and a description of each sub-phase. Table 3.B provides peak daily construction emissions. Changes to the sub-phases include the addition of 1d (remaining central area sediment removal) which caused renumbering of the sub-phases for Phase 1 activities included in the certified 2008 EIR. In addition, emissions for Phase 2 have been updated to reflect the five design alternatives for the Marine Stadium connection.

Table 3.A: Peak-Day Construction Emissions by Sub-Phase (lbs/day)

Sub-Phase	CO	ROCS	NO _x	SO _x	PM ₁₀	PM _{2.5}	CO ₂
1A: Existing Culvert Improvements	30.6	6.0	60.9	8.0	3.6	3.2	4,573.4
1B: Western Arm Sediment Removal	111.7	38.6	97.0	1.1	4.3	3.9	9,184.7
1C: Central Area Sediment Removal	111.7	38.6	98.4	0.7	4.3	3.9	9,352.6
1D: Remaining Central Area Sediment Removal	111.7	38.6	98.4	0.7	4.3	3.9	9,352.6
1E: Storm Drain Treatments	34.9	6.6	65.7	10.1	4.0	3.5	5,043.0
1F: Bioswales	25.9	4.9	49.1	6.9	3.0	2.7	3,709.0
1G: North Parking Lot, Access Road, and Restroom Demolition	30.8	5.6	65.0	10.2	4.6	3.2	4,916.4
1H: Side Slope Recontouring	33.2	6.3	68.3	10.4	8.9	4.4	5,049.2
1I: Trail and Viewing Platform Construction	27.6	5.1	59.3	8.1	8.1	3.7	4,531.2
2ALT1: New Culver Construction	62.5	12.8	127.1	18.8	12.6	7.7	8,997.6
2ALT2: Open Channel Construction	78.3	16.3	163.2	24.8	14.4	9.3	11,616.6

Table 3.A: Peak-Day Construction Emissions by Sub-Phase (lbs/day)

Sub-Phase	CO	ROCS	NO _x	SO _x	PM ₁₀	PM _{2.5}	CO ₂
2ALT3: Combo Open Channel and Culverts	65.5	13.2	133.0	18.8	12.8	7.9	9,659.0
2ALT4: Open Channel, Bridge, and One Culvert	78.3	16.3	163.2	24.8	14.4	9.3	11,616.6
2ALT4A: Open Channel and Two Bridges	78.3	16.3	163.2	24.8	14.4	9.3	11,616.6

¹ No threshold has been established.

CO = Carbon Monoxide

CO₂ = Carbon Dioxide

LBS/DAY = Pounds Per Day

NO_x = Nitrous Oxides

PM₁₀ = Particulate matter less than 10 microns in size

Source: LSA Associates, Inc., August 2010.

PM_{2.5} = Particulate matter less than 2.5 microns in size

ROCS = Reactive Organic Compounds

SCAQMD = South Coast Air Quality Management District

SO_x = Sulfur Oxides

Table 3.B: Peak Daily Construction Emissions (lbs/day)

Month	Sub-Phases	CO	ROCs	NO _x	SO _x	PM ₁₀	PM _{2.5}	CO ₂
Phase 1								
April	1E	34.6	6.4	71.3	8.6	4.0	3.6	5,714.5
May	1B, 1E	146.3	45.0	168.3	9.7	8.3	7.5	14,899.2
June	1B, 1E	146.3	45.0	168.3	9.7	8.3	7.5	14,899.2
July	1A, 1B, 1E	176.9	51.0	229.2	17.7	11.9	10.7	19,472.6
August	1A, 1B	142.3	44.6	157.9	9.1	7.9	7.1	13,758.1
September	1B, 1C	111.7	38.6	97.0	1.1	4.3	3.9	9,184.7
October	1C, 1F, 1G, 1H	201.6	55.4	280.8	28.2	20.8	14.2	23,027.2
November	1C, 1D, 1F, 1G, 1H	201.6	55.4	280.8	28.2	20.8	14.2	23,027.2
December	1D, 1G, 1H	175.7	50.5	231.7	21.3	17.8	11.5	19,318.2
January	1D, 1H, 1I	172.5	50.0	226.0	19.2	21.3	12.0	18,933.0
February	1D, 1H	144.9	44.9	166.7	11.1	13.2	8.3	14,401.8
Phase 2								
	2ALT1	62.5	12.8	127.1	18.8	12.6	7.7	8,997.6
	2ALT2	78.3	16.3	163.2	24.8	14.4	9.3	11,616.6
	2ALT3	65.5	13.2	133.0	18.8	12.8	7.9	9,659.0
	2ALT4	78.3	16.3	163.2	24.8	14.4	9.3	11,616.6
	2ALT4A	78.3	16.3	163.2	24.8	14.4	9.3	11,616.6
SCAQMD Emissions Threshold		550	75	100	150	150	55	NA
Exceed Significance?		NO	NO	YES	NO	NO	NO	NA

Note: Numbers in bold indicate exceedance of SCAQMD Emissions Threshold.

CO = carbon monoxide

CO₂ = carbon dioxide

lbs/day = pounds per day

NA = no threshold has been established

NO_x = nitrous oxides

Source: LSA Associates, Inc., September 2010.

PM₁₀ = particulate matter less than 10 microns in size

PM_{2.5} = particulate matter less than 2.5 microns in size

ROCs = reactive organic compounds

SCAQMD = South Coast Air Quality Management District

SO_x = sulfur oxides

Implementation of proposed project changes are anticipated to result in a longer dredging period for Phase 1 due to an increase in the amount of dredging within the Lagoon and the addition of dredging

the northern arm. Since the duration of the dredge period would be longer, the dredge activities will overlap with other construction activities and the daily peak emissions will be higher during some months compared to the proposed project addressed in the certified 2008 EIR. Implementation of Mitigation Measures AQ-1 through AQ-8, of the certified EIR, combined with the City's commitment to Tier 1/Tier 2 construction equipment, would reduce the short-term air quality impacts to the sensitive receptors within the project vicinity during construction activities to the extent feasible. As shown on Table 3.B, construction emission thresholds are daily. The certified 2008 EIR found that the daily peak emissions of NO_x would exceed daily thresholds. Emissions other than NO_x did not exceed the thresholds. This conclusion is the same for the revised project addressed in this Addendum. The project changes do not alter the conclusions of the certified 2008 EIR or require changes to Mitigation Measures AQ-1 through AQ-8.

The construction activities during Phase 1 of the project, including the dredging activity, do not exceed the SCAQMD thresholds for daily construction emissions. The dredging activity will not result in a significant short-term air quality impact.

Implementation of proposed project changes would not result in changes to the odor impacts or the LST impacts as evaluated for the proposed project in the certified 2008 EIR. Daily use of heavy duty equipment and aeration of dredged material would not change as a result of project changes; therefore, odor impacts would be essentially the same as evaluated for the proposed project in the certified 2008 EIR. Implementation of Mitigation Measure AQ-8 would continue to be required, ensuring that dredge material temporarily stored on site (prior to being hauled) be located as far as feasible from sensitive receptors. In addition, Mitigation Measure HAZ-4 calls for the use of a solution of Simple Green and water to be applied to the dredge material to accelerate decomposition of organic material and reduce the duration of odor emanation. With the combination of these measures, odors from organic material would continue to be less than significant.

Greenhouse Gas Emissions. Revisions to Appendix G of the State CEQA Guidelines suggest that the project be evaluated for the following impacts:

- Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?
- Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?

This Air Quality analysis considers whether the emissions associated with the proposed project and the proposed project changes should be considered significant in light of the new regulatory information that is available as a result of the amendment to the CEQA Guidelines. To determine if the project would generate Greenhouse Gas (GHG) emissions, either directly or indirectly, that may have a significant impact on the environment, the analysis relies on the draft significance criteria considered by the SCAQMD by its Stakeholder Working Group in November 2009. The Stakeholder Working Group considers generally three classes of common projects for a "tier 3" screening approach: residential, commercial and mixed use projects. The numerical standards for commercial projects are the lowest at 1,400 metric tons. By identifying this as a screening threshold, the Stakeholder Working Group recognize that some small commercial projects, emitting 1,400 metric tons of CO₂e per year or less, would clearly not interfere with achieving the States emission reduction

objectives in AB 32 (and EO S-03-05) and thus may be deemed categorically exempt from CEQA. The information from the Stakeholder Working Group does not state or imply that projects emitting more than 1,400 metric tons of CO₂e per year will necessarily result in a significant impact, although currently, there are no accepted numerical thresholds for significance conclusions.

Thus, while State agencies and local air pollution control districts are currently working to develop numeric thresholds of significance that would guide classification of impacts associated with global climate change in CEQA documents, to date, the City lacks sufficient information to establish formal, permanent thresholds by which to classify projects with relatively small, incremental contributions to the State's total GHG emissions as cumulatively considerable or not. Until appropriate regulatory entities develop quantified CEQA thresholds for GHGs, the City will consider the most current available guidance provided by air quality agencies. The City has determined that if this project emits 1,400 metric tons of CO₂e per year or less, GHG emissions are considered less than significant and no further analysis is required.

Greenhouse Gas Construction Emissions. The project as described in the certified 2008 EIR would generate emissions of GHGs, primarily in the form of vehicle exhaust, during construction. The 2008 Final EIR estimated that the construction activities would generate up to 34,818 lbs/day of CO₂, or approximately 16 metric tons.

Short-term GHG emissions would occur from construction activities, consisting primarily of emissions from equipment exhaust. The URBEMIS2007 model was used to calculate the CO₂ emissions that would be generated by the construction equipment. The emissions are summarized in Table 3.C. Table 3.A indicates that the peak daily CO₂ emissions associated with construction equipment exhaust for the proposed project would be highest during both Phase 1b (Western Arm Sediment Removal) and Phase 1d (Remaining Central Area Sediment Removal). Note that Alternative 4a is a variation of Alternative 4 that would have a similar open channel to Alternative 4, except at the channel's north end where the underground culvert is replaced with a bridge. The resultant Alternative 4a has an open channel along its entire length, a maximum open channel width of 230 feet, and two bridges. Total GHG emissions from this Alternative are higher than the other alternatives because the duration of the construction period would be slightly longer. However, for all project alternatives and variations considered in this addendum, total emissions are below the 1,400 metric ton screening threshold.

The proposed project changes would result in an increase in GHG emissions due in part to the additional dredging required to meet the environmental objectives of the project. However, some of these emissions are offset by the substantially reduced trip length for the haul trips for dredge material disposal. In addition, the project includes air quality mitigation measures that would also serve to reduce GHG emissions. For example, Mitigation Measure AQ-3 requires that construction equipment does not idle for more than 5 minutes and be shut off when not in use. Similarly, Mitigation Measure AQ-6 requires that on-road trucks and other vehicles do not idle for more than 5 minutes and be shut off when not in use. Mitigation Measure AQ-2 requires use of low-emission equipment, and the City has further committed to using Tier 1/Tier 2 equipment. While the low-emission equipment reduces NO_x and PM emission compared to standard/older construction equipment, the technology used in Tier 1/Tier 2 equipment does not result in a notable reduction of GHGs. The reductions in GHG emission from the reduced length of the haul

trips and the measures described above, however, support a conclusion of less than significant impact for GHG emissions.

Because GHG emissions during construction activities are below the screening threshold, are relatively short-term in duration and would cease once construction activities end, and would be reduced with implementation of the measures described above, construction-related GHG emissions are considered less than significant for all phases of construction, including dredging activities.

Table 3.C: Greenhouse Gas Emissions

Emissions Source	Emissions (metric tons/year)			
	CO ₂	CH ₄	N ₂ O	CO ₂ e
Alternative 1 Construction ¹	96.5	0.007	0.0002	96.5
Alternative 2 Construction ¹	147.2	0.010	0.0002	147.2
Alternative 3 Construction ¹	119.3	0.008	0.0002	119.3
Alternative 4a Construction ¹	139.1	0.009	0.0002	139.1
Alternative 4b Construction ¹	155.3	0.011	0.0002	155.3
SCAQMD Thresholds				1,400
Significant?				No

Note: Numbers in table may not appear to add up correctly due to rounding of all numbers to two significant digits.

¹ Construction emissions have been amortized for 30 years per the GHG significance threshold adopted by the SCAQMD on December 5, 2008.

CH₄ = methane

CO₂ = carbon dioxide

CO₂e = carbon dioxide equivalent

N₂O = nitrous oxide

SCAQMD = South Coast Air Quality Management District

Source: LSA Associates, Inc., August 2010.

In conclusion, both the original project as evaluated in the certified EIR and the GHG emissions as a result of the proposed project changes, generate construction GHG emission that are substantially below the suggested SCAQMD screening threshold of 1,400 metric tons. There is no change to the certified 2008 EIR conclusion that GHG emissions are less than significant.

Greenhouse Gas Operational Emissions. The proposed revised project would not result in any long-term on-site stationary sources and would have little to no change in the off-site vehicle trips. Therefore, the proposed revised project would not generate any additional long-term GHG emissions. In addition, the revegetation and habitat restoration of the project site may result in additional carbon sequestration that would reduce the existing “carbon footprint” of the project site.

GHG emissions are considered for their potential to contribute to Global Climate Change. The certified EIR concluded that the proposed project would result in short-term emissions associated with the use of construction equipment. There would be no ongoing increase in contribution to global warming because there are no on-site stationary sources, and there is essentially no increase in the number of vehicular trips coming to and from the project site. These conclusions are not altered by the proposed project changes, because the lagoon and Marian Vista Park would

continue to operate as park facilities after construction. Therefore, the proposed revised project's contribution to Global Climate Change in the form of GHG emissions is limited to construction equipment/vehicle emissions. The project would not result in a new, ongoing source of GHG emissions. Emissions are substantially below suggested quantified thresholds, therefore, the project's contribution to cumulative GHG emissions and Global Climate Change is less than significant.

The City of Long Beach does not currently have an adopted applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs in place.

As described in the certified EIR, the proposed restoration of the Colorado Lagoon was found to be consistent with the following applicable plans:

- Citywide Strategic Plan
- General Plan Land Use Element
- General Plan Open Space and Recreation Element.
- City of Long Beach Parks, Recreation, and Marine Strategic Plan

The proposed project changes are also consistent with these plans, because the changes would not affect the overall goal of improving outdoor recreation and natural open space resources that would be realized with the proposed dredging and restoration. Therefore, the proposed project and proposed project changes are consistent with adopted land use plans and do not conflict with applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

In conclusion, both the original project as evaluated in the certified EIR and the proposed project changes generate little to no operational GHG emissions and the project is consistent with applicable land use plans, therefore, the proposed changes do not result in a significant effect with regard to GHGs and global climate change.

Cumulative Impacts. The certified 2008 EIR concluded that the construction of the project would contribute cumulatively to the local and regional air pollutants, together with other projects under construction. Based on the analysis and information presented above, there is no evidence that the revised Colorado Lagoon Restoration Project would result in more substantial or new significant cumulative impacts to air quality compared to those disclosed and analyzed in the certified 2008 EIR. Therefore, in consideration of all of the above, the revised Colorado Lagoon Restoration Project does not require any major changes to the certified 2008 EIR and would not result in any new significant cumulative environmental impacts related to air quality.

3.2.4 Findings Related to Air Quality

No New Significant Effects Requiring Major EIR Revisions. Based on the foregoing analysis and information, there is no evidence that project modifications require a major change to the certified 2008 EIR. The revised Colorado Lagoon Restoration Project would not result in new significant

environmental impacts to air quality, nor is there a substantial increase in the severity of impacts described in the certified 2008 EIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available that indicated that there are substantial changes in circumstances pertaining to air quality that would require major changes to the certified 2008 EIR.

No New Information Showing Greater Significant Effects than the Certified 2008 EIR. This Addendum has analyzed all available relevant information to determine whether there is new information that was not available at the time the 2008 EIR was certified, indicating that a new significant effect not reported in that document may occur. Based on the information and analyses above, there is no substantial new information indicating that there would be a new significant impact to air quality requiring major revisions to the certified 2008 EIR.

No New Information Showing Ability to Reduce Significant Effects in Previous EIR. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more significant impacts pertaining to air quality identified in and considered by the certified 2008 EIR.

3.3 BIOLOGICAL RESOURCES

3.3.1 Existing Environmental Setting

Please refer to Section 4.3 of the certified 2008 EIR for a summary of the existing environmental setting for Biological Resources.

Documents reviewed and incorporated as part of the certified 2008 EIR analysis include the Biological Resources Assessment prepared for the proposed project, including a jurisdictional delineation of waters and wetlands, survey reports, and the results of database research. In addition, a survey of the underwater environment and associated intertidal areas of the Lagoon was performed in July 2004 by Chambers Group, Inc. (Chambers 2004) and was used to assess the existing setting of the Lagoon aquatic environment.

As stated in the certified 2008 EIR, the topography in the project vicinity is relatively flat with a gently sloping transition from the Lagoon waters to upland areas. The project area is dominated by the Lagoon, an 11.7 ac tidal water body¹ that is connected through an underground tidal culvert to Marine Stadium, which in turn is connected to Alamitos Bay and the Pacific Ocean. The proposed project area includes the Lagoon as well as adjacent parkland areas. The historic Los Cerritos Wetlands were dredged in the 1920s to form the Lagoon, which has subsequently been used for a variety of public and private recreational events.

¹ LSA Associates, Inc. used a Geographic Information System (GIS) to estimate Colorado Lagoon water body acreage based on a 2006 aerial photo; however, the water body acreage would vary with the tides.

According to the certified 2008 EIR, the Lagoon historically consisted of coastal salt marsh. The original vegetation communities have been eliminated or severely degraded due to the disturbances, steepness of the banks along the northern arm, the presence of invasive nonnative vegetation, and degraded water quality and pollutants in the Lagoon. A few isolated stands of coastal salt marsh occur within highly degraded habitat areas. The project area supports two plant communities (parks and ornamental plantings and southern coastal salt marsh) and four habitat types (mudflats, sandy beach, developed land, and marine open water and subtidal). Additionally, five terrestrial habitat communities exist within the project area including parks and ornamental landscaping, southern coastal salt marsh, mudflats, sandy beach, and developed land.

3.3.2 Certified 2008 EIR

Please refer to Section 4.3 of the certified 2008 EIR for analysis of the potential effect of the Colorado Lagoon Restoration Project on Biological Resources.

The certified 2008 EIR concluded that the proposed project would result in temporary impacts to biological resources as the result of construction, excavation, removal of sediment, debris and marine growth associated with cleaning the box culvert, removal of the tidal gates and sill/structural impediments, and sediment removal in the Lagoon. Additional temporary impacts would result from construction activities to repair and upgrade storm drains.

The certified 2008 EIR concluded that the proposed project would result in permanent positive impacts to biological resources as a result of replacing the existing underground box culvert with a naturalized engineered open water channel between the Lagoon and Marine Stadium and replacing the hard drain outlets with a vegetated bioswale. Implementation of the proposed project as evaluated in the certified 2008 EIR would result in an increase in useable special-interest habitats, improved water quality, and improved ecological function of the Lagoon in general.

In summary, the certified 2008 EIR concluded that with implementation of mitigation measures (refer to Appendix A) there would be no significant adverse impacts related to Biological Resources resulting from implementation of the proposed project.

3.3.3 Project Changes

Changes to the Colorado Lagoon Restoration Project addressed in this Addendum include:

- An increase in the maximum total dredge quantity from 30,000 to 72,000 cy, including dredging in the northern arm;
- Four optional dredge methods including one dry and three wet methods;
- A change in the mode of transportation and disposal destination for dredge material, from trucking to a landfill in the Bakersfield area to trucking or barging to a disposal site at the POLB;
- Requirement to use Tier 2 construction equipment for dredging Options 2, 3, and 4 and Tier 1 construction equipment for Option 1;

- Five alternatives for connecting the Lagoon to Marine Stadium through Marina Vista Park, including a second culvert, an Eliot Street Alignment, an open channel with culverts rather than bridges at the street crossings, an expanded channel concept with one bridge and one culvert, and an expanded channel concept with two bridges; and
- Elimination of the bird island component.

Please refer to Chapter 2.0 for more information regarding the project changes.

The certified 2008 EIR identified the California least tern and California brown pelican as a State and federally endangered and California Federally Protected (CFP) species known to use the project area. The certified 2008 EIR concluded that these species are not expected to be significantly adversely affected as a result of the Lagoon improvements since the Lagoon is a poor quality foraging site and higher quality foraging sites are available short distances up or down the coast. Following the certification of the EIR in 2008, the California brown pelican was removed from the State's endangered species list in February 2009 and was removed from the Federal endangered species list in November 2009. Since the California brown pelican was delisted and is no longer a State or Federal endangered species, implementation of the proposed project would result in impacts less than those evaluated for the proposed project in the certified 2008 EIR. Implementation of the proposed project would result in impacts to the California least tern similar to those evaluated for the proposed project in the certified 2008 EIR and would not change the conclusions of the certified 2008 EIR.

The certified 2008 EIR included construction of a bird island to provide a safe refuge for roosting birds. The bird island was viewed as a possible project enhancement and was not proposed in response to an adverse project impact. As a result of project design modifications, the proposed bird island has been eliminated from the project due to two reasons: (1) the recent delisting of the California brown pelican as a State and Federal threatened species and (2) as a result of Section 7 informal consultation between the USACE and NMFS, the NMFS requested elimination of the bird island because it may adversely affect essential fish habitat (EFH) resulting from impacts associated with overwater structures (letter from NOAA/NMFS to Ken Wong, USACE, on November 25, 2009). The project changes would result in no discernable changes to the construction impacts identified for the proposed project in the certified 2008 EIR.

