CHAPTER 1.0
INTRODUCTION

This Environmental Impact Report (EIR) has been prepared by the San Diego Association of Governments (SANDAG) to evaluate potential environmental effects that would result from development of the proposed Buena Vista Lagoon Enhancement Project (Enhancement Project). This EIR has been prepared in conformance with the California Environmental Quality Act of 1970 (CEQA) statutes (Cal. Pub. Res. Code, Section 21000 et seq., as amended) and the CEQA Guidelines (California Code of Regulations [CCR], Title 14, Section 15000 et seq., 2010). SANDAG is identified as the lead agency for the Enhancement Project under CEQA.

1.1 BACKGROUND

Buena Vista Lagoon (also referred to as "the lagoon") is located at the boundary between the Cities of Carlsbad and Oceanside in northern San Diego County. A number of individuals and agencies own portions of the lagoon, including the California Department of Fish and Wildlife (CDFW), whose lands are designated as a State Ecological Reserve. The lagoon is surrounded by urban development and traversed by a number of transportation corridors, all of which have contributed to a continual degradation of the lagoon over time. The Enhancement Project would improve lagoon ecological and recreational values through implementation of one of a range of alternatives. This section provides some background information specific to this project and a discussion of previous efforts to counteract past degradation of the lagoon.

1.1.1 PROJECT BACKGROUND

Historically, (i.e., pre-1940s), Buena Vista Lagoon was in a dynamic equilibrium between a tidal-influenced saltwater system during dry conditions and a river-influenced freshwater system during wet weather conditions. The combination of these inputs resulted in the creation of extensive salt flat habitats covering approximately 75 percent of the lagoon. Historical records indicate that an additional 23 percent of lagoon area was composed of salt marsh habitat (Beller et al. 2014). In 1940, the lagoon converted to a freshwater system as a result of installation of a weir ~~(a type of barrier)~~ across the lagoon outlet that precluded saltwater from entering the lagoon (Everest 2004; Beller et al. 2014). A weir is a low dam that is built across a river to raise the water level, divert the water, or control its flow (www.dictionary.com). The existing weir, built in 1972 and spanning approximately 50 feet, maintains a minimum water level within the lagoon at an elevation of +5.6 feet National Geodetic Vertical Datum (NGVD), an elevation measure roughly equivalent to mean sea level. Sedimentation from the watershed upstream of the lagoon

has accumulated within the lagoon basins, leading to decreasing water depths and increasing nutrient levels. Additional influences from adjacent urbanization have affected water quality, including runoff from adjacent roadways and development, as well as releases of sewage into the lagoon. Beginning in the 1970s, encroachment of vegetation into the open water basins of the lagoon has been occurring, leading to water quality and vector issues as circulation decreases. The lagoon is currently identified as an impaired water body for indicator bacteria, nutrients, and sedimentation/siltation on the State 303(d) list (SWRCB 2011). In addition, the County of San Diego currently treats the lagoon for mosquitos as part of its Vector Control Program (County of San Diego 2014a).

The lagoon has been progressively degrading in terms of benefits and value to biological communities, habitats, and human uses ~~(Everest 2003).~~ The Feasibility Study conducted for the Enhancement Project in 2004 found that, between 2030 and 2050, the lagoon was expected to become a vegetated freshwater marsh or riparian woodland-meadow (Everest 2004). ~~Without enhancement, the lagoon is expected to become a vegetated freshwater marsh or riparian woodland-meadow within the next 30 to 50 years (Everest 2014a).~~ This continued degradation could reduce coastal habitat biodiversity or eliminate coastal wetland functions and values, and result in decreased water circulation, leading to increased concerns about vectors and water quality impairments.

Regionally, the southern California coast historically supported approximately 48,410 acres of estuarine habitats, and over half of them were found in San Diego County. Almost 40 percent of this area was vegetated wetlands (e.g., salt marsh), 25 percent was unvegetated wetlands (e.g. salt flat and mudflat), and the remaining 35 percent was subtidal water. Since ca. 1850 there has been an overall loss of 23,022 acres (48 percent) of these historical estuarine habitat types. Estuarine vegetated wetlands have experienced the greatest loss in terms of absolute area (75 percent loss), while estuarine unvegetated wetlands have experienced the greatest proportional loss (78 percent) of historical extent (Stein et al. 2014). In turn, many wetland-dependent species have exhibited population declines.