The certified 2008 EIR concluded that implementation of the proposed project including culvert cleaning in the near-term with the later demolition of the existing concrete culvert, and construction of the Marine Stadium connection would eliminate the tidal connection during those activities. In order to provide a tidal connection during the construction period, construction would be done in sections/stages along their lengths between the Lagoon and Marine Stadium, and the channel would be periodically opened. In addition to coordination with the tidal regime, two subsurface aeration systems would be installed and utilized during construction that closes off the culvert to reduce impacts associated with habitat in the Lagoon to less than significant levels. The existing culvert was cleaned in June 2010; however, additional culvert cleaning may be required in the future (i.e., 5 years). Changes to the proposed project include consideration of five alternative Marine Stadium connections. Implementation of Alternative 1, an underground culvert, would result in interruptions to the tidal connection during construction activities similar to those resulting from construction of the open channel. Therefore, implementation of Alternative 1 would result in similar impacts to those evaluated for the proposed project in the certified 2008 EIR. Implementation of Alternatives 2, 3, 4,

or 4a would result in impacts to habitats in the Lagoon similar to those evaluated for the proposed project in the certified 2008 EIR.

The certified 2008 EIR concluded that dredge and fill activities within the Lagoon and Marine Stadium would result in a temporary loss of eelgrass and/or subtidal eelgrass habitat. Implementation of Mitigation Measures BIO-4 through BIO-7 requiring the creation of additional eelgrass habitat and transplanting of eelgrass at a minimum ratio of 1.2:1 would reduce potential impacts to aquatic nursery sites to less than significant levels. Additionally, the project proposes to increase eelgrass habitat (subtidal areas between 4 ft and 7 ft below mean sea level) by recontouring the Lagoon subtidal and intertidal areas as part of the habitat improvements planned at the Lagoon. The recontouring component would result in 2.70 ac of eelgrass habitat as a component of the subtidal area. Changes to the proposed project include consideration of five alternative Marine Stadium connections. As a result of the project design modifications, implementation of Alternative 1, an underground culvert, would not include planting eelgrass within the improved channel connection since an open channel would not be constructed. Implementation of Alternative 1 would include planting eelgrass within areas of the Lagoon as evaluated for the proposed project in the certified 2008 EIR and implementation of Mitigation Measures BIO-4 through BIO-7 would be required. Implementation of Alternative 1 would result in impacts less than or similar to those evaluated for the project in the certified 2008 EIR; however, it would also result in reduced mitigation opportunity because the open channel would not be created. Implementation of Alternatives 2, 3, 4, or 4a would result construction of a partial open channel or open channel; therefore, impacts would be similar to those evaluated for the project in the certified 2008 EIR and would not change the conclusions of the certified 2008 EIR.

Cumulative Biological Resources Impacts. The certified 2008 EIR concluded that the project as analyzed would not have a significant impact on biological resources. Based on the analysis and information presented above, there is no evidence that the revised Colorado Lagoon Restoration Project would result in more substantial or new significant cumulative impacts related to Biological Resources compared to those disclosed and analyzed in the certified 2008 EIR. Therefore, in consideration of all of the above, the changes to the revised Colorado Lagoon Restoration Project do not require any major changes to the certified 2008 EIR and would not result in any new significant cumulative environmental impacts.

3.3.4 Findings Related to Biological Resources

No New Significant Effects Requiring Major EIR Revisions. Based on the foregoing analysis and information, there is no evidence that project modifications require major change to the certified 2008 EIR. The Colorado Lagoon Restoration Project would not result in new significant environmental impacts related to biological resources, nor is there a substantial increase in the severity of impacts described in the certified 2008 EIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. As previously discussed, the brown pelican (listed as State and federally endangered at the time the EIR was certified in 2008) was removed from the State's endangered species list in February 2009 and was removed from the Federal endangered species list in November 2009; however, this change would not

require major changes to the certified 2008 EIR as the species is not expected to be significantly adversely affected as a result of the proposed project. There is no additional information in the record or otherwise available that indicates that there are substantial changes in circumstances pertaining to biological resources that would require major changes to the certified 2008 EIR.

No New Information Showing Greater Significant Effects than the Certified 2008 EIR. This Addendum has analyzed all available relevant information to determine whether there is new information that was not available at the time the 2008 EIR was certified, indicating that a new significant effect not reported in that document may occur. Based on the information and analyses above, there is no substantial new information indicating that there would be a new significant impact related to biological resources requiring major revisions to the certified 2008 EIR.

No New Information Showing Ability to Reduce Significant Effects in Previous EIR. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more significant impacts pertaining to biological resources identified in and considered by the certified 2008 EIR.

3.4 CULTURAL AND PALEONTOLOGICAL RESOURCES

3.4.1 Existing Environmental Setting

Please refer to Section 4.4 of the certified EIR for a summary of the existing environmental setting related to Cultural Resources.

The cultural, historic, and archaeological resource sections of the certified 2008 EIR include the results of (1) two archival reviews to identify previously recorded cultural resource sites and areas sensitive for potentially important cultural resources, as well as (2) a field survey of the project area to identify previously unrecorded cultural resources. The Cultural Resources section is based on a locality search conducted within a 0.25 mi radius of the project site.

The purpose of the locality search was to establish the status and extent of previously recorded paleontological resources within and adjacent to the project area. With this knowledge, in combination with the history of the project site being dredged with an area of fill, an informed assessment was made of the potential effects of the proposed project on paleontological resources and the kinds of resources that might be expected to be encountered during ground-disturbing activities.

3.4.2 Certified 2008 EIR

Please refer to Section 4.4 of the certified EIR for analyses of the potential effects of the Colorado Lagoon Restoration Project on Cultural and Paleontological Resources.

Based on records searches and an archaeological survey conducted for the proposed project (results of the Cultural Resources Assessment for the Colorado Lagoon Restoration Project, February 2008), the certified 2008 EIR concluded that there are no known cultural resources within the project area. Nevertheless, it is possible that unknown buried cultural resource would be encountered during

ground-disturbing activities. Mitigation was required to reduce impacts to unknown archaeological and paleontological resources.

As stated in the certified 2008 EIR, there are no facts or evidence to support the idea that either Native American or people of European descent have been buried within the project area. However, should human remains be discovered, standard procedures for the respectful handling of human remains during the ground-disturbing activities would be followed.

The certified 2008 EIR identified one historic resource located partially within the project area: The Long Beach Marine Stadium (CA-LAN-056), which is determined to be a significant Point of Historical Interest. The stadium is listed in the California Register of Historical Resources (California Register), the California Historical Landmarks (CHL; No. 1014), and the California Points of Historical Interests (PHI; No. 19-186115). Marine Stadium is not eligible for listing in the National Register of Historic Places (National Register). The certified 2008 EIR concluded that the physical alteration caused by implementation of the proposed project would not result in a substantial adverse change in the significance of Marine Stadium as a locally designated historic resource.

In summary, the certified 2008 EIR found that with implementation of Mitigation Measures (refer to Appendix A), there would be no significant adverse impacts related to Cultural Resources from implementation of the proposed project.

3.4.3 Project Changes

Changes to the Colorado Lagoon Restoration Project addressed in this Addendum include:

- An increase in the maximum total dredge quantity from 30,000 to 72,000 cy, including dredging in the northern arm;
- Four optional dredge methods including one dry and three wet methods;
- A change in the mode of transportation and disposal destination for dredge material, from trucking to a landfill in the Bakersfield area to trucking or barging to a disposal site at the POLB;
- Requirement to use Tier 2 construction equipment for dredging Options 2, 3, and 4 and Tier 1 construction equipment for Option 1;
- Five alternatives for connecting the Lagoon to Marine Stadium through Marina Vista Park, including a second culvert, an Eliot Street Alignment, an open channel with culverts rather than bridges at the street crossings, an expanded channel concept with one bridge and one culvert, and an expanded channel concept with two bridges; and
- Elimination of the bird island component.

Please refer to Chapter 2.0 for more information regarding the project changes.

The certified 2008 EIR identified Marine Stadium as a historical resource which is listed in the California Register, the CHL (as No. 1014), and the PHI (as No. 19-186115), and is determined to be a significant Point of Historical Interest. The proposed project, as evaluated in the certified 2008 EIR, includes alteration of the existing tidal connection between Marine Stadium and the Lagoon. This

would physically alter the Marine Stadium by (a) removing impedances at the Marine Stadium opening of the culvert and (b) developing an open channel through Marina Vista Park that connects to Marine Stadium. Changes to the proposed project include consideration of five alternative Marine Stadium connections. Implementation of Alternative 1, an underground culvert, would not result in construction of an open channel but would result in developing an improved channel connection, which would physically alter Marine Stadium. Therefore, implementation of Alternative 1 would result in impacts similar to those evaluated for the proposed project in the certified 2008 EIR. Implementation of Alternatives 2, 3, 4, or 4a would result construction of a partial open channel or open channel; therefore, impacts would be similar to those evaluated for the project in the certified 2008 EIR and would not change the conclusions of the certified 2008 EIR.

The certified 2008 EIR concluded that implementation of the proposed project including dredging portions of the Lagoon, developing an open channel, and constructing bioswales and storm drain treatments would require excavation and trenching; however, all of these project components are within the previous dredging and/or fill areas and depths. Although modifications to the project design would slightly change the horizontal limits of grading and dredging within the Lagoon (up to 20 ft deep below msl), dredging activities would be located within the original project limits identified during construction of the Lagoon. Additional changes to the proposed project include consideration of five alternative Marine Stadium connections. All five alternative Marine Stadium connections would occur within an area previously filled and would not change the low likelihood of encountering archaeological resources. Therefore, implementation of any of the five alternative Marine Stadium connections would result in impacts similar to those evaluated for the proposed project in the certified 2008 EIR and would not change the conclusions of the certified 2008 EIR.

The certified 2008 EIR concluded that implementation of the proposed project including dredging portions of the Lagoon, developing an open channel, and constructing bioswales and storm drain treatments would require excavation and trenching; however, all of these project components are located within soils that have been highly disturbed. Excavation and trenching for the various components of the lagoon would occur within the previously identified dredge and fill areas. Changes to the proposed project include consideration of five alternative Marine Stadium connections. The various locations of the five alternative Marine Stadium connections would all occur within an area previously filled and therefore not change the low likelihood of encountering paleontological resources in the park. Therefore, implementation of any of the five alternative Marine Stadium connections would result in impacts similar to those evaluated for the proposed project in the certified 2008 EIR and would not change the conclusions of the certified 2008 EIR.

As identified in the certified 2008 EIR, the project area does not contain any formal cemeteries and archival research and an archaeological survey in connection with the proposed project did not indicate the presence of any previous or existing known human remains in the project area. The project site has undergone extensive ground disturbance associated with dredge and fill. The project site has been used continually as a public park since the fill activities. As a result, the proposed project changes, including an increase in the quantity of material dredged from the Lagoon, are not anticipated to disturb any human remains, including those of formal cemeteries. Changes to the proposed project include consideration of five alternative Marine Stadium connections. The various locations of the five alternative Marine Stadium connections would all occur within an area previously filled and therefore do not change the very low likelihood of encountering human remains. Therefore, implementation of any of the five alternative Marine Stadium connections would result in

impacts similar to those evaluated for the proposed project in the certified 2008 EIR and would not change the conclusions of the certified 2008 EIR.

Cumulative Impacts. The certified 2008 EIR concluded that the cumulative effects of the proposed project would be less than significant as no cultural resources exist on the project site, and the proposed project would not contribute to the cumulative effects of other past, present, or reasonably foreseeable future projects related to undiscovered archaeological and paleontological resources. Based on the analysis and information presented above, there is no evidence that the proposed revised Colorado Lagoon Restoration Project would result in new significant cumulative impacts to cultural or paleontological resources compared to those disclosed in the certified 2008 EIR. Therefore, in consideration of all of the above, the changes to the Colorado Lagoon Restoration Project do not require any major changes to the certified 2008 EIR and would not result in any new significant cumulative environmental impacts.

3.4.4 Findings Related to Cultural Resources

No New Significant Effects Requiring Major EIR Revisions. Based on the foregoing analysis and information, there is no evidence that project modifications require a major change to the certified 2008 EIR. The Colorado Lagoon Restoration Project would not result in new significant environmental impacts related to cultural resources, nor is there a substantial increase in the severity of impacts described in the certified 2008 EIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available that indicates that there are substantial changes in circumstances pertaining to cultural resources that would require major changes to the certified 2008 EIR.

No New Information Showing Greater Significant Effects than the Certified 2008 EIR. This Addendum has analyzed all available relevant information to determine whether there is new information that was not available at the time the 2008 EIR was certified, indicating that a new significant effect not reported in that document may occur. Based on the information and analyses above, there is no substantial new information indicating that there would be a new significant impact related to cultural resources requiring major revisions to the certified 2008 EIR.

No New Information Showing Ability to Reduce Significant Effects in Previous EIR. There are no alternatives to the proposed project or additional mitigation measures that would substantially reduce one or more significant impacts pertaining to cultural resources identified in and considered by the certified 2008 EIR.

3.5 GEOLOGY AND SOILS

3.5.1 Existing Environmental Setting

Please refer to Section 4.5 of the certified 2008 EIR for a summary of the existing environmental setting for Geology and soils based on a technical study titled, "A Seismic Hazard Evaluation of the Long Beach 7.5-minute Quadrangle," prepared by the California Geological Survey (1998).

As stated in the certified 2008 EIR, the site lies within the southwestern block of the Los Angeles Basin, which comprises a low alluvial floodplain. The floodplain is bound by a line of elongated low hills, folds, and faults, which delineate the northwest-trending Newport-Inglewood Structural Zone.

According to the certified 2008 EIR, prior to extensive dredging of the Lagoon and Marine Stadium area in the 1920s, the site was a tidal mudflat that received alternating alluvial deposits of marine sands, organic silts and clays, and fluvial deposits. In the 1960s, the previously dredged area between what is now the north end of Marine Stadium and the south end of the Lagoon was filled and the existing underground box culvert constructed. This was done as part of the construction for the then-proposed Pacific Coast Freeway. This "filled" area is now Marina Vista Park.

According to the certified 2008 EIR and consistent with the project area's history, the soil underlying the project site is characterized by predominantly younger alluvial deposits and artificial fill. Younger alluvial deposits consist of Holocene alluvial soft clay, silt, silty sand, and sand. The artificial fill soils within Marina Vista Park vary with no consistent pattern of stratification among sites. Soil testing indicates that the fill consists of undifferentiated young and old soils, which generally include clay, sandy clays, and silty sand.

3.5.2 Certified 2008 EIR

Please refer to Section 4.5 of the certified 2008 EIR for analyses of potential effects of the Colorado Lagoon Restoration Project related to Geology and Soils.

The certified 2008 EIR concluded that the proposed project would utilize the existing sewer system. The proposed project does not include the use of septic tanks or alternative methods for disposal of wastewater into the subsurface soils; therefore, there would be no impact with regard to wastewater disposal.

According to the certified 2008 EIR, large volumes of soils and sediment would be dredged and excavated, which would expose areas of soil to wind and water erosion. However, after the completion of dredging, slope recontouring, development of the open channel between the Lagoon and Marine Stadium, and establishment of the landscaped areas, erosion potential would be minimal. All soils used in the project would be properly compacted in accordance with City specifications. The project design incorporates the use of riprap, erosion control blankets, and other erosion controls to reduce erosion and scour through the channel connection. The proposed project would also be subject to SWPPP requirements for erosion and sediment control during construction. Best Management Practices (BMPs) would be undertaken to control runoff and erosion from earthmoving activities such as excavation, recontouring, and compaction. All trenching and recontouring activities would be performed under the observation of a qualified engineer. The proposed project would be required to adhere to all applicable construction standards with regard to erosion control. Implementation of

mitigation measures would reduce potential impacts related to reduce fugitive dust and transport of soil to less than significant levels.

The certified 2008 EIR concluded that adherence to all applicable seismic codes and requirements during project implementation would reduce impacts related to expansive soils that could result from the proposed project components to a less than significant level. Implementation of Mitigation Measure GEO-1 would reduce potential impacts related to expansive soils to be less than significant levels.

According to the certified 2008 EIR, the project site is not located within a currently designated Alquist-Priolo Earthquake Fault Zone, nor is it currently identified by the regulatory community as being located within zones of either primary or secondary co-seismic surface deformation (e.g., pressure ridges, escarpments, and fissures). Thus, the site is not expected to experience primary surface fault rupture or related ground deformation. However, since the site is 4 miles from the Newport-Inglewood Structural Zone, significant ground shaking or secondary seismic ground deformation effects would occur at the site should a major seismic event occur along the Newport-Inglewood Structural Zone. The restroom structures would be designed and built in conformance with the adopted Uniform Building Code, including the seismic safety standards. Additionally, the bridges spanning the open channel at East Colorado and East Eliot Streets would be designed and built in conformance with California Department of Transportation (Caltrans) and American Association of State Highway and Transportation Officials (AASHTO) standards. Implementation of Mitigation Measures GEO-1 and GEO-2 would reduce potential seismic ground-shaking impacts to less than significant levels.

According to the certified 2008 EIR, the proposed project would be designed and implemented in accordance with the City's design standards and all applicable building codes, including Caltrans and AASHTO standards related to bridge design and construction. Since no habitable structures would be constructed (other than the three public restroom structures), applicable regulations would primarily involve soil compaction and bridge design requirements. Implementation of Mitigation Measures GEO-1 and GEO-2 would reduce potential impacts related to liquefaction, lateral spreading, and subsidence to less than significant levels.

As stated in the certified 2008 EIR, the project area is surrounded by developed areas, and site topography is relatively level; therefore, the possibility of a seismically induced landslide is remote. Additionally, the site is located near any known historical landslides. According to the California Department of Conservation's Seismic Hazard Zones Map for the *Long Beach* quadrangle, the project area does not fall within any earthquake-induced landslide zones. Adherence to all applicable seismic codes and requirements during project implementation would reduce to a less than significant level any impacts related to landslides that could result from these project components. Implementation of Mitigation Measure GEO-1 would reduce potential impacts related to landslides to less than significant levels.

In summary, the certified 2008 EIR concluded that with implementation of mitigation measures (refer to Appendix A), there would be no significant adverse impacts related to Geology and Soils resulting from implementation of the proposed project.

3.5.3 Project Changes

Changes to the Colorado Lagoon Restoration Project addressed in this Addendum include:

- An increase in the maximum total dredge quantity from 30,000 to 72,000 cy, including dredging in the northern arm;
- Four optional dredge methods including one dry and three wet methods;
- A change in the mode of transportation and disposal destination for dredge material, from trucking to a landfill in the Bakersfield area to trucking or barging to a disposal site at the POLB;
- Requirement to use Tier 2 construction equipment for dredging Options 2, 3, and 4 and Tier 1 construction equipment for Option 1;
- Five alternatives for connecting the Lagoon to Marine Stadium through Marina Vista Park, including a second culvert, an Eliot Street Alignment, an open channel with culverts rather than bridges at the street crossings, an expanded channel concept with one bridge and one culvert, and an expanded channel concept with two bridges; and
- Elimination of the bird island component.

Please refer to Chapter 2.0 for more information regarding the project changes.

The certified 2008 EIR concluded that large volumes of soils and sediment would be dredged and excavated during implementation of the proposed project, which would expose areas of soil to wind and water erosion. Changes to the proposed project include an increase in the quantity of material dredged from the Lagoon as well as consideration of five alternative Marine Stadium connections. The proposed revised project would include an increase in the quantity of material dredged from the Lagoon including dredging the northern arm. All dredging activities would be required to adhere to all applicable construction standards with regard to erosion control. Implementation of the proposed revised project would result in impacts similar to those evaluated in the certified 2008 EIR and would not change the conclusion of the certified 2008 EIR. Marine Stadium connection Alternative 1 includes construction of an underground culvert instead of an open channel. Construction of the underground culvert would be required to adhere to all applicable construction standards with regard to erosion control. Implementation of all five alternative Marine Stadium connections would result in impacts similar to those evaluated in the certified 2008 EIR and would not change the conclusions of the certified 2008 EIR.

The certified 2008 EIR concluded that construction of the two bridges would result in less than significant impacts related to seismic ground-shaking with implementation of Mitigation Measures GEO-1 and GEO-2. Changes to the proposed project include the consideration of five alternative Marine Stadium connections. As a result of project design modifications, Alternative 2 includes construction of two bridges at Colorado Street and Eliot Street while Alternative 4 includes construction of one bridge at Eliot Street. Construction of Alternatives 2, 4, or 4a would require implementation of Mitigation Measures GEO-1 and GEO-2. Implementation of Alternatives 2, 4, or 4a would result in impacts less than or similar to those evaluated for the proposed project in the certified 2008 EIR and would not change the conclusions of the certified 2008 EIR. Implementation of Alternatives 1 and 3 do not include construction of bridges; therefore, impacts would be less than those evaluated for the proposed project in the certified 2008 EIR.

Cumulative Impacts. The certified 2008 EIR concluded that the proposed project as analyzed would not have a significant impact related to geology and soils. Based on the analysis and information presented above, there is no evidence that the Colorado Lagoon Restoration Project would result in more substantial or new significant cumulative impacts to geology and soils compared to those disclosed and analyzed in the certified 2008 EIR. Therefore, in consideration of all of the above, the changes to the Colorado Lagoon Restoration Project do not require any major changes to the certified 2008 EIR and would not result in any new significant cumulative environmental impacts.

3.5.4 Findings Related to Geology and Soils

No New Significant Effects Requiring Major EIR Revisions. Based on the foregoing analysis and information, there is no evidence that project modifications require a major change to the certified 2008 EIR. The revised Colorado Lagoon Restoration Project would not result in new significant environmental impacts related to geology and soils, nor is there a substantial increase in the severity of impacts described in the certified 2008 EIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available that indicated that there are substantial changes in circumstances pertaining to geology and soils that would require major changes to the certified 2008 EIR.

No New Information Showing Greater Significant Effects than the Certified 2008 EIR. This Addendum has analyzed all available relevant information to determine whether there is new information that was not available at the time the 2008 EIR was certified, indicating that a new significant effect not reported in that document may occur. Based on the information and analyses above, there is no substantial new information indicating that there would be a new significant impact related to geology and soils requiring major revisions to the certified 2008 EIR.

No New Information Showing Ability to Reduce Significant Effects in Previous EIR. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more significant impacts pertaining to geology and soils identified in and considered by the certified 2008 EIR.

3.6 HAZARDS AND HAZARDOUS MATERIALS

3.6.1 Existing Environmental Setting

Please refer to Section 4.6 of the certified EIR for a summary of the existing environmental setting for Hazards and Hazardous Materials based on several reports that characterized site sediments within the Colorado Lagoon water body and the existing soil along the proposed channel alignment within Marina Vista Park and the health risk evaluation that was prepared for the proposed project.

As stated in the certified 2008 EIR, sediment samples were collected from the Lagoon in 2004 and 2006 to characterize existing sediment on the Lagoon floor. In addition, sampling was completed in

2008 to characterize the existing soils within the proposed open channel alignment. An Health Risk Assessment (HRA) was also completed in 2008 to identify any potential human health risks that may result from implementation of Phase 2 of the proposed project (connecting the Lagoon to Marine Stadium through Marina Vista Park).

Additional sediment testing was conducted in 2009 (reports finalized in 2010). The purpose of this study was to provide more detailed information on the horizontal and vertical extent of contamination in the central arm of the lagoon. Lead and zinc were specifically tested by previous work has demonstrated that lead is a good indicator of other contaminants present in the Lagoon.

3.6.2 Certified 2008 EIR

Please refer to Section 4.6 of the certified 2008 EIR for analyses of potential effects of the Colorado Lagoon Restoration Project related to hazards and hazardous materials.

The certified 2008 EIR concluded that the proposed project would not change the existing recreation and open space uses of the project site, nor would it introduce new uses or equipment that would result in hazardous emissions or involve hazardous materials.

As stated in the certified 2008 EIR, the proposed project would include the dredging of hazardous and nonhazardous sediments within the western arm and central area of the Lagoon utilizing either a wet or dry excavation method. Excavated soil would be dried on site and then transported via truck to a landfill in the Bakersfield area. Implementation of Mitigation Measures HAZ-3 and HAZ-4 would ensure that construction impacts related to hazards and hazardous materials would be less than significant.

As stated in the certified 2008 EIR, the proposed project would include demolishing two existing restroom structures on either side of Eliot Street. Based on the estimated age of the two restroom structures, there is potential for LBP and/or PCBs to be present within the structures. Implementation of pre-demolition surveys, as discussed in Mitigation Measure HAZ-1, would reduce potential impacts related to hazards and hazardous materials to less than significant levels.

The certified 2008 EIR concluded that removal of the north parking lot and the creation of an East 6th Street access road would potentially require removal or relocation of existing PCB-containing transformers. Implementation of Mitigation Measure HAZ-2 would ensure that potential impacts related to hazards and hazardous materials would be less than significant.

According to the certified 2008 EIR, based on the results of the soil sampling performed for the soils at Marina Vista Park, the soils excavated as part of the open channel construction are not anticipated to pose a concern to human health of the public or sensitive receptors such as residences, hospitals, or schools during routine transport, use, or disposal. Therefore, impacts related to hazards and hazardous materials are considered less than significant.

In summary, the certified 2008 EIR concluded that with implementation of mitigation measures (refer to Appendix A), there would be no significant adverse impacts related to hazards and hazardous materials resulting from implementation of the proposed project.

3.6.3 Project Changes

Changes to the Colorado Lagoon Restoration Project addressed in this Addendum include:

- An increase in the maximum total dredge quantity from 30,000 to 72,000 cy, including dredging in the northern arm;
- Four optional dredge methods including one dry and three wet methods;
- A change in the mode of transportation and disposal destination for dredge material, from trucking to a landfill in the Bakersfield area to trucking or barging to a disposal site at the POLB;
- Requirement to use Tier 2 construction equipment for dredging Options 2, 3, and 4 and Tier 1 construction equipment for Option 1;
- Five alternatives for connecting the Lagoon to Marine Stadium through Marina Vista Park, including a second culvert, an Eliot Street Alignment, an open channel with culverts rather than bridges at the street crossings, an expanded channel concept with one bridge and one culvert, and an expanded channel concept with two bridges; and
- Elimination of the bird island component.

Please refer to Chapter 2.0 for more information regarding the project changes.

The certified 2008 EIR concluded that the dredging of hazardous and nonhazardous sediments within the western arm and central area of the Lagoon would result in less than significant impacts with implementation of Mitigation Measures HAZ-3 and HAZ-4. As a result of project design modifications and post EIR regulatory agency requirements pursuant to the Federal Clean Water Act, the maximum total quantity of dredge material has increased as well as the addition of dredging within the northern arm of the Lagoon (both hazardous and nonhazardous material). Furthermore, the excavated soil would be dried on site but would be transported after treatment (to stabilize the contaminants of concern) via truck or barge to a disposal site at the POLB. The treatment would mix the dredge material with cement lime and/or other chemical reagents to stabilize the sediments. The proposed revised project would be required to implement Mitigation Measures HAZ-3 and HAZ-4, which would ensure that the dredging and handling of hazardous materials are in compliance with Federal, State, and local regulations during construction and that the project is in compliance with the workplan overseen by the Office of Environmental Health Hazard Assessment (OEHHA). No changes to Mitigation Measures HAZ-3 or HAZ-4 are required as a result of project changes. With implementation of Mitigation Measures HAZ-3 and HAZ-4, the project changes would result in similar impacts to those evaluated for the proposed project in the certified 2008 EIR and would not change the conclusions of the certified 2008 EIR.

The certified 2008 EIR concluded that, based on the results of the soil sampling performed for the soils at Marina Vista Park, the soils excavated as part of the open channel construction are not anticipated to pose a concern to human health of the public or sensitive receptors such as residences, hospitals, or schools during routine transport, use or disposal. Changes to the proposed project include consideration of five alternative Marine Stadium connections. The five alternative Marine Stadium connections are proposed in slightly different alignments/locations that the proposed open channel but would be constructed within the area of Marina Vista Park that was analyzed in the certified 2008 EIR. Therefore, implementation of any of the five alternative Marine Stadium

connections would result in similar impacts to those evaluated for the proposed project in the certified 2008 EIR.

The certified 2008 EIR concluded that after loading, covering, and manifesting the trucks containing the impacted soils, the trucks destined for the Kettleman Hills Landfill would be routed north on Park Avenue, east on East 7th Street, north on I-605 and then north on I-5. Removal trucks transporting materials to Class III landfills in the region would also be routed north on Park Avenue, east on East 7th Street, and north on I-605. Removal vehicles destined to the POLB would travel east on East 7th Street, north on I-405, and then south on I-710. Implementation of Mitigation Measures HAZ-3 and HAZ-4 would ensure that construction impacts related to the routine transport and disposal of potentially impacted sediments would be less than significant. Changes to the proposed project include treated sediment would be transported to the POLB. The treated sediment would no longer be transported to Kettleman Hills, approximately 200 miles from the Lagoon. Transport of treated sediment by truck to the POLB would continue to travel on the same haul route identified in the certified 2008 EIR. However, there is an alternative for treated sediment to be trucked to Marine Stadium, and then barged to the POLB. In this case, vehicles destined to Marine Stadium would travel north through Recreation Park to East 6th Street, south on Park Avenue, and southeast on East Appian Way. Therefore, implementation of the revised haul routes would result in similar or reduced impacts to those evaluated for the proposed project in the certified 2008 EIR.

Cumulative Impacts. The certified 2008 EIR concluded that the project as analyzed would not have a significant impact related to hazards and hazardous materials. Based on the analysis and information presented above, there is no evidence that the revised Colorado Lagoon Restoration Project would result in more substantial or new significant cumulative impacts related to hazards or hazardous materials compared to those disclosed and analyzed in the certified 2008 EIR. Therefore, in consideration of all of the above, the changes to the Colorado Lagoon Restoration Project do not require any major changes to the certified 2008 EIR and would not result in any new significant cumulative environmental impacts.

3.6.4 Findings Related to Hazards and Hazardous Materials

No New Significant Effects Requiring Major EIR Revisions. Based on the foregoing analysis and information, there is no evidence that project modifications require a major change to the certified 2008 EIR. The revised Colorado Lagoon Restoration Project would not result in new significant environmental impacts related to hazards and hazardous materials, nor is there a substantial increase in the severity of impacts described in the certified 2008 EIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available that indicates that there are substantial changes in circumstances pertaining to hazards and hazardous materials that would require major changes to the certified 2008 EIR.

No New Information Showing Greater Significant Effects than the Certified 2008 EIR. This Addendum has analyzed all available relevant information to determine whether there is new

information that was not available at the time the 2008 EIR was certified, indicating that a new significant effect not reported in that document may occur. Based on the information and analyses above, there is no substantial new information indicating that there would be a new significant impact related to hazards and hazardous materials requiring major changes to the certified 2008 EIR.

No New Information Showing Ability to Reduce Significant Effects in Previous EIR. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more significant impacts pertaining to hazards and hazardous materials identified in and considered by the certified 2008 EIR.

3.7 HYDROLOGY AND WATER QUALITY

3.7.1 Existing Environmental Setting

Please refer to Section 4.7 of the certified 2008 EIR for a summary of the existing environmental setting related to hydrology and water quality.

According to the certified 2008 EIR, the Lagoon is a relatively small tidal lagoon connected to Alamitos Bay and the Pacific Ocean through a tidal culvert to Marine Stadium. It serves three main functions: hosting sensitive habitat, providing public recreation, and retaining and conveying storm floods.¹

As stated in the certified 2008 EIR, the Lagoon watershed lies entirely within the boundaries of the City. The watershed is almost entirely built out; remaining open space includes the City Recreation Park Area, consisting of two golf courses and adjacent park areas, the Pacific Electric (PE) right-of-way (ROW) greenbelt, and to a lesser degree the picnic and park areas surrounding the Lagoon.²

According to the certified 2008 EIR, surface water runoff within the watershed occurs as overland runoff into curb inlets and catch basins, and as sheet flow near the shores of the Lagoon. There are five major storm drain systems in the area; four of the major systems outfall into the Lagoon, and the fifth major system outfalls into Marine Stadium. Currently, the County of Los Angeles Termino Avenue Drain Project (TADP) is under construction. This project would realign the Termino Avenue Drain (TAD) to discharge into Marine Stadium instead of into the Lagoon, as it does currently; the TADP would also include a low-flow diversion system to divert non-storm flows from the storm drain to an existing County sanitary sewer line. The low-flow diversion system would be operational year round (during wet and dry seasons). This system would be able to hold up to 80,000 gallons per day, which would be redirected into the sewer lines each day between 12 a.m. and 6 a.m. All storm event's first flushes would be captured. This is a permanent fix to the contamination problem. This system will be fully operational by November 2010. With the TADP, all major storm system outfalls (4) would be diverted or redirected. The remaining smaller local drains (7) would either be eliminated as part of the TADP or filter through a bioswale. Therefore, with implementation of the TADP, three of the major storm drain systems would outfall into the Lagoon, and two major storm drain systems would outfall into Marine Stadium. Construction of the TADP began in October 2009 at Marine Stadium and is anticipated to be complete by November 2011.

¹ Colorado Lagoon Restoration Feasibility Study Final Report, Moffatt & Nichol, February 4, 2005.

² Ibid.

According to the certified 2008 EIR, seven minor/local storm drains also discharge into the Lagoon. With implementation of the TADP, three minor/local storm drains would be redirected to discharge into Marine Stadium, leaving four minor/local storm drains discharging into the Lagoon.

3.7.2 Certified 2008 EIR

Please refer to Section 4.7 of the certified EIR for analyses of the potential effects of the Colorado Lagoon Restoration Project on hydrology and water quality. Project impacts related to hydrology and water quality were evaluated based on the project's adherence to local, State, and Federal standards; proposed land use; site design; and proposed BMPs for control of surface runoff and reduction of pollutants in runoff.

As stated in the certified 2008 EIR, the project site is located in Flood Zone X and Flood Zone AE on the Flood Insurance Rate Map (FEMA FIRM Panel No. 0601360025C). The proposed project includes several water quality, habitat, operational, and recreational improvement components. No housing or habitable structures, other than two replacement restroom structures, are proposed. The water quality component includes construction of an open channel and two at-grade bridges. Combined with the reduction of low flow and storm flow entering the Lagoon due to the TADP, the proposed project components would enhance the existing flood conveyance facilities and increase flood protection over existing conditions. Therefore, the proposed project is expected to result in a beneficial effect related to flood protection.

As stated in the certified 2008 EIR, the proposed project included the removal and replacement of two existing restroom structures located on either side of Eliot Street and the construction of two bridge structures that would span the proposed open channel. Although the proposed restroom structures and bridges would be placed within the Flood Zone AE, as in kind structures the proposed restroom structures and bridges would not impede or redirect flood flows. Sheet flow would continue to flow in the same manner as currently exists. Therefore, impacts related to floods from the proposed restroom and bridge structures are less than significant.

As stated in the certified 2008 EIR, according to the City General Plan Seismic and Safety Element, the proposed project is within a seiche and tsunami influence area. Although extremely rare, the project site is located at the back of Alamitos Bay, which is adjacent to the Pacific Ocean and could potentially be affected by a storm surge associated with a tsunami. Due to the water-oriented nature and purpose of the project, the proposed improvements are creating no further risk than currently exists on site to withstand inundation from seiche or tsunami. The proposed project would not change or worsen this existing condition, and there is an established warning system in place that would provide early notification of an advancing tsunami that would allow for evacuation. Therefore, the impacts of the proposed project related to potential inundation of the Lagoon are considered less than significant.

According to the certified 2008 EIR, the project site is not located within a groundwater recharge basin and there are no production wells within the vicinity. Therefore, there would be no impact to groundwater supply with implementation of the proposed project. Due to the variable depth of groundwater at the project site, groundwater dewatering may be required during construction dredging activities. Dewatering activities would be temporary and the volume of groundwater that

may be removed would not be substantial. Based on the proposed project (restoration project), groundwater withdrawal would not be required during operation of the project. Therefore, impacts to groundwater would not be significant.

The certified 2008 EIR concluded that clearing/cleaning the culvert of sediment, biofouling debris, and structural impedances would improve tidal exchange through the culvert, but would not alter the drainage pattern of the project site. Cleaning the culvert of impedances would not result in erosion or siltation on or off site. The effect of cleaning the culvert would be to increase the tide range and tidal prism over existing conditions. Increasing the tide range and tidal prism would enable more rapid tidal flushing and more frequent turnover of Lagoon water over existing conditions, which would improve water quality. However, the culvert cleaning would not increase tidal flushing so rapidly as to cause erosion at each end, as the culvert was designed to function at this capacity. Therefore, impacts from the culvert cleaning related to erosion are less than significant. Implementation of Mitigation Measure WQ-3 requires that the culvert tidal connection is established every 2 weeks for 2 to 3 days during culvert cleaning and requires the use of two subsurface aeration systems, which would reduce the temporary water quality impacts associated with the culvert cleaning to less than significant levels. In addition, the use of a silt screen around each end of the culvert shall be implemented to minimize sediment/turbidity impacts to the receiving waters when the culvert is periodically opened to flush out the potentially stagnant Lagoon waters. Mitigation Measure WQ-4 requires that daily bacteria testing shall be conducted during construction activities associated with culvert cleaning in order to ensure conditions are acceptable to maintain swimming within the Lagoon. Implementation of these water quality protection features would result in less than significant impacts to water quality in the Lagoon during the culvert cleaning.

According to the certified 2008 EIR, the storm drain upgrade components of the proposed project would upgrade seven storm drains (three major system outfalls and four local drains) that discharge into the north shore of the Lagoon. The improvements consist of redirecting low flows from the three major system outfalls to a wet well (water storage area) that would discharge the low flows to the sanitary sewer system for treatment to minimize contamination of water and sediment. Therefore, the proposed project would not increase the rate or amount of surface runoff in a manner that would result in flooding on or off site.

As stated in the certified 2008 EIR, flows from the four local storm drains that are not diverted to the wet well would flow into vegetated bioswales. The proposed bioswales would not alter the overall drainage pattern of the site but would promote infiltration and reduce the flow velocity of storm water runoff. Therefore, impacts associated with drainage and runoff volume are considered less than significant.

The certified 2008 EIR concluded that the drainage pattern or the rate or amount of surface runoff would not change from existing conditions as a result of the proposed open channel and bridges. Similarly, implementation of the two bridges would not alter the drainage pattern of the site. Creating an open channel where the culvert currently exists and building bridges over the channel would not alter the drainage pattern of the site. Flows would continue to move into and out of the Lagoon via the channel in the same manner as the culvert. Riprap would be placed on the Lagoon side of the channel entrance to prevent erosion. In addition, the use of erosion-control blankets throughout the channel would also limit potential erosion impacts. Therefore, there would not be increased erosion within the proposed open channel or at the mouth of either side of the proposed open channel. In summary, the

use of erosion-control blankets and riprap within the proposed open channel would reduce potential erosion impacts to less than significant levels.

The certified 2008 EIR concluded that removal of the north parking lot, access road, and restroom structure would result in the decrease of approximately 2.26 ac of impervious surface. As a result of implementation of this component, the pervious area of the site would increase by 2.26 ac. Therefore, this component would result in a potential decrease in the surface runoff from the site and would have a positive impact on the site.

As stated in the certified 2008 EIR, during construction, the City is required to adhere to the General Construction Permit and utilize typical BMPs specifically identified in the SWPPP for the project in order to prevent construction pollutants from contacting storm water and to keep all products of erosion from moving off site into receiving waters (Mitigation Measures WQ-1 and WQ-2). Compliance with the General Construction Permit has been determined by the SWRCB to ensure that water quality standards (protection of beneficial uses and adherence to water quality objectives) are adequately protected during the construction period. Therefore, Mitigation Measures WQ-1 and WQ-2 would reduce potential waste discharge and water quality violations related to runoff during construction of the storm drain upgrade component to less than significant levels.

The certified 2008 EIR concluded that construction of the proposed open channel would result in potentially significant impacts related to waste discharge and water quality. Implementation of Mitigation Measures WQ-1 through WQ-4 would reduce potential waste discharge and water quality violations related to runoff during construction of the proposed open channel to less than significant levels.

The certified 2008 EIR concluded that construction of the two bridges over the open channel would result in potentially significant impacts to water quality. The construction of the bridges would be near-grade and would require special consideration to prevent adverse direct impacts to water quality, specifically measures to block pollutants from entering the Lagoon and Marine Stadium. Construction of each bridge would require demolition of the existing asphalt street; therefore, there is a potential for pollutants to enter the water bodies from construction work. The soil excavation required for bridge construction would be the same as that required for channel construction. Implementation of construction BMPs as presented in Mitigation Measure WQ-2 would reduce potentially adverse water quality impacts to less than significant levels.

The certified 2008 EIR concluded that dredging activities in the Lagoon would result in temporary impacts to water quality related to suspended solids in the water column during dredging activities. To reduce potentially significant water quality impacts to a less than significant level, Mitigation Measures WQ-2, WQ-6, and WQ-7 would be implemented during construction activities and would limit the area subject to these temporary effects.

The certified 2008 EIR concluded that recontouring the Lagoon side slopes, and revegetating the Lagoon would potentially result in impacts to water quality. Implementation of Mitigation Measures WQ-1, WQ-2, and WQ-8, would reduce impacts related to water quality to less than significant levels.

In summary, the certified 2008 EIR concluded that with implementation of mitigation measures (refer to Appendix A), there would be no significant adverse impacts related to hydrology and water quality resulting from implementation of the proposed project.

3.7.3 Project Changes

Changes to the Colorado Lagoon Restoration Project addressed in this Addendum include:

- An increase in the maximum total dredge quantity from 30,000 to 72,000 cy, including dredging in the northern arm;
- Four optional dredge methods including one dry and three wet methods;
- A change in the mode of transportation and disposal destination for dredge material, from trucking to a landfill in the Bakersfield area to trucking or barging to a disposal site at the POLB;
- Requirement to use Tier 2 construction equipment for dredging Options 2, 3, and 4 and Tier 1 construction equipment for Option 1;
- Five alternatives for connecting the Lagoon to Marine Stadium through Marina Vista Park, including a second culvert, an Eliot Street Alignment, an open channel with culverts rather than bridges at the street crossings, an expanded channel concept with one bridge and one culvert, and an expanded channel concept with two bridges; and
- Elimination of the bird island component.

Please refer to Chapter 2.0 for more information regarding the project changes.

The certified 2008 EIR concluded that the proposed open channel and two bridges would be constructed within Flood Zone AE. Changes to the proposed project include consideration of five alternative Marine Stadium connections. Alternative 1 does not include construction of an open channel; however, an underground culvert would be constructed within the flood zone. All five alternative Marine Stadium connections would be constructed within the flood zone; however, none of the connections qualifies as housing or habitable structures. Therefore, impacts associated with construction of the alternative Marine Stadium connections would be similar to those evaluated for the proposed project in the certified 2008 EIR. As a result of the project design modifications, Alternatives 2 and 4a include construction of two bridges at Colorado Street and Eliot Street, while Alternative 4 includes construction of one bridge at Eliot Street. Implementation of Alternatives 2, 4 and 4a would result in impacts less than or similar to those evaluated for the proposed project in the certified 2008 EIR and do not change the conclusions of the certified 2008 EIR. Implementation of Alternatives 1 or 3 do not include construction of bridges and would result in impacts less than those evaluated for the proposed project in the certified 2008 EIR.

The certified 2008 EIR concluded that construction of the proposed open channel and two bridges would not alter the drainage pattern or the rate or amount of surface runoff on the site. Changes to the proposed project include consideration of five alternative Marine Stadium connections. Alternative 1 includes the construction of an underground culvert that would increase the amount of tidal flushing by facilitating the movement of flows in and out of the Lagoon similar to the existing culvert. Implementation of any of the five alternative Marine Stadium connections would not alter the

drainage pattern or the rate or amount of surface runoff on the site; therefore, impacts would be less than or similar to those evaluated for the proposed project in the certified 2008 EIR. As a result of the project design modifications, Alternatives 2 and 4a include construction of two bridges at Colorado Street and Eliot Street, while Alternative 4 includes construction of one bridge at Eliot Street. Implementation of Alternatives 2, 4 and 4a would result in impacts less than or similar to those evaluated for the proposed project in the certified 2008 EIR and would not change the conclusions of the certified 2008 EIR. Implementation of Alternatives 1 or 3 do not include construction of bridges and would result in impacts less than those evaluated for the proposed project in the certified 2008 EIR.

The certified 2008 EIR included construction of a bird island to proposal provide a safe refuge for roosting birds. As a result of project design modifications, the bird island has been removed from the project due to two reasons: (1) the recent delisting of the California brown pelican as a State and Federal threatened species and (2) as a result of Section 7 informal consultation between the USACE and NMFS, the NMFS requested elimination of the bird island because it may adversely affect EFH resulting from impacts associated with overwater structures (letter from NOAA/NMFS to Ken Wong, USACE, on November 25, 2009). The project changes would result in no discernable changes to the construction impacts identified for the proposed project in the certified 2008 EIR.

The certified 2008 EIR concluded that construction of the proposed open channel would result in less than significant impacts related to waste discharge and water quality with implementation of Mitigation Measures WQ-1 through WQ-4. Changes to the proposed project include consideration of five alternative Marine Stadium connections. Alternative 1 includes construction of an underground culvert instead of an open channel. All five alternative Marine Stadium connections would require implementation of Mitigation Measures WQ-1 through WQ-4 and no changes are required to Mitigation Measures WQ-1 through WQ-4. Impacts related to waste discharge and water quality resulting from implementation of any of the alternative Marine Stadium connections would be similar to those evaluated for the proposed project in the certified 2008 EIR and would not change the conclusions of the certified 2008 EIR.

The certified 2008 EIR concluded that clearing/cleaning the culvert of sediment, biofouling debris, and structural impedances would improve tidal exchange through the culvert, but would not alter the drainage pattern of the project site. The existing culvert was cleaned in June 2010; however, additional culvert cleaning may be required in the future (i.e., 5 years). Mitigation Measures WQ-3 and WQ-4 would still be implemented as part of the proposed project during construction of the Marine Stadium connection and future culvert cleaning. Impacts associated with this aspect of the proposed project would be less than those evaluated for the proposed project in the certified 2008 EIR.

The certified 2008 EIR concluded that construction of the two bridges would result in less than significant impacts to water quality with implementation of Mitigation Measure WQ-2. Changes to the proposed project include consideration of five alternative Marine Stadium connections. Alternatives 2 and 4a include construction of two bridges at Colorado Street and Eliot Street, while Alternative 4 includes construction of one bridge at Eliot Street. As a result of project design modifications, the proposed bridges would be constructed at a slightly higher elevation than the existing street elevations due to the design high water level with in the channel, but would still require measures to block pollutants from entering the Lagoon and Marine Stadium. Construction of

Alternatives 2, 4 or 4a would require implementation of Mitigation Measure WQ-2 and no changes to Mitigation Measure WQ-2 are required. Implementation of Alternatives 2, 4 or 4a would result in impacts less than or similar to those evaluated for the proposed project in the certified 2008 EIR and would not change the conclusions of the certified 2008 EIR. Implementation of Alternatives 1 or 3 do not include construction of bridges and would result in impacts less than those evaluated for the proposed project in the certified 2008 EIR.

The certified 2008 EIR concluded that dredging activities in the Lagoon would result in less than significant levels with implementation of Mitigation Measures WQ-2, WQ-6, and WQ-7. As a result of project design modifications, the quantity of dredging within the Lagoon has increased and now includes the northern arm of the Lagoon. Although the quantity of dredging within the Lagoon has increased, implementation of Mitigation Measures WQ-2, WQ-6, and WQ-7 would reduce potential impacts related to suspended soils in the water column during dredging activities to less than significant levels. No changes to mitigation measures are required. Implementation of the proposed revised project would result in impacts similar to those evaluated for the proposed project in the certified 2008 EIR and would not change the conclusions of the certified 2008 EIR.

The certified 2008 EIR concluded that recontouring the Lagoon side slopes, and revegetating the Lagoon would result in less than significant impacts with implementation of Mitigation Measures WQ-1, WQ-2, and WQ-8. As a result of design modification, the proposed project no longer includes construction of the bird island. Mitigation Measures WQ-1, WQ-2, and WQ-8 would be implemented to reduce potential impacts related to water quality resulting from recontouring the Lagoon side slopes and revegetating the Lagoon. No changes to mitigation measures are required. Implementation of the proposed revised project would result in impacts less than or similar to those evaluated for the proposed project in the certified 2008 EIR and would not change the conclusions of the certified 2008 EIR.

Cumulative Impacts. The certified 2008 EIR concluded that the project as analyzed would not have a significant impact on hydrology and water quality. Based on the analysis and information presented above, there is no evidence that the revised Colorado Lagoon Restoration Project would result in more substantial or new significant cumulative impacts related to hydrology and water quality compared to those disclosed and analyzed in the certified 2008 EIR. Therefore, in consideration of all of the above, the changes to the Colorado Lagoon Restoration Project do not require any major changes to the certified 2008 EIR and would not result in significant cumulative environmental impacts.

3.7.4 Findings Related to Hydrology and Water Quality

No New Significant Effects Requiring Major EIR Revisions. Based on the foregoing analysis and information, there is no evidence that project modifications require a major change to the certified 2008 EIR. The revised Colorado Lagoon Restoration Project would not result in new significant environmental impacts to hydrology and water quality, nor is there a substantial increase in the severity of impacts described in the certified 2008 EIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available that indicates that there are substantial changes in circumstances pertaining to hydrology and water quality that would require major changes to the certified 2008 EIR.

No New Information Showing Greater Significant Effects than the Certified 2008 EIR. This Addendum has analyzed all available relevant information to determine whether there is new information that was not available at the time the 2008 EIR was certified, indicating that a new significant effect not reported in that document may occur. Based on the information and analyses above, there is no substantial new information indicating that there would be a new significant impact related to hydrology and water quality requiring major changes to the certified 2008 EIR.

No New Information Showing Ability to Reduce Significant Effects in Previous EIR. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more significant impacts pertaining to hydrology and water quality identified in and considered by the certified 2008 EIR.

3.8 LAND USE

3.8.1 Existing Environmental Setting

Please refer to Section 4.8 of the certified 2008 EIR for a summary of the existing environmental setting.

As stated in the certified 2008 EIR, the Lagoon is an 11.7 ac water body that is located in a park setting owned and maintained as a City park by the City Department of Parks, Recreation, and Marine. On-site facilities include the Colorado Lagoon Playgroup Preschool; Colorado Lagoon Marine Science Center that is staffed by the City and the Friends of the Colorado Lagoon (FOCL); a model boat shop; two restrooms; picnic areas; parking; a pedestrian bridge; a lifeguard station; sandy shoreline areas; play equipment; and grassy open space areas.

As stated in the certified 2008 EIR, the project area also includes Marina Vista Park, which is located to the southeast of the Lagoon on the south side of East Colorado Street. Marina Vista Park overlooks the water of Marine Stadium to the south and provides the following amenities: two soccer fields, tennis courts, a baseball diamond, play equipment, and picnic areas. Marina Vista Park is also the site of municipal band concerts in the summer.

Additionally, as stated in the certified 2008 EIR, the project area includes a small triangle-shaped area (0.282 ac) at Marine Stadium that is a water body and park area on the south side of East Eliot Street. The Marine Stadium amenities include Mothers Beach, an activity center, boating facilities, coastal viewing, a rowing center, green open space, benches, and picnic tables. The entire project area is owned and operated by the City Department of Parks, Recreation, and Marine.

3.8.2 Certified 2008 EIR

Please refer to Section 4.8 of the certified 2008 EIR for analysis of potential impacts associated with implementation of the Colorado Lagoon Restoration Project.

As stated in the certified 2008 EIR, the project site is presently used for park and recreation activities. The proposed project would implement water and sediment quality improvements, habitat improvements, and recreation improvements to the project area. The proposed project would not change the existing uses within or adjacent to the project site. The Lagoon and Marina Vista Park are existing neighborhood parkland/open space uses, which would continue with implementation of the proposed project. Therefore, the proposed project would not divide an established community or disrupt the existing physical arrangement of the surrounding area and impacts related to this issue would not occur.

The certified 2008 EIR concluded that the proposed project would not conflict with existing land uses. As stated in the certified 2008 EIR, none of the proposed project improvements conflict with the existing recreation, open space, and natural resource uses at the Lagoon, Marina Vista Park, or Marine Stadium. The proposed project would make long-term improvements to the existing land uses at the Lagoon, Marina Vista Park, and Marine Stadium; however, these improvements would enhance the value of the site's existing uses, and no conflict would occur. Therefore, impacts related to land uses at the Lagoon, Marina Vista Park, and Marine Stadium would be less than significant, and no mitigation is necessary.

The certified 2008 EIR concluded that the proposed project would result in less than significant impacts related to planning effects and no mitigation would be required. The proposed project would be consistent with and comply with all applicable policies related to the California Coastal Act, SCAG Regional policies, Local Coastal Program, Citywide Strategic Plan, General Plan Land Use Element, General Plan Open Space and Recreation Element, City of Long Beach Parks, Recreation, and Marine Strategic Plan, and City of Long Beach Zoning Code.

As stated in the certified 2008 EIR, there are no adopted Habitat Conservation Plans (HCPs) or Natural Community Conservation Plans (NCCPs) applicable to the project site. Therefore, the proposed project would not result in impacts to an adopted HCP or NCCP.

In summary, the certified 2008 EIR concluded that there would be no significant adverse impacts related to Land Use resulting from implementation of the proposed project.

3.8.3 Project Changes

Changes to the Colorado Lagoon Restoration Project addressed in this Addendum include:

- An increase in the maximum total dredge quantity from 30,000 to 72,000 cy, including dredging in the northern arm;
- Four optional dredge methods including one dry and three wet methods;
- A change in the mode of transportation and disposal destination for dredge material, from trucking to a landfill in the Bakersfield area to trucking or barging to a disposal site at the POLB;

- Requirement to use Tier 2 construction equipment for dredging Options 2, 3, and 4 and Tier 1 construction equipment for Option 1;
- Five alternatives for connecting the Lagoon to Marine Stadium through Marina Vista Park, including a second culvert, an Eliot Street Alignment, an open channel with culverts rather than bridges at the street crossings, an expanded channel concept with one bridge and one culvert, and an expanded channel concept with two bridges; and
- Elimination of the bird island component.

Please refer to Chapter 2.0 for more information regarding the project changes.

The certified 2008 EIR concluded that the proposed open channel and its features are consistent with the existing open space uses of the project site. Changes to the proposed project include consideration of five alternative Marine Stadium connections. Alternative 1 includes the construction of an underground culvert. Following installation of the culvert, the disturbed area would be restored to its pre-construction conditions; therefore, Alternative 1 would not alter the current use of the site. Alternatives 2 and 4a includes the construction of an open channel while Alternatives 3 and 4 include the combination of open channel and culvert. The various locations and design features of the five alternative Marine Stadium connections would be consistent with the existing open space uses of the project site. Implementation of any of the five alternative Marine Stadium connections would result in impacts less than or similar to those evaluated for the proposed project in the certified 2008 EIR.

The certified 2008 EIR concluded that the project components including a landscaped buffer along the sides of the channel and a meandering walking trail would be consistent with the existing recreation uses in Marina Vista Park. Changes to the proposed project include consideration of five alternative Marine Stadium connections. Alternative 1 includes construction of an underground culvert and does not include construction of a landscaped buffer or meandering walking trail along the sides of the channel connection. Alternatives 2, 3, 4, and 4a include construction of a landscaped buffer along the sides of the channel as well as a 10 ft walking trail (except along the north shore where the access trail from East 6th Street would be 12 ft wide) along the eastern side of the channel. Implementation of Alternative 1 would result in impacts less than those evaluated for the proposed project in the certified 2008 EIR. Implementation of Alternatives 2, 3, 4, or 4a would result in impacts similar to those evaluated for the proposed project in the certified 2008 EIR and would not change the conclusions of the certified 2008 EIR.

The certified 2008 EIR concluded that the development of a bird island, which would be located on the north shore of the western arm of the Lagoon (where no fence exists), would utilize some of the land area that is currently golf course. Changes to the proposed project include the elimination of the bird island; therefore, impacts related to this project component would be less than those evaluated for the proposed project in the certified 2008 EIR.

The proposed project changes would be consistent with and comply with all applicable policies related to the California Coastal Act, SCAG Regional policies, Local Coastal Program, Citywide Strategic Plan, General Plan Land Use Element, General Plan Open Space and Recreation Element, City of Long Beach Parks, Recreation, and Marine Strategic Plan, and City of Long Beach Zoning Code. Implementation of the proposed project changes would not result in changes to the conclusions of the certified 2008 EIR.

Implementation of Alternatives 2, 3, 4, or 4a would require relocating the sports fields within Marina Vista Park which would require grading of approximately 6 acres for new grass. In addition, approximately 10,000 cy of topsoil would be imported in order to create the new sports fields. Although Alternatives 2, 3, 4, and 4a would result in import of additional fill, the truck trips would be spread out over the duration of construction activities; therefore, there would be no significant impacts resulting from relocating the sports fields.

Cumulative Impacts. The certified 2008 EIR concluded that the project, as analyzed, would have a less than significant cumulative impact on land use. Based on the foregoing analysis and information, there is no evidence that project modifications would result in more substantial or new significant cumulative impacts related to land use compared to what was identified in the 2008 EIR. Therefore, in consideration of all of the above, the changes to the Colorado Lagoon Restoration Project do not require any major changes to the certified 2008 EIR and would not result in any new significant environmental impacts.

3.8.4 Findings Related to Land Use

No New Significant Effects Requiring Major EIR Revisions. Based on the foregoing analysis and information, there is no evidence that project modifications require a major change to the certified 2008 EIR. The revised Colorado Lagoon Restoration Project would not result in new significant environmental impacts to land use, nor is there a substantial increase in the severity of impacts described in the certified 2008 EIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available that indicates that there are substantial changes in circumstances pertaining to land use that would require major changes to the certified 2008 EIR.

No New Information Showing Greater Significant Effects than the Certified 2008 EIR. This Addendum has analyzed all available relevant information to determine whether there is new information that was not available at the time the 2008 EIR was certified, indicating that a new significant effect not reported in that document may occur. Based on the information and analyses above, there is no substantial new information indicating that there would be a new significant impact to land use requiring major revisions to the certified 2008 EIR.

No New Information Showing Ability to Reduce Significant Effects in Previous EIR. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more significant impacts pertaining to land use identified in and considered by the certified 2008 EIR.

3.9 NOISE

3.9.1 Existing Environmental Setting

Please refer to Section 4.9 of the certified 2008 EIR for a summary of the existing environmental setting related to noise.

3.9.2 Certified 2008 EIR

Please refer to Section 4.9 of the certified 2008 EIR for analyses of the potential effects of the proposed project related to noise.

The certified 2008 EIR concluded that the construction-related, short-term noise levels would be higher than existing ambient noise levels in the project area and would exceed the City of Long Beach's Municipal Code noise thresholds. Standard construction activities that occur within 315 ft and pile driving that occurs within 706 ft of the sensitive land uses would generate noise levels in excess of the City's daytime exterior noise standard of 70 dBA L_{max} .

In summary, the certified 2008 EIR concluded that operational project impacts related to noise are less than significant. Implementation of Mitigation Measures NOI-1 through NOI-5 would reduce temporary and intermittent construction related noise impacts; however, construction noise impacts, from pile driving for the bridge construction in particular, to on-site sensitive receptors and to off-site residential uses would remain significant and unavoidable.

3.9.3 Project Changes

Changes to the Colorado Lagoon Restoration Project addressed in this Addendum include:

- An increase in the maximum total dredge quantity from 30,000 to 72,000 cy, including dredging in the northern arm;
- Four optional dredge methods including one dry and three wet methods;
- A change in the mode of transportation and disposal destination for dredge material, from trucking to a landfill in the Bakersfield area to trucking or barging to a disposal site at the POLB;
- Requirement to use Tier 2 construction equipment for dredging Options 2, 3, and 4 and Tier 1 construction equipment for Option 1;
- Five alternatives for connecting the Lagoon to Marine Stadium through Marina Vista Park, including a second culvert, an Eliot Street Alignment, an open channel with culverts rather than bridges at the street crossings, an expanded channel concept with one bridge and one culvert, and an expanded channel concept with two bridges; and
- Elimination of the bird island component.

Please refer to Chapter 2.0 for more information regarding the project changes.

The certified 2008 EIR concluded that the construction-related, short-term noise levels would be higher than existing ambient noise levels in the project area and would exceed the City of Long

Beach's Municipal Code noise thresholds. Standard construction activities that occur within 315 ft and pile driving that occurs within 706 ft of the sensitive land uses would generate noise levels in excess of the City's daytime exterior noise standard of 70 dBA L_{max} .

The City of Long Beach Municipal Code allows elevated construction-related noise levels as long as construction activities are limited to the hours specified in the Noise Ordinance. Due to the exceptionally high noise levels from pile driving, and in an abundance of caution, the City concluded in the certified 2008 EIR that construction noise would result in a significant unavoidable impact. It was determined that noise from the operation of construction equipment would exceed the City's standards, but with adherence to the Municipal Code requirement regarding hours of construction operation and implementation of Mitigation Measures NOI-1 through NOI-5 to reduce construction noise effects, construction activity other than pile driving would be reduced to below a level of significance. Mitigation Measure NOI-6, requiring a community pre-construction meeting, was included to address construction noise and other neighborhood impacts in general, and pile driving activity in particular. Even with implementation of mitigation measures, however, pile driving noise was considered significant and unavoidable.

Implementation of proposed project changes are anticipated to result in a longer construction period for Phase 1 (dredging) (an increase of 5 months resulting in a 15-month construction duration for the entire construction phase) due to an increase in the amount of dredging within the Lagoon, including the northern arm. Although the duration of the dredge period would be longer, the daily noise conditions on site would be essentially the same as described in the certified 2008 EIR. Implementation of Mitigation Measures NOI-1 through NOI-5, of the certified EIR, would reduce the noise impacts to the sensitive receptors within the project vicinity during construction activities. With implementation of Mitigation Measures NOI-1 through NOI-5, noise impacts to the sensitive receptors within the project vicinity from construction of any of the dredging options evaluated in this Addendum would continue to be reduced to the extent feasible. The increase in construction duration does not change the conclusions of the certified 2008 EIR nor does it require changes to Mitigation Measures NOI-1 through NOI-5.

Changes to the proposed project include consideration of four dredging options (three wet methods and one dry method). Three of the four dredging options would require that material be hauled to Marine Stadium where it would be treated and loaded onto barges for transport. See Figure 3.1, Potential Dredging Material Treatment Areas. These dredging options would require the use of heavy construction equipment at Marine Stadium. Sensitive receptors, including residences and schools (Lowell Elementary and Rogers Middle Schools) located within 315 ft of the construction equipment within Marine Stadium, would be exposed to noise levels in excess of the City's daytime exterior noise standard of 70 dBA L_{max} . The City of Long Beach Municipal Code allows elevated construction-related noise levels as long as the construction activities are limited to the hours specified in the Noise Ordinance. Adherence to the City's noise regulations and implementation of Mitigation Measures NOI-1 through NOI-5, of the certified EIR, would continue to reduce most construction noise impacts, including dredging, to below a level of significance. The exception is pile driving, which remains significant and unavoidable as disclosed in the certified 2008 EIR.

It is the City's intention to include Long Beach Unified School District (LBUSD) in the pre-construction meeting identified in Mitigation Measure NOI-6, and to provide the LBUSD with formal advanced notice of construction schedules and construction traffic plans. While the City is not able to



LSA



A horizontal number line is shown with tick marks at 0, 150, and 300. The word "FEET" is written below the 0 mark. The line is divided into segments by vertical lines at 0, 75, 150, 225, and 300. The segments are colored as follows: 0 to 75 is black, 75 to 150 is white, 150 to 225 is black, and 225 to 300 is white.

SOURCE: Google Earth
I:\CLB0803\G\potential dredging fig 3.1.cdr (6/27/10)

FIGURE 3.1

Colorado Lagoon Restoration Project
Potential Dredging Material Treatment Areas

commit to a construction schedule that excludes construction activity during the school year because of specific environmental scheduling factors (for example, the dredging of the Lagoon and the excavation of the channel would need to be coordinated with the dry weather months and spring tides), the City is committed to providing the LBUSD advance notice of construction activities. Specifically, the City Director of Parks and Recreation (or designee) will work with LBUSD staff to minimize disruption on school days as feasible, and to inform the LBUSD of construction schedules, construction traffic plans, and public meetings regarding the project implementation.

Cumulative Impacts. The certified 2008 EIR concluded that the construction activity for the proposed project and construction of the TADP in the vicinity of and at the project site may occur at the same time. These projects, when combined, have the potential to contribute to short-term construction noise impacts, which could be cumulatively significant, even with implementation of mitigation measures as described above and in the TADP EIR. Based on the analysis and information presented above, there is no evidence that the revised Colorado Lagoon Restoration Project would result in more substantial or new significant cumulative impacts to noise compared to those disclosed and analyzed in the certified 2008 EIR. Therefore, in consideration of all of the above, the revised Colorado Lagoon Restoration Project does not require any major changes to the certified 2008 EIR and would not result in any new significant cumulative environmental impacts related to Noise.

3.9.4 Findings Related to Noise

No New Significant Effects Requiring Major EIR Revisions. Based on the foregoing analysis and information, there is no evidence that project modifications require a major change to the certified 2008 EIR. The revised Colorado Lagoon Restoration Project would not result in new significant environmental impacts to noise, nor is there a substantial increase in the severity of impacts described in the certified 2008 EIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available that indicated that there are substantial changes in circumstances pertaining to noise that would require major changes to the certified 2008 EIR.

No New Information Showing Greater Significant Effects than the Certified 2008 EIR. This Addendum has analyzed all available relevant information to determine whether there is new information that was not available at the time the 2008 EIR was certified, indicating that a new significant effect not reported in that document may occur. Based on the information and analyses above, there is no substantial new information indicating that there would be a new significant impact related to noise requiring major revisions to the certified 2008 EIR.

No New Information Showing Ability to Reduce Significant Effects in Previous EIR. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more significant impacts pertaining to noise identified in and considered by the certified 2008 EIR.

3.10 PUBLIC SERVICES AND UTILITIES

3.10.1 Existing Environmental Setting

Please refer to Section 4.10 of the certified EIR for a summary of the existing environmental setting related to Public Services and Utilities. Utilities include the provision or disposition of water, wastewater, and solid waste disposal services. Public services include law enforcement and fire protection services. Public facilities included in this discussion address public schools and public libraries.

As stated in the certified 2008 EIR, the entities listed in Table 3.D provide corresponding Public Services and Utilities to the proposed project site.

Table 3.D: Public Utilities and Service Providers

Provider	Service
Long Beach Police Department	Law enforcement
City of Long Beach Fire Department	Fire and emergency medical response, fire prevention, and hazardous materials regulatory enforcement
Long Beach Unified School District	K–12 education
Long Beach Public Library System	Library services
Long Beach Water Department	<ul style="list-style-type: none">• Potable and reclaimed water for domestic, irrigation, and fire protection purposes• Local sewage
Sanitation Districts of Los Angeles County	<ul style="list-style-type: none">• Sewage• Solid waste services

3.10.2 Certified 2008 EIR

Please refer to Section 4.10 of the certified EIR for an analysis of the potential effects of the proposed project on public services and utilities.

The certified 2008 EIR concluded that removal and replacement of the two existing restroom structures on either side of Eliot Street would result in a benefit to the Long Beach Police Department (LBPd) by deterring crime. The restrooms in Marina Vista Park and Marine Stadium would be replaced with new facilities that are the preferred design of the LBPd and consistent with the Crime Prevention Through Environmental Design (CPTED) guidelines. Per the recommendation of the LBPd, the restroom buildings would be designed so that the exterior of the building is lined with doors to individual stalls that can be locked from the inside. Washbasins would be outside at one end of the building. This design would eliminate hallways or other central areas in which criminal activity can take place and has the advantage of not providing room for multi-person criminal acts. In addition, restroom entrances and washbasin areas would be well lit.

The certified 2008 EIR concluded that the proposed project is not anticipated to result in an increase in calls for police services or require additional personnel to maintain acceptable service ratios, response times, or other performance objectives. Similarly, the project would not require new or

expanded police facilities. Therefore, impacts related to police protection services are considered less than significant.

The certified 2008 EIR concluded that development of an open tidal channel through Marina Vista Park would result in potential safety concerns related to reallocation of lifeguard services. The proposed open channel would be designed with gently sloping banks for safety and a landscaped buffer that would be installed along the sides of the channel. The landscaped buffer would contain a mixture of armor rock and native plantings that would create a safety barrier. Signage would be installed along the channel to deter pedestrians and children from entering the channel area. However, development of an open channel with tidal flows would create an area with potential safety concerns that could result in the need for a reallocation of lifeguard services. Therefore, as required by Mitigation Measure PSU-1, upon completion of construction of the open channel, the Long Beach Fire Department and the City Department of Parks, Recreation, and Marine would monitor lifeguard services in the project area to ensure adequate staffing.

The certified 2008 EIR concluded that the proposed project would have a less than significant impact on schools. The proposed project does not involve the construction of residential units or include components that would create additional jobs in the project area. As such, the proposed project would not increase demand or negatively impact capacity in the LBUSD. Specifically, the available capacity of the schools in the vicinity of the proposed project would not be affected by the project including Bryant Elementary, Fremong elementary, Lowell Elementary, Mann Elementary, Jefferson Middle School, Rogers Middle School, and Wilson High School. Therefore, the proposed project would not create a need to expand or construct new school facilities to maintain acceptable service levels, and no mitigation is required.

The certified 2008 EIR concluded that implementation of the proposed project, specifically construction activities, has the potential to affect the sensitive receptors at the school locations. Several schools are located in the vicinity of the project site. Implementation of mitigation measures would reduce potential impacts to less than significant levels.

As stated in the certified 2008 EIR, the proposed project does not involve the construction of residential units or include components that would create additional jobs in the project area. As such, the proposed project would not result in an increase of population in the project area that would result in increased demands on the existing library facilities. Therefore, the proposed project is not expected to have a significant impact on library services in Long Beach or to create a need for the expansion of library facilities or staffing levels. Implementation of the proposed project would result in less than significant impacts and no mitigation is necessary.

As stated in the certified 2008 EIR, the proposed project would include the replacement of two existing restroom structures on either side of Eliot Street. The new restrooms would be equipped with low-flow faucets and toilets (pursuant to Title 24 of the California Administrative Code) that would reduce the amount of water consumed by the fixtures, thereby also reducing the amount of wastewater generated when compared to existing conditions. Any changes in park attendance and/or patterns of use are expected to be negligible as a result of project implementation. Therefore, due to the use of low-flow facilities, the restroom component of the project would result in a small reduction of wastewater generation. Hence, the restroom component of the proposed project would not require new or expanded wastewater treatment capacity.

The certified 2008 EIR concluded that the project would not necessitate new or expanded water entitlements or infrastructure as significant increases in both potable and reclaimed water demands would not result from the proposed project. Implementation of Mitigation Measure PSU-2 would reduce project impacts associated with an increase in water demand or an extension of supply infrastructure to less than significant levels.

The certified 2008 EIR concluded that project-generated wastewater would not exceed the existing capacity of the sewer delivery system and would not require the construction of new sewer delivery facilities other than those to be constructed on site for the storm water diversion system. In addition, based on the anticipated flows and existing available capacity of the Joint Water Pollution Control Plant (JWPCP), the proposed project would not exceed wastewater treatment requirements of the Los Angeles RWQCB or require the construction or expansion of the JWPCP facilities. Likewise, the proposed project is not anticipated to result in a determination by the Sanitation District of Los Angeles County (LACSD) that inadequate capacity exists to serve the project in addition to existing commitments. Hence, project impacts related to the provision of wastewater services are considered less than significant, and no mitigation measures are required.

As stated in the certified 2008 EIR, construction of the proposed project would result in solid waste that would need to be disposed of in off-site facilities. The types of solid waste that would be generated include: dredge material, excavation soils, asphalt, concrete, rock, marine growth, and building materials. The project components that would generate materials for off-site disposal include cleaning the existing culvert and removing impedances at the culvert, dredging Lagoon areas, creating a bird island, recontouring the Lagoon's side slopes, removing the north shore parking lot and access road to East 6th Street, demolishing three existing restrooms, constructing a storm water diversion system and bioswales, developing the open channel, and constructing the bridges at East Colorado and East Eliot Streets. Implementation of Mitigation Measure PSU-3 would assist the City in its effort to meet its waste reduction goals by facilitating recycling on site during construction and operation of the proposed project. Therefore, the proposed project would not result in significant impacts related to landfill capacity or compliance with Federal, State, and local statutes and regulations related to solid waste.

As stated in the certified 2008 EIR, dredge of the western arm of the Lagoon would generate contaminated dredge material. Because this material is contaminated (as further described in Section 3.6, Hazards and Hazardous Materials), there are limitations as to where the material can be placed. It would not be eligible for disposal at a Class III nonhazardous landfill along with the other solid wastes generated by the project. The certified 2008 EIR analyses were based on the assumption that the contaminated sediment would be hauled to the closest Class I landfill, which is Kettleman Hills Landfill. The certified 2008 EIR concluded that the proposed project would not result in significant impacts related to landfill capacity or compliance with Federal, State, and local statutes and regulations related to solid waste.

In summary, the certified 2008 EIR concluded that with implementation of mitigation measures (refer to Appendix A), there would be no significant adverse impacts related to public services and utilities resulting from implementation of the proposed project.

3.10.3 Project Changes

Changes to the Colorado Lagoon Restoration Project addressed in this Addendum include:

- An increase in the maximum total dredge quantity from 30,000 to 72,000 cy, including dredging in the northern arm;
- Four optional dredge methods including one dry and three wet methods;
- A change in the mode of transportation and disposal destination for dredge material, from trucking to a landfill in the Bakersfield area to trucking or barging to a disposal site at the POLB;
- Requirement to use Tier 2 construction equipment for dredging Options 2, 3, and 4 and Tier 1 construction equipment for Option 1;
- Five alternatives for connecting the Lagoon to Marine Stadium through Marina Vista Park, including a second culvert, an Eliot Street Alignment, an open channel with culverts rather than bridges at the street crossings, an expanded channel concept with one bridge and one culvert, and an expanded channel concept with two bridges; and
- Elimination of the bird island component.

Please refer to Chapter 2.0 for more information regarding the project changes.

The certified 2008 EIR concluded that development of an open tidal channel through Marina Vista Park would result in potential safety concerns related to reallocation of lifeguard services. Changes to the proposed project include consideration of five alternative Marine Stadium connections. Alternative 1 includes construction of an underground culvert, which would eliminate the open channel. Construction of an underground culvert would not result in potential safety concerns. Implementation of Alternative 1 would result in impacts less than those evaluated for the proposed project in the certified 2008 EIR and no mitigation would be required. Construction of Alternatives 2, 3, 4, or 4a would require implementation of Mitigation Measure PSU-1 requiring the Long Beach Fire Department and the City Department of Parks, Recreation, and Marine to monitor lifeguard services in the project area to ensure adequate staffing. Implementation of Alternatives 2, 3, 4, or 4a would result in impacts similar to those evaluated for the proposed project in the certified 2008 EIR and would not change the conclusions of the certified 2008 EIR.

The certified 2008 EIR concluded that implementation of project components include cleaning the existing culvert and removing impedances at the culvert, dredging Lagoon areas, creating a bird island, recontouring the Lagoon's side slopes, removing the north shore parking lot and access road to East 6th Street, demolishing three existing restrooms, constructing a storm water diversion system and bioswales, developing the open channel, and constructing the bridges at East Colorado Street and Eliot Street would result in solid waste that would need to be disposed of in off-site facilities. Changes to the proposed project include the elimination of the bird island, proposed increase in the quantity of dredge material in the Lagoon, and consideration of five alternative Marine Stadium connections. Elimination of the bird island would reduce the quantity of solid waste that would need to be disposed of in off-site facilities by reducing the need for associated construction activities. Furthermore, the cleaning of the existing culvert was conducted in June 2010 and is no longer part of the proposed project; therefore, approximately 1,200 cy of material would no longer be included in the solid waste total for the proposed project. The addition of dredging in the northern arm of the

Lagoon and an increase in the quantity of material dredged from the Lagoon would result in an increase in solid waste disposal needs. Mitigation Measure PSU-3 would be required to assist the City in meeting its waste reduction goals. With implementation of Mitigation Measure PSU-3, implementation of the proposed revised project would result in similar impacts to those evaluated for the proposed project in the certified 2008 EIR. Additionally, Marine Stadium connection Alternative 1 includes construction of an underground culvert, eliminating the open channel concept. Construction of an underground culvert would require similar excavation as proposed for the open channel. Implementation of any of the five alternative Marine Stadium connections would result in impacts similar to those evaluated for the proposed project in the certified 2008 EIR and would not change the conclusions of the certified 2008 EIR.

Changes to the proposed project include dredging in the northern arm of the Lagoon and an increase in the quantity of material dredged from the Lagoon from 30,000 cy to 72,000 cy. Additional soil testing (2010) confirmed that contaminated material would be dredged from the western arm, northern arm, and central area of the Lagoon. Contaminated material would no longer be transported to the Kettleman Hills Landfill but will instead be transported via truck or barge to the POLB Landfill. This will reduce the trip length from approximately 200 miles to less than 10 miles. Despite the increase in the quantity of material dredged, it is still anticipated that the contaminated soil would be treated with a cement lime and/or other chemical reagents to stabilize the sediments and disposed of at a POLB landfill. When the POLB receives the material, it will not be considered hazardous/contaminated. Therefore, the proposed project would result in impacts similar to those evaluated for the proposed project in the certified 2008 EIR and would not change the conclusions of the certified 2008 EIR.

Cumulative Impacts. The certified 2008 EIR concluded that the project, as analyzed, would have a less than significant cumulative impact on public services and utilities. Based on the foregoing analysis and information, there is no evidence that project modifications would result in more substantial or new significant cumulative impacts related to public services and utilities compared to what was identified in the 2008 EIR. Therefore, in consideration of all of the above, the changes to the Colorado Lagoon Restoration Project do not require any major changes to the certified 2008 EIR and would not result in any new significant cumulative environmental impacts.

3.10.4 Findings Related to Public Services and Utilities

No New Significant Effects Requiring Major EIR Revisions. Based on the foregoing analysis and information, there is no evidence that project modifications require a major change to the certified 2008 EIR. The revised Colorado Lagoon Restoration Project would not result in new significant environmental impacts to public services and utilities, nor is there a substantial increase in the severity of impacts described in the certified 2008 EIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available that indicates that there are substantial changes in circumstances pertaining to public services and utilities that would require major changes to the certified 2008 EIR.

No New Information Showing Greater Significant Effects than the Certified 2008 EIR. This Addendum has analyzed all available relevant information to determine whether there is new information that was not available at the time the 2008 EIR was certified, indicating that a new significant effect not reported in that document may occur. Based on the information and analyses above, there is no substantial new information indicating that there would be a new significant impact related to public services and utilities requiring major revisions to the certified 2008 EIR.

No New Information Showing Ability to Reduce Significant Effects in Previous EIR. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more significant impacts pertaining to public services and utilities identified in and considered by the certified 2008 EIR.

3.11 RECREATION

3.11.1 Existing Environmental Setting

Please refer to Section 4.11 of the certified 2008 EIR for a summary of the existing environmental setting for recreation.

According to the certified 2008 EIR, there are several existing on-site recreation facilities and opportunities at the Lagoon, including swimming areas, a sandy shoreline, grassy open space, play equipment, picnic areas, a pedestrian bridge over the Lagoon, the Colorado Lagoon Marine Science Center, restrooms, and parking. Additionally, the Colorado Lagoon Playgroup Preschool, which is a private program for 3 to 5-year-old children that is permitted through the City to use the building, and a model boat shop are located on the south side of the Lagoon. The City utilizes the Lagoon area for several City programs, including Summer Fun Days, Estuary Explorers, Summer Sensations, Beauty and the Beach, Super Science at Colorado Lagoon, and the Model Boat Program.

As stated in the certified 2008 EIR, Marina Vista Park also has several existing on-site recreation facilities and opportunities including two soccer fields (one adult and one youth field that overlays the baseball/softball field), tennis courts, a baseball/softball field, play equipment, grassy open space, picnic areas, and restrooms. These facilities are utilized by City and private sports programs. Both the Lagoon and Marina Vista Park are owned and operated by the City Department of Parks, Recreation, and Marine.

3.11.2 Certified 2008 EIR

Please refer to Section 4.11 of the certified EIR for an analysis of the potential effects of the proposed project related to recreation.

As stated in the certified 2008 EIR, the proposed project does not include residential development or other factors that would increase demand on City Department of Parks, Recreation, and Marine services and facilities beyond its capacity. In addition, the proposed project would not preclude the use of any existing recreation facilities in the project vicinity. The project would provide additions/

enhancements to the existing recreational facilities on the project site. Therefore, there are no adverse impacts related to increased demand on existing parks and recreation facilities.

As stated in the certified 2008 EIR, implementation of the proposed project would provide improvements to enhance the existing uses within and adjacent to the Lagoon. The proposed project would improve water quality within the Lagoon by increasing the tidal flows between the Lagoon and Marine Stadium, develop storm drain upgrades to divert and treat flows prior to discharge in to the Lagoon, and to remove contaminated sediments within the western arm of the Lagoon. The improved water quality that is expected to result from the proposed project would lead to fewer days when the swimming area would be closed due to elevated bacteria levels, which in turn would provide more opportunities for swimming at the Lagoon.

As stated in the certified 2008 EIR, in addition to the north shore parking lot, parking for Lagoon use is also provided by a parking lot on the south shore, which includes 56 parking spaces, and by on-street parking on East 6th Street to the north of the Lagoon and on East Colorado Street south of the Lagoon. The parking lot bounded by East Colorado Street, East Appian Way, and Nieto Avenue is also utilized for Lagoon parking; however, it is not reserved for Lagoon use. After implementation of the proposed project, the maximum parking demand of Lagoon use would be approximately 38 spaces. The parking lot on the south shore can accommodate this demand while providing 18 surplus parking spaces. In addition, parking would remain available on East 6th Street, East Colorado Street, and at the Nieto Avenue parking lot. The parking locations along the southern shore of the Lagoon are appropriate, as a large portion of the existing recreational use of the Lagoon is on the south shore, which is also the location of the swimming area. As a result, removal of the north parking lot would not cause a parking deficiency, overcrowding of the remaining parking areas, or other adverse impacts.

As stated in the certified 2008 EIR, the proposed project would develop a walking trail around portions of the perimeter of the Lagoon and the eastern side of the proposed open channel, extending through areas that currently provide no public access. A viewing platform would be located at the end of the trail toward the western arm. The trail would connect to the existing footbridge on both the north and south shores of the Lagoon. The trail would be generally 8 ft wide, except along the north shore where the access trail from East 6th Street would be 12 ft wide so as to provide emergency access along the western shore of the northern arm of the Lagoon. The trail would be constructed of decomposed granite in the new areas, and would connect to the existing sidewalk. Interpretive kiosks, seating benches, picnic tables, and shade structures would be installed along the trail. The kiosks would provide educational information about the Lagoon. As described above, the proposed project would make improvements to the recreational amenities at the Lagoon. These improvements would enhance the existing recreational uses on site. Therefore, the proposed project would not result in any long-term adverse impacts related to recreation at the Lagoon.

The certified 2008 EIR concluded that implementation of the proposed project would result in improvements and recreational use changes within Marina Vista Park. The proposed project would develop an open channel with vegetated buffers and a walking trail within the park. The location of the proposed open channel would separate the sports fields and court areas within Marina Vista Park. The project would maintain pedestrian accessibility from one side of Marina Vista Park to the other by developing pedestrian facilities on the two proposed bridges that would span the open channel at East Colorado Street and East Eliot Street. After construction of the proposed open channel,

pedestrian movement between the east and west portions of the park would be limited to the street sidewalks and bridges spanning the channel. All areas of the park would remain open and accessible to the public; therefore, the impact of pedestrian flow is considered a less than significant impact to recreation.

As stated in the certified 2008 EIR, the proposed project would make changes to the recreation amenities within Marina Vista Park. Development of the open channel would result in a conversion of 2.02 ac of parkland from an active recreation use to a passive recreation use. Although there would be a change to the use of approximately 2.02 ac of Marina Vista Park as a result of the open channel, there would be no loss of City parkland and no conversion from parkland to non-parkland use. The conversion of approximately 2.02 ac of park from active recreation to passive recreation/open channel is considered a less than significant impact on recreation. The proposed project would not result in any long-term adverse impacts related to recreation within Marina Vista Park.

As stated in the certified 2008 EIR, the development of a bird island, which would be located on the north shore of the western arm of the Lagoon (where no fence exists), would utilize some of the land area that is currently golf course. Additionally, the storm drain diversion system would involve the installation of an underground wet well and pump station on the golf course at the corner of East 6th Street and Park Avenue. These improvements would result in the use of a small portion of the golf course. However, the locations of the bird island and the pump station would not impede the golf course uses, specifically the long and short tees of the 7th hole. Therefore, the proposed project would not result in significant adverse impacts related to recreation at the Recreation Park 9-hole golf course.

The certified 2008 EIR concluded that use of the project area for recreational activities would be adversely affected during the construction phases of the project. Use of areas in proximity to construction would not be permitted during the construction phases in order to enhance public safety and therefore would result in short-term use impacts. Some areas at the Lagoon would be closed off to the public during construction activities. During these times, passive and active recreation, including swimming, at the Lagoon would be affected. A large portion of Marina Vista Park, including the sports fields, would not be available for use during construction of the improvements within the park. In addition, the Summer Concert Series that is held at Marine Stadium, which consists of one concert per week during the summer, would be affected and may need to be relocated during construction of the open channel (Phase 2). To offset these short-term construction use impacts, Mitigation Measures REC-1 and REC-2 would provide coordination between the City Department of Parks, Recreation, and Marine and the affected park users, including identification of other available recreation facilities within the project vicinity. Mitigation Measures REC-1 and REC-2 would require coordination of the use of other sports fields and facilities for the Summer Concert Series within Long Beach to substitute for the short-term unavailability of the soccer and baseball/softball fields within Marina Vista Park and the concert location at Marine Stadium. With implementation of Mitigation Measures REC-1 and REC-2, short-term construction-related recreation use impacts would be less than significant.

In summary, the certified 2008 EIR concluded that with implementation of mitigation measures (refer to Appendix A), there would be no significant adverse impacts to recreation resulting from implementation of the proposed project.

3.11.3 Project Changes

Changes to the Colorado Lagoon Restoration Project addressed in this Addendum include:

- An increase in the maximum total dredge quantity from 30,000 to 72,000 cy, including dredging in the northern arm;
- Four optional dredge methods including one dry and three wet methods;
- A change in the mode of transportation and disposal destination for dredge material, from trucking to a landfill in the Bakersfield area to trucking or barging to a disposal site at the POLB ;
- Requirement to use Tier 2 construction equipment for dredging Options 2, 3, and 4 and Tier 1 construction equipment for Option 1;
- Five alternatives for connecting the Lagoon to Marine Stadium through Marina Vista Park, including a second culvert, an Eliot Street Alignment, an open channel with culverts rather than bridges at the street crossings, an expanded channel concept with one bridge and one culvert, and an expanded channel concept with two bridges; and
- Elimination of the bird island component.

Please refer to Chapter 2.0 for more information regarding the project changes.

As stated in the certified 2008 EIR, implementation of the proposed project including development of an open channel with vegetated buffers and a walking trail around portions of the perimeter of the Lagoon and the eastern side of the proposed open channel would result in less than significant impacts to recreation. Changes to the proposed project include consideration of five alternative Marine Stadium connections. Alternative 1, construction of an underground culvert, would not include construction of an open channel, development of vegetated buffers, or development of a walking trail along the eastern side of the open channel. However, Alternative 1 would include development of a walking trail around portions of the perimeter of the Lagoon. Alternatives 2, 3, 4, and 4a would include development of a combination of open channel and/or culvert with vegetated buffers and a 8 ft (except along the north shore where the access trail from East 6th Street would be 12 ft wide so as to provide emergency access along the western shore of the northern arm of the Lagoon) walking trail along the eastern side of the channel and along portions of the perimeter of the Lagoon. Implementation of any of the five alternative Marine Stadium connections would result in impacts less than or similar to those evaluated for the proposed project in the certified 2008 EIR and would not change the conclusions of the certified 2008 EIR.

The certified 2008 EIR concluded that construction of the proposed open channel would result in a conversion of 2.02 ac of parkland at Marina Vista Park from an active recreation use to a passive recreation use. Changes to the proposed project include the consideration of five alternative Marine Stadium connections. Alternative 1 includes construction of an underground culvert resulting in temporary construction impacts to recreation use at Marina Vista Park. After the culvert is installed, the disturbed area would be returned to its pre-construction condition and active recreational uses would resume. Alternative 2 includes the construction of an open channel resulting in a maximum conversion of 2.66 ac of active recreation use to passive recreation use. Alternative 3 includes the construction of a combination open channel and culvert resulting in a maximum conversion of 1.86 ac of active recreation use to passive recreation use. Alternative 4 includes the construction of a

combination open channel and culvert resulting in a maximum conversion of 4.49 ac of active recreation use to passive recreation use. Alternative 4a includes the construction of an open channel the same as Alternative 4, but with two bridges and would result in a maximum conversion of 4.49 acres of active recreation use to passive recreation use. Implementation of Alternatives 1 or 3 would result in impacts less than those evaluated for the proposed project in the certified 2008 EIR. Implementation of Alternative 2, 4 or 4a would result in impacts to active recreation park area greater than those evaluated for the proposed project in the certified 2008 EIR. Although impacts would be greater than those identified in the certified 2008 EIR, the conversion of parkland from active recreation use to passive recreation use is considered a less than significant impact on recreation since there would be no loss of City parkland and no conversion from parkland to non-parkland use. Project changes would not result in any long-term adverse impacts related to recreation within Marina Vista Park.

Implementation of the five alternative Marine Stadium connections would result in changes to the active recreation facilities (i.e., sports fields) within Marina Vista Park. Implementation of Alternative 1, construction of an under ground culvert, would result in no impacts to the existing configuration/location of the recreation facilities within Marina Vista Park. Once the underground culvert is installed, disturbed areas would be restored to preconstruction conditions and the sports fields would be reconstructed in their original configuration. Implementation of Alternative 2, an approximately 100 ft wide open channel, would result in minor impacts to the configuration of the sports fields including relocating the baseball field and the youth sports field to the east, slightly overlapping each other. Implementation of Alternative 3, an approximately 100 ft – 120 ft wide open channel, would result in impacts similar to Alternative 2 including relocating the baseball field and youth sports field to the east, slightly overlapping each other. Implementation of Alternative 4 and 4a, an approximately 230 ft wide open channel, would result in relocating the baseball field and youth sports field to the east with the majority of the youth sports field overlapping the baseball field. Although Alternatives 2, 3, 4, and 4a would result in relocating the baseball field and youth sports field, the size of the sports fields would not change; therefore, there would be no significant impacts to the availability of recreational facilities within Marina Vista Park.

As stated above, implementation of Alternatives 2, 3, 4, or 4a would require relocating the sports fields within Marina Vista Park which would require grading of approximately 6 acres for new grass. In addition, approximately 10,000 cy of topsoil would be imported in order to create the new sports fields. Although Alternatives 2, 3, 4, and 4a would result in import of additional fill, the truck trips would be spread out over the duration of construction activities; therefore, there would be no significant impacts resulting from relocating the sports fields.

Cumulative Impacts. The certified 2008 EIR concluded that the Colorado Lagoon Restoration Project, as analyzed, would not result in cumulative adverse impacts to recreation. Based on the analysis and information presented above, there is no evidence that the revised Colorado Lagoon Restoration Project would result in more substantial or new significant cumulative impacts to recreation compared to those disclosed and analyzed in the certified 2008 EIR. Therefore, in consideration of all of the above, the revised Colorado Lagoon Restoration Project does not require any major changes to the certified 2008 EIR and would not result in any new significant adverse cumulative environmental impacts related to recreation.

3.11.4 Findings Related to Recreation

No New Significant Effects Requiring Major EIR Revisions. Based on the foregoing analysis and information, there is no evidence that project modifications require a major change to the certified 2008 EIR. The revised Colorado Lagoon Restoration Project would not result in new significant environmental impacts to recreation, nor is there a substantial increase in the severity of impacts described in the certified 2008 EIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available that indicates that there are substantial changes in circumstances pertaining to recreation that would require major changes to the certified 2008 EIR.

No New Information Showing Greater Significant Effects than the Certified 2008 EIR. This Addendum has analyzed all available relevant information to determine whether there is new information that was not available at the time the 2008 EIR was certified, indicating that a new significant effect not reported in that document may occur. Based on the information and analyses above, there is no substantial new information indicating that there would be a new significant impact related to recreation requiring major revisions to the certified 2008 EIR.

No New Information Showing Ability to Reduce Significant Effects in Previous EIR. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more significant impacts pertaining to recreation identified in and considered by the certified 2008 EIR.

3.12 TRAFFIC AND CIRCULATION

3.12.1 Existing Environmental Setting

Please refer to Section 4.12 of the certified 2008 EIR for a summary of the existing environmental setting related to traffic and circulation.

As stated in the certified 2008 EIR, the closest major roadway to the project site is East 7th Street, which is a six-lane, east-west regional corridor located north of the project area. The proposed project area is bounded by several local streets: East 6th Street, Park Avenue, East Appian Way, East Colorado Street, East Eliot Street, Monrovia Avenue, Haines Avenue, and Orlena Avenue.

As identified in the certified 2008 EIR, according to the City's Bicycle Master Plan existing bicycle routes adjacent to the project site include East 6th Street (Class III bikeway), Park Avenue between East 4th Street and East 6th Street and East Appian Way (Class II bikeways), and East Eliot Street (Class I bikeway).

3.12.2 Certified 2008 EIR

Please refer to Section 4.12 of the certified EIR for an analysis of the potential effects of the proposed project related to traffic and circulation.

The certified 2008 EIR concluded that the habitat improvements may make the Lagoon more attractive to bird watchers and local residents who are interested in the passive and natural components of the site and that the open channel may be of interest to people who wish to view or walk along the feature; however, the channel does not incorporate new active uses that would attract a greater number of park users on a regular basis. Overall, any change in park attendance and patterns of use are expected to be negligible as a result of project implementation. Therefore, the traffic levels are not anticipated to change as a result of operation of the proposed project.

As stated in the certified 2008 EIR, the proposed project would implement habitat and recreation improvements to the existing project area. The proposed project would retain the recreation and open space uses of the project site and is not anticipated to lead to an increase in the number of visitors to the project area. Because the project does not intensify visitor-serving uses, the parking demand of the Lagoon is expected to remain the same with the project as the existing observed parking demand. Therefore, the maximum parking demand would continue to be approximately 38 spaces with implementation of the project.

As stated in the certified 2008 EIR, the City's Zoning Code designates the required number of parking spaces for the various land uses throughout the City. Application of Zoning Code parking ratios to the land area at the Lagoon results in a total parking requirement of 37 spaces. At the completion of the proposed project, parking would continue to be provided in the west parking lot (which contains 56 metered parking spaces), the south parking lot (50 spaces not metered and shared with other uses), and unmetered on-street parking along East Colorado Street and East 6th Street. As described previously, the average maximum parking demand of the Lagoon area is 38 spaces, and the Zoning Code requires 37¹ spaces; therefore, project impacts related to parking capacity are less than significant..

As described in the certified 2008 EIR, East 7th Street is a six-lane roadway with an hourly capacity of 6,400 vehicles and an existing LOS of F in the a.m. and p.m. peak hours at the intersection of East 7th Street and Pacific Coast Highway. The addition of up to 32 p.m. peak-hour, construction-related, short-term trips would add less than one-half of 1 percent of the capacity of the roadway during the peak hour. In addition, most truck trips would occur during the day, when ambient traffic is less. Therefore, construction of the project as described in the certified 2008 EIR would not cause an increase in traffic that is substantial in relation to the existing traffic load of the street system. In addition, construction traffic effects are temporary during the period of construction, and the number of construction workers and truck trips would vary depending on the specific construction activities. However, because the intersection of East 7th Street and Pacific Coast Highway has an existing LOS of F in the a.m. and p.m. peak hours (which is below the City's established threshold of LOS D as the minimum operating level for roadway segments and intersections) and is located in the project vicinity and along the haul route, Mitigation Measure TR-1, which requires implementation of a construction management plan, has been included to reduce the impact of construction traffic on the local circulation system to less than significant.

¹ Passive Park Zoning Code requires two spaces per gross acre.

The certified 2008 EIR concluded that after loading, covering, and manifesting the trucks containing the impacted soils, the trucks destined for the Kettleman Hills Landfill would be routed north on Park Avenue, east on East 7th Street, north on I-605 and then north on I-5. Removal trucks transporting materials to Class III landfills in the region would also be routed north on Park Avenue, east on East 7th Street, and north on I-605. The certified 2008 EIR noted that, should removal vehicles be destined for the POLB, they would travel east on East 7th Street, north on I-405, and then south on I-710. This haul route minimizes truck activity on City streets between East Long Beach and the POLB.

As stated in the certified 2008 EIR, during construction of the two at-grade bridges spanning the open channel, East Colorado Street would be closed between East Eliot Street and Panama Avenue during construction of the Colorado Street Bridge, and East Eliot Street (which contains a Class I bikeway) would be closed between East Colorado Street and Boathouse Lane during construction of the Eliot Street Bridge. Construction of the bridges would occur one at a time so as to provide adequate circulation during construction. Construction was anticipated to take approximately 6 months for each bridge. When East Colorado Street is closed, East Eliot Street would serve as an alternate route. Similarly, when East Eliot Street is closed, East Colorado Street would be the alternate route. Likewise, when the East Eliot Street bikeway is closed, the existing bikeways on East Appian Way would serve as alternate routes. As a result, the closure of either East Colorado Street or East Eliot Street for a temporary period (6 months for each road consecutively) during construction of the open channel and bridges was not anticipated to adversely affect traffic. However, to ensure that impacts related to construction traffic are less than significant, implementation of a construction management plan would be required to minimize traffic impacts to the local circulation system in the area. With implementation of Mitigation Measure TR-1, construction traffic impacts associated with implementation of the project were reduced to less than significant.

In summary, the certified 2008 EIR concluded that with implementation of Mitigation Measure TR-1 (refer to Appendix A), there would be no significant adverse impacts related to traffic and circulation resulting from implementation of the proposed project.

3.12.3 Project Changes

Changes to the Colorado Lagoon Restoration Project addressed in this Addendum include:

- An increase in the maximum total dredge quantity from 30,000 to 72,000 cy, including dredging in the northern arm;
- Four optional dredge methods including one dry and three wet methods;
- A change in the mode of transportation and disposal destination for dredge material, from trucking to a landfill in the Bakersfield area to trucking or barging to a disposal site at the POLB;
- Requirement to use Tier 2 construction equipment for dredging Options 2, 3, and 4 and Tier 1 construction equipment for Option 1;
- Five alternatives for connecting the Lagoon to Marine Stadium through Marina Vista Park, including a second culvert, an Eliot Street Alignment, an open channel with culverts rather than bridges at the street crossings, an expanded channel concept with one bridge and one culvert, and an expanded channel concept with two bridges; and

- Elimination of the bird island component.

Please refer to Chapter 2.0 for more information regarding the project changes.

The CEQA Checklist Traffic and Circulation thresholds were updated in January 2010; however, the revisions to the thresholds apply to operational contributions of a proposed project. Implementation of the revised proposed project would only result in construction related impacts; therefore, the updated thresholds would not affect the analysis of the proposed project.

The certified 2008 EIR concluded that habitat improvements including the open channel may be of interest to people who wish to view or walk along the feature, but the channel does not incorporate new active uses that would attract a greater number of park users on a regular basis. Therefore, traffic levels resulting from operation of the proposed project are not anticipated to change as a result of the proposed project.

The project as proposed in the certified 2008 EIR included dredging contaminated sediment from the western arm of the Lagoon and transportation of the treated material via truck to Kettleman Hills Landfill. Changes to the proposed project include the dredging of contaminated sediment from the western arm, northern arm, and central area of the Lagoon and an increase in the quantity of dredged material. The contaminated material would be transported via truck or barge to the POLB landfill site after it has been treated with cement lime and/or other chemical reagents to stabilize the sediments. With the revised project evaluated in this Addendum, contaminated material would no longer be hauled to the Kettleman Hills Landfill. Dredging Option 1 would utilize trucks to transport the contaminated sediment to the POLB, while the other three options would utilize a combination of trucks and barges to transport the contaminated sediment to the POLB landfill site. Implementation of dredge Options 2, 3, and 4 which utilize barges to transport contaminated sediment would result in fewer truck trips through local neighborhood streets which are required to access the POLB landfill site. Implementation of Alternative 1 would result in impacts similar to those evaluated for the proposed project in the certified 2008 EIR. The total number of truck trips would be greater as a result of the increased dredge quantity and extension of the dredging activity; however, daily construction traffic impacts would be similar to what was characterized for the project as proposed in the certified 2008 EIR. Utilizing barges in combination with truck to transport contaminated sediment would result in a reduction in construction-related traffic impacts as compared to using only trucks; therefore, implementation of Alternatives 2, 3, 4 or 4a would result in impacts less than those evaluated for the proposed project in the certified 2008 EIR.

The greatest disruption to traffic flows in the area would result from the street closures necessary to construct the two bridges included as part of the project as proposed in the certified 2008 EIR. Culvert crossings of the streets could be accomplished in less time than the bridge construction. The certified 2008 EIR concluded that construction of the open channel as well as the two bridges spanning the open channel would result in construction-related impacts to traffic and circulation, specifically to local traffic; however, implementation of Mitigation Measure TR-1 requiring implementation of a construction management plan would reduce impacts to less than significant levels. Changes to the proposed project include consideration of five alternative Marine Stadium connections. Alternative 1 includes construction of an underground culvert without bridges. Alternatives 2 and 4a include construction of an open channel with two bridges at Colorado Street and Eliot Street. Alternative 3 includes construction of a combination of open channel and culvert

without bridges and Alternative 4 includes construction of a combination of open channel and culvert with one bridge at Eliot Street. Implementation of Alternative 1 would result in reduced construction traffic impacts compared to those evaluated for the proposed project in the certified 2008 EIR. Implementation of Alternatives 2, 3, 4, or 4a would require implementation of Mitigation Measure TR-1 to provide adequate circulation during construction of the open channel and/or bridges. Implementation of Alternatives 2 and 4a, construction of two bridges, would result in impacts similar to those evaluated for the proposed project in the certified 2008 EIR and would not change the conclusions of the certified 2008 EIR. Although implementation of Alternative 3 includes construction of an open channel, no bridges would be construction resulting in a reduction in construction-related traffic impacts; therefore, Alternative 3 would result in impacts less than those evaluated for the proposed project in the certified 2008 EIR. Implementation of Alternative 4, including construction of an open channel and one bridge, would result in impacts less than those evaluated for the proposed project in the certified 2008 EIR.

Construction Traffic. A comment letter was received on September 4, 2008, approximately 8 weeks after the close of the public review period for the Colorado Lagoon Draft EIR. The letter identified several concerns regarding the short-term construction effects of the project, particularly with regard to construction traffic. Resolution for many of the issues would occur at the time that the Construction Traffic Management Plan (TMP) is developed by the City. The TMP is prepared shortly before the initiation of construction activity in order to ensure that all of the current traffic and other conditions are reflected in the plan. Since the construction activities planned as part of the Colorado Lagoon project will occur over time, the TMP will be updated as needed. The City remains committed to considering the suggestions included in the letter at the time the TMP is prepared and updated for the Colorado Lagoon project, including (but not limited to) the following:

- Lower speed limit to 15 miles per hour on Park Avenue, from 4th Street to 7th Street, and on other residential streets during construction period.
- Install a speed table (i.e., an elongated speed bump) on Park Avenue near 6th Street.
- Install dynamic “slow down signs” or additional traffic calming measures on all affected residential streets.
- Prohibit construction truck haul traffic on Saturdays.
- Prohibit construction truck haul traffic at peak traffic hours (7:00 to 9:00 a.m. and 5:00 to 7:00 p.m.).
- Require publically published suggested travel routes to mitigate both event and construction traffic.
- Require detour signs for both event and construction traffic.
- Inspect Park Avenue pavement before and after construction period. Require quarterly inspection of pavement and street control markings and make repairs as needed.
- Post signs to temporarily eliminate bike route on Park Avenue.

Cumulative Impacts. The certified 2008 EIR concluded that the Colorado Lagoon Restoration Project when combined with proposed project in the same project vicinity has the potential to contribute to short-term construction traffic impacts. Implementation of Mitigation Measure TR-1 would reduce project impacts to less than significant levels. In addition, the mitigation measures included in the TADP DEIR include implementation of a traffic control plan and restricting construction on East 7th Street to weekends while requiring a minimum of one travel lane in each direction to be open to traffic. Nevertheless, should the TADP, in the vicinity of the Lagoon, and Phase 1 and/or Phase 2 of the Colorado Lagoon Restoration project both be under construction at the same time, it was determined that implementation of Mitigation Measure TR-2 was warranted to ensure coordination between City of Long Beach and Los Angeles County construction activities.

Based on the analysis and information presented above, there is no evidence that the revised Colorado Lagoon Restoration Project would result in more substantial or new significant cumulative impacts to traffic and circulation compared to those disclosed and analyzed in the certified 2008 EIR. Therefore, in consideration of all of the above, the revised Colorado Lagoon Restoration Project would not require any major changes to the certified 2008 EIR and would not result in any new significant cumulative environmental impacts related to traffic and circulation.

3.12.4 Findings Related to Traffic and Circulation

No New Significant Effects Requiring Major EIR Revisions. Based on the foregoing analysis and information, there is no evidence that project modifications require a major change to the certified 2008 EIR. The revised Colorado Lagoon Restoration Project would not result in new significant environmental impacts to traffic and circulation, nor is there a substantial increase in the severity of impacts described in the certified 2008 EIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available that indicates that there are substantial changes in circumstances pertaining to traffic and circulation that would require major changes to the certified 2008 EIR.

No New Information Showing Greater Significant Effects than the Certified 2008 EIR. This Addendum has analyzed all available relevant information to determine whether there is new information that was not available at the time the 2008 EIR was certified, indicating that a new significant effect not reported in that document may occur. Based on the information and analyses above, there is no substantial new information indicating that there would be a new significant impact related to traffic and circulation requiring major revisions to the certified 2008 EIR.

No New Information Showing Ability to Reduce Significant Effects in Previous EIR. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more significant impacts pertaining to traffic and circulation identified in and considered by the certified 2008 EIR.

3.13 DETERMINATION

Based on information and analyses in this Addendum and pursuant to Section 15162 of the State CEQA Guidelines, the City has determined the following:

1. There are no substantial changes to the proposed project that would require major revisions to the certified 2008 EIR due to new significant environmental effects or a substantial increase in the severity of impacts identified in the certified 2008 EIR.
2. Substantial changes have not occurred in circumstances under which the project is being undertaken that would require major revisions of the certified 2008 EIR to disclose new significant effects or a substantial increase in the severity of impacts identified in the certified 2008 EIR.
3. There is no new information of substantial importance not known at the time the 2008 EIR was certified that shows any of the following:
 - The project would have new significant effect not discussed in the certified 2008 EIR.
 - There are impacts determined significant in the certified 2008 EIR that would be substantially increased.
 - There are no additional mitigation measures or alternatives to the project that would substantially reduce one or more significant effects identified in the certified 2008 EIR.
 - There are additional mitigation measures or alternatives that were rejected by the project proponent that are considerably different from those analyzed in the certified 2008 ER that would substantially reduce any significant impacts identified in that EIR.

APPENDIX A: MITIGATION MONITORING AND REPORTING PROGRAM

MITIGATION MONITORING REQUIREMENTS

Public Resources Code Section 21081.6 (enacted by the passage of Assembly Bill 3180) mandates that the following requirements shall apply to all reporting or mitigation monitoring programs:

- I. The public agency shall adopt a reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment. The reporting or monitoring program shall be designed to ensure compliance during project implementation. For those changes which have been required or incorporated into the project at the request of a responsible agency or a public agency having jurisdiction by law over natural resources affected by the project, that agency shall, if so requested by the lead agency or a responsible agency, prepare and submit a proposed reporting or monitoring program.
- II. The lead agency shall specify the location and custodian of the documents or other material which constitute the record of proceedings upon which its decision is based.
- III. A public agency shall provide the measures to mitigate or avoid significant effects on the environment that are fully enforceable through permit conditions, agreements, or other measures. Conditions of project approval may be set forth in referenced documents which address required mitigation measures or in the case of the adoption of a plan, policy, regulation, or other project, by incorporating the mitigation measures into the plan, policy, regulation, or project design.
- IV. Prior to the close of the public review period for a draft environmental impact report or mitigated negative declaration, a responsible agency, or a public agency having jurisdiction over natural resources affected by the project, shall either submit to the lead agency complete and detailed performance objectives for mitigation measures which would address the significant effects on the environment identified by the responsible agency or agency having jurisdiction over natural resources affected by the project, or refer the lead agency to appropriate, readily available guidelines or reference documents. Any mitigation measures submitted to a lead agency by a responsible agency or an agency having jurisdiction over natural resources affected by the project shall be limited to measures which mitigate impacts to resources which are subject to the statutory authority of, and definitions applicable to, that agency. Compliance or noncompliance by a responsible agency or agency having jurisdiction over natural resources affected by a project with that requirement shall not limit that authority of the responsible agency or agency having jurisdiction over natural resources affected by a project, or the authority of the lead agency, to approve, condition, or deny projects as provided by this division or any other provision of law.

MITIGATION MONITORING PROCEDURES

The mitigation monitoring and reporting program has been prepared in compliance with Public Resources Code Section 21081.6. It describes the requirements and procedures to be followed by the City of Long Beach to ensure that all mitigation measures adopted as part of the proposed Colorado Lagoon Restoration Project will be carried out as described in this EIR.

Table A lists each of the mitigation measures specified in the certified 2008 EIR and identifies the party or parties responsible for implementation and monitoring of each measure. No changes to the existing mitigation measures are warranted as a result of this Addendum.

Table A: Mitigation and Monitoring Reporting Program

Mitigation Measures	Responsible Party	Timing for Mitigation Measure
4.1 AESTHETICS		
AES-1 Prior to issuance of a grading permit, the City of Long Beach Director of Development Services designee shall require the construction contractor to provide screened construction fencing around construction area boundaries to temporarily screen views of construction activities.	City of Long Beach Director of Development Services	Prior to issuance of grading permits
AES-2 Prior to the issuance of a building permit, an Exterior Lighting Plan for the proposed restroom structures shall be prepared. The Lighting Plan shall indicate the location, type, and wattage of all light fixtures and include catalog sheets for each fixture. The Lighting Plan shall demonstrate that all exterior lighting has been designed and located so that all direct rays are confined to the property. The Lighting Plan shall be subject to review and approval by the City of Long Beach Director of Development Services.	City of Long Beach Director of Development Services	Prior to issuance of building permits
4.2 AIR QUALITY		
AQ-1 Prior to issuance of a grading permit, the City of Long Beach Building Official (or designee) and the City of Long Beach Director of Public Works shall review and approve final grading plans and contractor agreements to ensure that the following dust suppression measures are incorporated. The following dust suppression measures in the South Coast Air Quality Management District (SCAQMD) CEQA Air Quality Handbook are included to further reduce the likelihood of air quality impacts: <ul style="list-style-type: none"> • Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 miles per hour (mph). • Sweep all streets once per day if visible soil materials are carried to adjacent streets (recommend water sweepers with reclaimed water). • Install wheel washers or steel plate rumble strips where vehicles enter and exit unpaved roads onto paved roads, or wash trucks and any equipment leaving the site. • Pave, water, or chemically stabilize all on-site roads as soon as feasible. • Minimize at all time the area disturbed by clearing, grading, earthmoving, or excavation operations. • All trucks hauling dirt, sand, soil, or other loose materials are to be tarped with a fabric cover and maintain a freeboard height of 12 inches. • Limit on-site vehicle speeds (on unpaved roads) to 15 mph. 	City of Long Beach Building Official (or designee) and the City of Long Beach Director of Public Works	Prior to issuance of grading permits

Table A: Mitigation and Monitoring Reporting Program

Mitigation Measures	Responsible Party	Timing for Mitigation Measure
AQ-2 Prior to issuance of a grading permit, the Construction Contractor shall provide evidence to the City of Long Beach Building Official (or designee) that the construction equipment to be used on site is based on low-emission factors and high energy efficiency. The City of Long Beach Building Official (or designee) and the City of Long Beach Director of Public Works shall ensure that the grading plans include a statement that all construction equipment will be tuned and maintained in accordance with the manufacturer's specifications.	City of Long Beach Building Official (or designee) and City of Long Beach Director of Public Works/Construction Contractor	Prior to issuance of grading permits
AQ-3 During construction and as noted on construction plans, the Construction Contractor shall ensure that construction equipment is shut off when not in use and idle for more than five minutes.	Construction Contractor	Ongoing during construction
AQ-4 Prior to issuance of a grading permit, the Construction Contractor shall provide evidence to the City of Long Beach Building Official (or designee) that the Construction Contractor will time the construction activities so as to not interfere with peak-hour traffic and minimize obstruction of through traffic lanes adjacent to the site. If necessary, a flagperson shall be retained to maintain safety adjacent to existing roadways	Construction Contractor/City of Long Beach Building Official (or designee)	Prior to issuance of grading permits
AQ-5 Prior to issuance of a grading permit, the Construction Contractor shall provide evidence to the City of Long Beach Building Official (or designee) that the Construction Contractor will support and encourage ridesharing and transit incentives for the construction crew.	Construction Contractor/City of Long Beach Building Official (or designee)	Prior to issuance of grading permits
AQ-6 During construction and as noted on construction plans, the Construction Contractor shall ensure that on-road construction trucks and other vehicles greater than 10,000 pounds shall be shut off when not in use and shall not idle for more than 5 minutes.	Construction Contractor	Ongoing during construction
AQ-7 Prior to issuance of a grading permit, the Construction Contractor shall provide evidence to the City of Long Beach Building Official (or designee) that on-site sensitive land uses, such as the on-site preschool center and the beaches, shall be closed or relocated when construction activities occur within 250 feet.	Construction Contractor/City of Long Beach Building Official (or designee)	Prior to issuance of grading permits
AQ-8 Prior to issuance of a grading permit, the Construction Contractor shall provide evidence to the City of Long Beach Building Official (or designee) that dredged material that shall be dried on site shall be located as far as feasible from the residential, school, and daycare land uses within the project area.	Construction Contractor/City of Long Beach Building Official (or designee)	Prior to issuance of grading permits

Table A: Mitigation and Monitoring Reporting Program

Mitigation Measures	Responsible Party	Timing for Mitigation Measure
4.3 BIOLOGICAL RESOURCES		
BIO-1 The Director of Parks, Recreation, and Marine shall ensure that the project biologist work with the contractor to preserve the one specimen of estuary sea-blite on site, if feasible. If the original plant cannot be preserved, then cuttings and/or any other propagules of the plant shall be collected from this specimen or a close genetic source (e.g. Seal Beach National Wildlife Refuge) prior to the removal of the specimen. These cuttings and/or propagules shall be used in the revegetation process for the project.	City of Long Beach Director of Parks, Recreation and Marine/Project Biologist	During project implementation
BIO-2 The Director of Parks, Recreation, and Marine shall ensure that the presence or absence of Western yellow bats is investigated by a qualified biologist prior to the removal of any palms or cottonwoods from the project area. If bats are present, a memo shall be submitted to the CDFG to determine appropriate action.	City of Long Beach Director of Parks, Recreation and Marine/qualified biologist	Prior to the removal of any palms or cottonwoods from the project area
BIO-3 The Director of Parks, Recreation, and Marine shall ensure that a field survey to investigate the presence of the invasive algae <i>Caulerpa taxifolia</i> is conducted 30 to 60 days prior to commencement of construction, by qualified divers certified by the California Department of Fish and Game (CDFG) and National Marine Fisheries Service (NMFS) to conduct such surveys. The pre-construction <i>Caulerpa</i> surveys will be conducted according to the accepted criteria of the Southern California <i>Caulerpa</i> Action Team (SCCAT) for conducting surveys for the invasive algae and in accordance with the NMFS and CDFG <i>Caulerpa</i> survey protocols. In accordance with the recommendations of the SCCAT and according to the NMFS <i>Caulerpa</i> Control Protocol (Version 3, adopted March 12, 2007 [NMFS 2007]), a survey must be conducted in harbor areas that may be disturbed. In areas that are expected to be free of <i>Caulerpa</i> , such as Colorado Lagoon, a 20% visual Surveillance Level survey is required to prior to any dredging. The survey will also identify any other marine vegetation in the proposed construction area, including eelgrass. The Director of Parks, Recreation, and Marine, or his/her designee, will transmit the survey results via <i>Caulerpa</i> Survey Reporting Form to NMFS and the CDFG within 48 hours of completion of the survey. If <i>Caulerpa</i> is identified in the project area, the City, NMFS, and the CDFG will be notified within 24 hours of completion of the survey. In the event that <i>Caulerpa</i> is detected, disturbance shall not be conducted until such time as the infestation has been isolated, treated, or the risk of spread from the proposed Disturbing Activity is eliminated in accordance with Section F of the <i>Caulerpa</i> Control Protocol.	City of Long Beach Director of Parks, Recreation and Marine/Department of Fish and Game (CDFG) and National Marine Fisheries Service (NMFS) certified divers	30 to 60 days prior to commencement of construction or dredging activities

Table A: Mitigation and Monitoring Reporting Program

Mitigation Measures	Responsible Party	Timing for Mitigation Measure
BIO-4 The Director of Parks, Recreation, and Marine shall ensure that a pre-construction eelgrass survey is conducted of the entire Lagoon and within 100 ft from the opening of the culvert into Marine Stadium during the period of March through October. The survey is considered valid by NMFS for a period of no more than 60 days, with the exception that surveys conducted in August through October will be valid until the following March 1. Pre-construction survey results will be provided by the Director of Parks, Recreation, and Marine to NMFS and the CDFG in an appropriate data format for the information to be mapped on the project drawings.	City of Long Beach Director of Parks, Recreation, and Marine	During the period of March through October and prior to any construction activities
BIO-5 The Director of Parks, Recreation, and Marine shall ensure that a post-construction survey is conducted within 30 days of the cessation of construction activities to determine the actual area of eelgrass affected for mitigation purposes. If loss of eelgrass is noted in the post-dredge survey, the City of Long Beach will be required to mitigate the loss of eelgrass in accordance with the Southern California Eelgrass Mitigation Policy (SCEMP). As per the SCEMP Revision 11 (NMFS 1991), the loss of eelgrass habitat must be mitigated at a minimum 1.2:1 ratio.	City of Long Beach Director of Parks, Recreation, and Marine	Within 30 days of the cessation of construction activities
BIO-6 The Director of Parks, Recreation, and Marine shall ensure that eelgrass mitigation be initiated within 135 days of project inception; projects requiring more than 135 days to complete may result in additional mitigation. A mitigation plan with a schedule is required 30 days prior to any construction or dredge activities. The amount of mitigation necessary will be determined by the difference between a pre-construction and post-construction survey.	City of Long Beach Director of Parks, Recreation, and Marine	Within 135 days of project inception; 30 days prior to any construction or dredge activities
BIO-7 The Director of Parks, Recreation, and Marine shall ensure that an eelgrass transplant report is completed following construction (Initial Report) and monitoring reports conducted at 6, 12, 24, 36, 48, and 60 months post-transplant. The Director of Parks, Recreation, and Marine shall ensure that project achievement of specific milestones and criteria for success, as directed in the SCEMP along with guidelines for remedial actions, are documented. If the success criteria are not met, construction of a Supplementary Transplant Area and monitoring, for an additional five years may be required by NMFS. Prior to issuance of any demolition or construction permits, the Director of Parks, Recreation, and Marine shall verify that the following measures have been incorporated into project plans in order to further reduce any potential impacts to sea turtles and marine mammals. The following measures are part of the United States Army Corps of Engineers permitting process under Section 404 of the Clean Water Act, and are above and beyond those required under	City of Long Beach Director of Parks, Recreation, and Marine	Following construction and at 6, 12, 24, 36, 48, and 60 months post-transplant

Table A: Mitigation and Monitoring Reporting Program

Mitigation Measures	Responsible Party	Timing for Mitigation Measure
the California Environmental Quality Act (CEQA) to mitigate biological resource impacts to a less than significant level.		
BIO-8 A qualified biologist shall be on site during the construction period to monitor the presence of sea turtles and marine mammals. The onsite biological monitor shall have the authority to halt construction operations if it is determined that sea turtles or marine mammals are present and may be adversely affected, and shall determine when construction operations can proceed.	Qualified Marine Biologist selected by the Director of Recreation, Parks and Marine.	Ongoing during construction activities
BIO-9 Construction crews and work vessel crews shall be briefed on the potential for marine mammal and sea turtle species to be present, the legal protection of these species, and will be provided with identification characteristics of these animals	Qualified Marine Biologist selected by the Director of Recreation, Parks and Marine.	Prior to any construction activities
BIO-10 In the event that a sea turtle is sighted within 500 meters of the construction zone, all construction activity shall be temporarily stopped until the sea turtle(s) is safely outside the 500 meter buffer zone. In the event that a marine mammal is sighted within 500 meters of the construction zone, all construction activity shall be temporarily stopped until the marine mammal(s) is safely outside the 500 meter buffer zone. The onsite biological monitor shall have the authority to halt construction operation and shall determine when construction operations can proceed.	Qualified Marine Biologist selected by the Director of Recreation, Parks and Marine.	Ongoing during construction activities
BIO-11 The biological monitor shall prepare an incident report of any marine mammal or sea turtle activity in the project area and shall advise the construction manager to have his crews be aware of the potential for additional sightings. The report shall be provided within 24 hours to the CDFG and the NMFS.	Qualified Marine Biologist selected by the Director of Recreation, Parks and Marine.	Ongoing during construction activities and within 24 hours of any marine mammal or sea turtle sighting
BIO-12 The Director of Parks, Recreation, and Marine will endeavor to conduct vegetation clearing and grading outside of the nesting season. If construction is proposed between February 1 and August 31 the Director of Parks, Recreation, and Marine shall ensure that a qualified biologist familiar with local avian species and the requirements of the MBTA and the California Fish and Game Code shall conduct a preconstruction survey for nesting birds no more than one week prior to construction. The survey will include the area of impact and suitable habitat up to 300 feet from the area of impact (as appropriate, given the anticipated nature of project impacts). The results of the survey will be recorded in a memo and submitted to the City within 48 hours. If the survey is positive, and the nesting species are subject to the MBTA or California Fish and Game Code, the memo shall be submitted to the CDFG to determine appropriate action. If the survey is negative or inconclusive, either due to ambiguous behavior by birds or overly dense vegetation, a qualified biologist	City of Long Beach Director of Parks, Recreation and Marine and the Director of Planning and Building.	One week prior to any construction activities if construction occurs between February 1 and August 31

Table A: Mitigation and Monitoring Reporting Program

Mitigation Measures	Responsible Party	Timing for Mitigation Measure
<p>shall be retained to monitor the site during initial vegetation clearing and grading, as well as during other activities that would have the potential to disrupt nesting behavior. The monitor shall be empowered by the City to halt construction work in the vicinity of the nesting birds if the monitor believes the nest is at risk of failure or the birds are excessively disturbed.</p>		
<p>BIO-13 The Director of Parks, Recreation and Marine shall ensure that the Project Biologist identifies, maps, and measures all trees that will be removed as a result of project activities. Ornamental trees removed as a result of open channel construction and reconfiguring of the sports fields within Marina Vista Park will be replaced on a 1:1 basis with California (or western) sycamores (<i>Platanus racemosa</i>). The replacement trees to be installed will be incorporated into the areas used as native upland restoration areas for the overall project improvements. The Director of Parks, Recreation and Marine will obtain the services of a qualified biologist to monitor and document the mitigation effort. Over the five-year period following tree installation, the following performance standards shall be included in the compensatory habitat maintenance plan for the Colorado Lagoon Improvement Project, which will be prepared concurrent with permit applications and subject to agency approval:</p> <ul style="list-style-type: none"> • Increase in height by a minimum of 24 inches per year for the first five years. • Trees determined to be in good health annually by an ISO Certified arborist for the first five years following installation. 	<p>City of Long Beach Director of Parks, Recreation and Marine in conjunction with the Project Biologist and Contractor</p>	<p>Prior to any construction activities; five years following tree installation</p>
4.4 CULTURAL AND PALEONTOLOGICAL RESOURCES		
<p>CULT-1 In conjunction with the submittal of applications for rough grading permits, the Director of Development Services, shall verify that a Los Angeles County certified archaeologist has been retained, shall be present at the pregrading conference, and shall establish procedures for temporarily halting or redirecting work if unrecorded archaeological resources are discovered during grading to permit the sampling, identification, and evaluation of archaeological materials as appropriate. If archaeological materials are identified during construction, standard professional archaeological practices shall be initiated to characterize the resources and mitigate any impacts to those resources. Included within this approach will be the development of a curation agreement for the permanent care of materials collected from the project. This agreement would be negotiated with a suitable repository.</p>	<p>City of Long Beach Director of Development Services</p> <p>Certified project archaeologist</p>	<p>Verification: Prior to issuance of grading permits</p> <p>Implementing Action: Ongoing during grading or ground disturbance activities</p>

Table A: Mitigation and Monitoring Reporting Program

Mitigation Measures	Responsible Party	Timing for Mitigation Measure
CULT-2 If human remains are encountered, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be Native American, the County Coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.	Construction Contractor	Ongoing during grading or ground disturbance activities
CULT-3 In accordance with the recommendations of the Gabrielino Tongva Indians of California Tribal Council and the Gabrielino/Tongva San Gabriel Band of Mission Indians, monitoring by a qualified Native American from either one or both of these groups shall take place when, and if, ground-disturbing activities occur in undisturbed native soil. The project archaeologist will notify the Director of Development Services immediately upon exposure of native soils, so that a qualified Native American monitor can be retained to monitor further excavation and/or grading.	City of Long Beach Director of Development Services Qualified Native American Monitor	Verification: Prior to issuance of grading permits Implementing Action: Ongoing during ground disturbance activities in undisturbed native soils
4.5 GEOLOGY AND SOILS		
GEO-1 Prior to issuance of building permits for the structural components of the proposed project, such as channel and bridge development and slope recontouring, the City of Long Beach Building Official (or designee) and the City of Long Beach Director of Public Works are required to review and approve final design plans to ensure that geotechnical hazard-resistant designs have been incorporated into the final engineering drawings in accordance with the most current California Building Code and the recommended seismic design parameters of the Structural Engineers Association of California. Ultimate site seismic design acceleration shall be determined by the project structural engineer during the project design phase.	City of Long Beach Building Official (or designee) and the City of Long Beach Director of Public Works	Prior to issuance of building permits for structural project components
GEO-2 A project geotechnical report shall be submitted to the City of Long Beach Building Official prior to the issuance of permits to construct the proposed bridges and open channel. The geotechnical recommendations shall be incorporated into the design plans to the satisfaction of the Building Official and Director of Public Works.	City of Long Beach Building Official	Prior to issuance of building permits for construction of the proposed bridges and open channel

Table A: Mitigation and Monitoring Reporting Program

Mitigation Measures	Responsible Party	Timing for Mitigation Measure
4.6 HAZARDS AND HAZARDOUS MATERIALS		
HAZ-1 Pre-Demolition Surveys: Prior to issuance of any demolition, grading, or street work permits for the project, a pre-demolition survey for polychlorinated biphenyls (PCBs) and lead-based paints (LBPs) will be performed. All inspections, surveys, and analyses shall be performed by appropriately licensed and qualified individuals in accordance with applicable regulations (e.g., ASTM E 1527-00, and 40 CFR, Subchapter R, Toxic Substances Control Act [TSCA], Part 716). All identified PCBs and LBPs shall be removed, handled, and properly disposed of by appropriately licensed contractors according to all applicable regulations during demolition of structures (40 CFR, Subchapter R, TSCA, Parts 745, 761, 763). Air monitoring shall be completed by appropriately licensed and qualified individuals in accordance with applicable regulations both to ensure adherence to applicable regulations and to provide safety to workers and the adjacent community (e.g., South Coast Air Quality Management District [SCAQMD]). The City of Long Beach Public Works Department shall provide documentation (including all required waste manifests, sampling and air monitoring analytical results, etc.) to the Department of Human and Health Services that abatement of any LBPs has been completed in full compliance with all applicable regulations and approved by the appropriate regulatory agency(ies) (40 CFR, Subchapter R, TSCA, Parts 716, 745, 761, 763, 795).	City of Long Beach Public Works Department /City of Long Beach Department of Human and Health Services; and licensed and qualified hazardous materials contractor(s)	Prior to issuance of any demolition, grading, or street work permits
HAZ-2 The City of Long Beach or their designated consultant will ensure that all utility pole-mounted transformers or pad mounted transformers within the project area will be inspected for leaks prior to disturbance or removal. Leaking transformers should be considered a potential for PCB hazard, unless tested, and should be handled accordingly.	City of Long Beach (or designated consultant)	Prior to disturbance/removal of any utility transformers

Table A: Mitigation and Monitoring Reporting Program

Mitigation Measures	Responsible Party	Timing for Mitigation Measure
<p>HAZ-3 Health and Safety Plan: Prior to issuance of any demolition, grading, or street work permits for the project, a Health and Safety Plan shall be prepared by the designated contractor and reviewed by the City of Long Beach or their designated consultant to ensure that all workers are in compliance with federal, State, and local regulations during construction. The Health and Safety Plan shall include:</p> <ul style="list-style-type: none"> • A summary of all potential risks to construction workers, monitoring programs, maximum exposure limits for all site chemicals, and emergency procedures. • The identification of a Site Health and Safety Officer. • Methods of contact and the phone number, office location, and responsibilities of the Site Health and Safety Officer. • Specification that the Site Health and Safety Officer shall be contacted immediately by the contractor should any potentially toxic chemical, other than the chemicals already disclosed, be detected above the exposure limits or if evidence of undocumented soil contamination is encountered during site preparation and construction. • Any potentially contaminated groundwater encountered during construction activities must be properly characterized and removed in accordance to all applicable State and federal policies. <p>The Health and Safety Plan is to be provided to all contractors on the project site. The Health and Safety Plan is required to be amended as needed if different site conditions are encountered by the Site Health and Safety Officer.</p>	<p>City of Long Beach (or designated consultant)/Construction contractor</p>	<p>Prior to issuance of any demolition, grading, or street work permits</p>
<p>HAZ-4 Soil Management Plan: The Office of Environmental Health Hazard Assessment (OEHHHA) shall review the removal workplan and shall list any additional requirements. Implementation of the workplan shall be overseen by the OEHHHA for compliance with local, State, and federal regulations. Any additional sampling or contaminant material removal shall be subject to these same regulations. As part of the soil management plan, all disposal material will be characterized prior to disposal at a State landfill site. All hazardous waste will be disposed of in a Class I landfill. All other soils or solid waste will be disposed of at an unclassified landfill. In addition, during construction activities of the potentially impacted soils on site, monitoring will be required by the SCAQMD. This on-site monitoring will be performed in conformance with the SCAQMD Site Specific Rule 1166 Permit obtained by the City of Long Beach prior to commencement of grading activities. Typically a field instrument such as an organic vapor analyzer (OVA) will be used to record the</p>	<p>The Office of Environmental Health Hazard Assessment (OEHHHA)</p> <p>Site Health and Safety Officer</p>	<p>Verification: Prior to issuance of grading permits</p> <p>Implementing Action: Ongoing during construction activities of potentially impacted soils</p>

Table A: Mitigation and Monitoring Reporting Program

Mitigation Measures	Responsible Party	Timing for Mitigation Measure
<p>concentrations of volatile organic compounds (VOCs) detected in potentially impacted soils while these soils are being excavated and/or treated on site. A daily log of the OVA readings, in addition to a copy of the Site-Specific Rule 1166 Permit, will be kept on site by the construction team for the duration of the work performed with these potentially impacted soils.</p> <p>The Site Health and Safety Officer shall contact the City of Long Beach if evidence of potential soil contamination is encountered during site preparation, demolition, or construction activities. Evidence of potential soil contamination may include discolored soils, soils that behave differently when compacted, and/or soils with an odor.</p> <p>After inspection by personnel from the City of Long Beach, these potentially impacted soils may be segregated. Soil samples collected and submitted for appropriate analyses and the soils may either be transported off site for appropriate disposal or may be treated on site with appropriate regulatory agency oversight.</p> <p>If excavation of potentially impacted soils is necessary, the excavated sediments/soil will be passed through a sieve to ensure that debris 4-inches circumference and greater is removed from the material. During the sieving process a mixture of Simple Green and water (10:1) will be lightly applied to the excavated sediments/soils. The excavated sediments/soils will be evenly spread to facilitate the efforts of workers as they manually pick through the material to remove any debris 4-inches circumference and greater that managed to pass through the sieve. Upon completion of debris removal this material will be stockpiled and covered with plastic sheeting to comply with the Rule 1166 permit, if warranted, i.e., if the volatile organic compound (VOC) monitoring of the excavation, sieving process and stockpiles exceeds 50 milligrams per kilogram (mg/kg).</p>		
4.7 HYDROLOGY AND WATER QUALITY		
<p>WQ-1 During demolition, grading, and construction, the construction contractor shall ensure that the project complies with the requirements of the State General Construction Activity National Pollution Discharge Elimination System (NPDES) Permit. Prior to issuance of demolition and grading permits, the construction contractor shall demonstrate to the City that coverage has been obtained under the State General Construction Activity NPDES Permit by providing a copy of the Notice of Intent (NOI) submitted to the State Water Resources Control Board (SWRCB) and a copy of the subsequent notification</p>	Construction Contractor	Ongoing during demolition, grading, and construction activities

	Mitigation Measures	Responsible Party	Timing for Mitigation Measure
	of the issuance of a Waste Discharge Identification (WDID) number or other proof of filing to the City Building Official.		
WQ-2	<p>Prior to issuance of a grading permit, the City of Long Beach Building Official shall ensure that construction plans for the project include features meeting the applicable construction activity best management practices (BMPs) and erosion and sediment control BMPs published in the <i>California Storm water BMP Handbook–Construction Activity</i> or equivalent. The construction contractor shall submit a Storm Water Pollution Prevention Plan (SWPPP) to the City that includes the BMP types listed in the handbook or equivalent. The SWPPP shall be prepared by a civil or environmental engineer and will be reviewed and approved by the City Building Official prior to the issuance of any grading or building permits. The SWPPP shall reduce the discharge of pollutants to the maximum extent practicable using BMPs, control techniques and systems, design and engineering methods, and such other provisions as appropriate. A copy of the SWPPP shall be kept at the project site.</p> <p>The construction contractor shall be responsible for performing and documenting the application of BMPs identified in the SWPPP. The construction contractor shall inspect BMP facilities before and after every rainfall event predicted to produce observable runoff and at 24-hour intervals during extended rainfall events, except on days when no ongoing site activity takes place. Prestorm activities will include inspection of the major storm drain grate inlets and examination of other on-site surface flow channels and swales, including the removal of any debris that blocks the flow path. Poststorm activities will include inspection of the grate inlets for evidence of unpermitted discharges. The construction contractor shall implement corrective actions specified by the City Building Official, as necessary, at the direction of the City Director of Public Works. Inspection records and compliance certification reports shall be submitted to the City Director of Public Works on a monthly basis and shall be maintained for a period of three years. Inspections shall be scheduled monthly during the dry season and weekly during the wet season for the duration of project construction or until all areas are revegetated.</p>	<p>City of Long Building Official</p> <p>Construction Contractor, to the satisfaction of the City Building Official</p>	<p>Verification: Prior to issuance of grading permits</p> <p>Implementing Action: Ongoing during construction activities until all areas are vegetated</p>
WQ-3	The Construction Contractor shall ensure, and the Director of Development Services shall verify, that during cleaning/clearing of the culvert, the culvert shall be opened once every 2 weeks during the period of the greatest tidal fluctuations for 2 to 3 consecutive days to allow for maximum tidal exchange between Marine Stadium and Colorado Lagoon. The tidal exchange will occur during spring tides, if feasible, to allow for exchange during the period of	City of Long Beach Director of Development Services/Construction Contractor	Ongoing during cleaning/clearing of the culvert

Table A: Mitigation and Monitoring Reporting Program

Mitigation Measures	Responsible Party	Timing for Mitigation Measure
greatest tidal fluctuation to achieve maximum water quality benefit. If, for erosion, flooding, or other engineering reasons, the Project Engineer determines that tidal exchange during spring tides is not feasible, an alternative tidal exchange regime will be implemented subject to approval by the Directors of Development Services and Parks, Recreation, and Marine Services. In addition to coordination with the tidal regime, two subsurface aeration systems shall be installed and utilized during construction activities that close off the tidal flow of the culvert. The use of silt screen around each end of the culvert shall be implemented during culvert flushing to minimize sediment/turbidity impacts to the adjacent receiving waters.		
WQ-4 The Director of Director of Health and Human Services shall continue to monitor bacteria levels in the Colorado Lagoon on a daily basis during cleaning of the culvert and during construction of the open channel in order to ensure the integrity of the water is maintained for swimming in Colorado Lagoon during construction activities associated with the culvert and open channel. If water quality exceeds the water contact recreational beneficial use water quality standards, the Directors of the Health and Human Services, Recreation and Marine Services, shall post the site and close the beach, if necessary.	City of Long Beach Director of the Health and Human Services and Director of Parks, Recreation and Marine Services	During construction activities associated with the culvert cleaning and open channel construction.
WQ-5 Prior to commencement of grading activities, the construction contractor shall determine, and report to the Director of Development Services and Public Works, whether dewatering of groundwater will be necessary during project construction and whether dewatering activities will require discharge to the storm drain system or surface waters. Discharge of dewatered groundwater to the storm drain system or surface waters will require compliance with the <i>Waste Discharge Requirement for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties</i> (Order No. R4-2003-0111, NPDES No. CAG994004), or subsequent permit. This will include submission of a Report of Waste Discharge (ROWD) and an application for coverage under the permit to the Los Angeles Regional Water Quality Control Board at least 45 days prior to the start of dewatering and compliance with all applicable provisions in the permit, including water sampling, analysis, and reporting of dewatering-related discharges.	Construction contractor/ City of Long Beach Director of Development Services and Public Works	Prior to issuance of grading permits

Table A: Mitigation and Monitoring Reporting Program

Mitigation Measures	Responsible Party	Timing for Mitigation Measure
<p>WQ-6 During dredging, the City Director of Development Services shall require that the contractor employs measures to control dispersion of contaminated sediments. Equipment used for dredging shall be modified or specifically designed to control the dispersion of sediments. In addition, the City shall require that contractor to implement specific measures as required by the United States Army Corps of Engineers (Corps), Regional Water Quality Control Board (RWQCB), and other regulatory agencies during the permitting process. The operations could include the use automatic rather than manual monitoring of the dredging operations, which would allow continuous data logging with automatic interpretation and automatic adjustments to the dredging operations for real-time feedback for the dredge operator. Automatic systems could also be used to monitor turbidity and other water quality conditions in the vicinity of the dredging operations and allow real-time adjustments by the dredging operators to control temporary water quality effects. The specific measures to be implemented would be subject to approval by the Corps, RWQCB, and other regulatory agencies during the permitting process.</p>	<p>City of Long Beach Director of Development Services</p> <p>Construction Contractor</p>	<p>Verification: During permitting process with regulatory agencies</p> <p>Implementing Action: Ongoing during dredging activities</p>
<p>WQ-7 Prior to the issuance of any construction permits, the City Director of Development Services shall verify that Best Management Practices (BMPs) for all dredging activities, such as a silt curtain, have been incorporated into project plans in order to reduce impacts to water quality to the maximum extent practicable. The construction contractor shall be responsible for performing and documenting the application of the BMPs.</p>	<p>City of Long Beach Director of Development Services</p> <p>Construction Contractor</p>	<p>Verification: Prior to issuance of construction permits</p> <p>Implementing Action: Ongoing during dredging activities</p>
<p>WQ-8 Prior to the issuance of any construction permits, the Director of Development Services shall demonstrate in the record that silt curtains for all construction activities involving excavation and grading directly adjacent to or within the Lagoon waters, have been incorporated into project plans in order to reduce impacts to water quality to the maximum extent practicable. The construction contractor shall be responsible for performing and documenting the application of BMPs, such as the silt curtain, identified in this document.</p>	<p>City of Long Beach Director of Development Services</p> <p>Construction Contractor</p>	<p>Verification: Prior to issuance of construction permits</p> <p>Implementing Action: Ongoing during excavation and grading activities</p>
<p>WQ-9 The Director of Health and Human Services shall continue to monitor bacteria levels in the Colorado Lagoon on a weekly basis. If water quality exceeds the water contact recreational beneficial use water quality standards, the Directors of the Health and Human Services, and Parks, Recreation and Marine Services, shall post the site and close the beach, if necessary. In addition, the Directors of the Department of Health and Parks, Recreation and Marine Services, and Development Services shall review the monitoring data on an annual basis and evaluate the water contact recreational beneficial use of the Lagoon.</p>	<p>City of Long Beach Director of Health and Human Services and Director of Parks, Recreation and Marine Services</p>	<p>Ongoing during and after construction activities</p>

Table A: Mitigation and Monitoring Reporting Program

Mitigation Measures	Responsible Party	Timing for Mitigation Measure
4.8 LAND USE		
None required		
4.9 NOISE		
NOI-1 The City of Long Beach (City) Noise Control Officer shall ensure that the construction contractor limits construction activity, which produces loud or unusual noise that annoys or disturbs a reasonable person of normal sensitivity to between the hours of 7:00 p.m. and 7:00 a.m. Monday through Friday and 9:00 a.m. and 6:00 p.m. on Saturdays and no construction activities on Sundays and federal holidays in accordance with City standards.	City of Long Beach Noise Control Officer	Ongoing during construction activities
NOI-2 During all site excavation and grading, the project contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers consistent with manufacturers' standards, as documented in construction plans and verified by the City Building Official.	Construction Contractor/City of Long Beach Building Official	Ongoing during site excavation and grading
NOI-3 The project contractor shall place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site, as documented in construction plans and verified by the City Building Official.	Construction Contractor/City of Long Beach Building Official	Ongoing during all construction activities
NOI-4 The construction contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction, as documented in construction plans and verified by the City Building Official.	Construction Contractor/City of Long Beach Building Official	Ongoing during all construction activities
NOI-5 Prior to issuance of a grading permit, the Construction Contractor shall provide evidence to the City of Long Beach Building Official (or designee) that on-site sensitive land uses, such as the on-site preschool and the beaches, shall be closed or relocated when construction activities occur within 315 feet or pile driving occurs within 706 feet.	City of Long Beach Building Official (or designee) Construction Contractor	Verification: Prior to issuance of grading permits Implementing Action: Ongoing during construction activities
NOI-6 Prior to issuance of a grading permit, the Director of Parks, Recreation, and Marine shall hold a community pre-construction meeting, in concert with the Construction Contractor, to provide information regarding the construction schedule. The construction schedule information shall include the duration of each construction activity and the specific location, days, frequency, and duration of the pile driving that will occur during both Phase 1 and Phase 2 of the project construction. Public notification of this meeting shall be done in the same manner as the Notice of Availability mailings for this Draft Environmental Impact Report (EIR).	City of Long Beach Director of Parks, Recreation, and Marine Construction Contractor	Prior to issuance of grading permits

Table A: Mitigation and Monitoring Reporting Program

Mitigation Measures	Responsible Party	Timing for Mitigation Measure
4.10 PUBLIC SERVICES AND UTILITIES		
PSU-1 Upon completion of construction of the open channel within Marina Vista Park, the Long Beach Fire Department and the Long Beach Department of Parks, Recreation, and Marine shall assess and monitor lifeguard services, and re-allocate staff as warranted, at the Lagoon and Marina Vista Park to ensure adequate staffing.	City of Long Beach Fire Department and the City of Long Beach Department of Parks, Recreation, and Marine	Upon completion of the construction of the open channel
PSU-2 During the irrigation and establishment of newly vegetated areas at the Lagoon, the Long Beach Department of Parks, Recreation, and Marine shall coordinate with the Long Beach Water Department (LBWD) to develop a schedule for the use of reclaimed water for temporary irrigation purposes at the Colorado Lagoon. The temporary irrigation of Lagoon areas shall occur during non-peak water usage times so as to ensure that the proposed project does not exacerbate the existing intermittent nighttime reclaimed water pressure decreases.	City of Long Beach Department of Parks, Recreation, and Marine/ City of Long Beach Water Department	During irrigation and establishment of newly vegetated areas
PSU-3 A solid waste management plan for the proposed project shall be developed by the City of Long Beach Department of Parks, Recreation, and Marine, and submitted to the City of Long Beach Environmental Services Bureau for review and approval prior to issuance of permits. The plan shall identify methods to promote recycling and reuse of construction materials as well as safe disposal consistent with the policies and programs outlined by the City of Long Beach. The plan shall identify methods of incorporating source reduction and recycling techniques into project construction and operation in compliance with State and local requirements such as those described in Chapter 14 of the California Code of Regulations and AB 939.	City of Long Beach Department of Parks, Recreation, and Marine, and City of Long Beach Environmental Services Bureau	Prior to the issuance of permits
4.11 RECREATION		
REC-1 The City of Long Beach Director of Parks, Recreation, and Marine will ensure that during construction activities affecting Colorado Lagoon (Lagoon) (e.g., dredging, recontouring the Lagoon side slopes, revegetation, storm drain improvements, and development of the walking trail and viewing platform), City Department of Parks, Recreation, and Marine staff will provide local residents and neighborhood groups with information regarding the availability of other nearby City parks and facilities that offer swimming, picnicking, and other passive recreation opportunities enjoyed at the Lagoon. Information regarding Lagoon closures will also be made available on the City's Web site, through outreach to the neighborhood groups, and other means as appropriate.	City of Long Beach Director of Parks, Recreation, and Marine	Ongoing during construction activities affecting Colorado Lagoon

Table A: Mitigation and Monitoring Reporting Program

Mitigation Measures	Responsible Party	Timing for Mitigation Measure
REC-2 The City of Long Beach Director of Parks, Recreation, and Marine will ensure that during construction activities affecting Marina Vista Park (such as culvert improvements, channel construction, and activities affecting the sports fields), City Department of Parks, Recreation, and Marine staff will determine what specific neighborhood groups and/or league uses of Marina Vista Park will be temporarily affected by construction activity, and will coordinate with these groups and local residents to identify other nearby available City parks and other facilities to meet the temporarily displaced recreation uses, including the Summer Concert Series. City staff also will provide information to City residents when swimming is closed at the Lagoon as a result of project construction activities on the City's Web site, through outreach with neighborhood groups, and other means as appropriate.	City of Long Beach Director of Parks, Recreation, and Marine	Ongoing during construction activities affecting Marina Vista Park
4.12 TRAFFIC AND CIRCULATION		
TR-1 Prior to the issuance of a grading permit for each of the two construction phases, the City of Long Beach shall, under the direction of the City of Long Beach Traffic Engineer, design and implement a construction area traffic management plan. The plan shall be designed by a registered Traffic Engineer and shall address traffic control for any street closure, detour, or other disruption to traffic circulation and public transit routes. The plan shall identify the routes that construction vehicles will use to access the site, the hours of construction traffic, traffic controls and detours, and off-site vehicle staging areas. The plan shall also require the City to keep all haul routes clean and free of debris including, but not limited to, gravel and dirt.	City of Long Beach Traffic Engineer	Prior to issuance of grading permits for each construction phase
TR-2 Prior to the issuance of a grading permit for each of the two construction phases, the City of Long Beach shall, under the direction of the City of Long Beach Traffic Engineer, address the truck route and circulation effects of TADP construction, should the TADP be under construction in the vicinity of the project site during either Phase 1 or Phase 2 construction of the Colorado Lagoon Restoration project. The coordination shall identify the construction routes, the hours of construction traffic, traffic controls and detours, and off-site vehicle staging areas, and address traffic control for any street closure, detour, or other disruption to traffic circulation and public transit routes.	City of Long Beach Traffic Engineer	Prior to issuance of grading permits for each construction phase