Buena Vista Lagoon is owned and managed by a number of different individuals and agencies. CDFW owns and manages the majority of the lagoon. The portion of the lagoon owned by CDFW was designated as a State Ecological Reserve in 1968 as described in Title 14, Section 630 of the CCR. This reserve represents the first state designated ecological reserve and, as such, is maintained for the purpose of supporting a statewide program for protection of rare, threatened, or endangered native plants, wildlife, aquatic organisms, and specialized terrestrial or aquatic habitat types (CCR Title 14, Section 630[a]). Portions of the lagoon are owned by the State of California and controlled by the State Lands Commission. The lagoon also encompasses other landowners. Portions of the Weir Basin are owned and maintained by the St. Malo

Homeowner's Association (HOA), representing a private development located on the west side of the lagoon. The Carlsbad Beach Owners HOA owns the property to the south of the current inlet channel and has granted a public access easement. The weir itself, as well as the surrounding channel, is owned by private individuals. On the north side of the Coast Highway Basin, the Audubon Nature Center (Nature Center) ~~owns and~~ manages informal trails along the northern shore. Rights-of-way associated with the railroad, Carlsbad Boulevard, and Interstate 5 (I-5) also extend through the lagoon. Since 2001, numerous federal, state, and local agencies and organizations have been engaged in planning efforts for its enhancement. These efforts are discussed in more detail in Section 1.1.2. Since its involvement began in 2012, SANDAG has been compiling previous studies and information, and has reinitiated the effort to design an enhancement plan for the lagoon.

In July 2012, SANDAG became involved in enhancement efforts for Buena Vista Lagoon as a component of the North Coast Corridor Public Works Plan/Transportation and Resource Enhancement Program (PWP/TREP). That document was prepared to address comprehensive, system-wide improvements within the San Diego North Coast Corridor that would be implemented to mitigate transportation infrastructure improvements needed along the corridor. It identifies possible mitigation and enhancement opportunities, including bicycle and pedestrian circulation improvements, trail improvements, transportation facilities construction, habitat enhancement/restoration, and various mitigation projects that could be selected for implementation to provide "functional lift" to coastal resources. The PWP/TREP identifies opportunities to improve ecological health and hydrological connectivity to coastal resources and habitats within the corridor. Transportation improvement projects identified within Buena Vista Lagoon include double-tracking of the railroad tracks extending through the lagoon as part of the Los Angeles to San Diego Proposed Rail Corridor Improvements (LOSSAN) project and replacement of the I-5 bridge and construction of the I-5/State Route (SR) 78 interchange as part of the North Coast Corridor Project, proposed by SANDAG and the California Department of Transportation (Caltrans), respectively. Senate Bill 468 (Kehoe) mandates that transportation improvements and regional habitat enhancements within the north coast corridor occur concurrently, unless construction in phases would result in an environmentally superior alternative to concurrent construction.

Within the PWP/TREP, the Enhancement Project at Buena Vista Lagoon is identified as a potential enhancement opportunity that could be implemented by SANDAG along the North Coast Corridor. The Enhancement Project is one mitigation project that could be selected for implementation. Each of projects has independent utility, or independent significance, and could be constructed and usable without the others; however, if selected, the project is anticipated to be built at the same time as the proposed North Coast Corridor infrastructure is constructed, per the Kehoe Bill.

Consistent with Senate Bill 468, I-5 and railroad bridge improvements over the lagoon would occur concurrently with the Enhancement Project. However, these bridges are not part of the Enhancement Project and the environmental analysis for these projects proposed (and constructed) by others is addressed in other documents (SCH No. 2002031067/SCH No. 2004101076) or is in the planning phase (I-5/SR 78 Interchange Project).

In addition to these other projects planned within the lagoon, the San Diego Regional Water Quality Control Board (RWQCB) is currently developing Total Maximum Daily Load (TMDL) regulations for Buena Vista Lagoon. Establishment of a TMDL specific to the lagoon could influence enhancement design and implementation. Enhancement of the lagoon could also help address impairments identified by the SWQCB in the Clean Water Act 303(d) list (RWQCB 2011).

SANDAG is coordinating with these project teams and agencies in an effort to ensure the Enhancement Project is designed consistent with these different projects/programs and that these projects would not preclude any alternative being considered for the Enhancement Project. Opportunities for consolidating access and staging may also be identified. Prior to implementation of the Enhancement Project, various agency permits and approvals will also be required. Specific anticipated approvals are identified in Section 1.4.

1.1.2 Previous Documentation Related to the Enhancement Project

Numerous federal, state, and local agencies and organizations have been involved in lagoon enhancement efforts since the 1980s. Several documents have been prepared for these various efforts, as listed in Table 1-1, Previous Buena Vista Lagoon Documentation.

Table 1-1
Previous Buena Vista Lagoon Documentation

Document	Year Prepared
Watershed Enhancement Plan	1982
Stewardship Plan	1983
Public Access Plan	1984
Buena Vista Lagoon Strategic Plan	1996
Land Management Plan Elements Report	2000
Sediment Characterization Study	2003
Restoration Feasibility Analysis	2004

Previous efforts identified different enhancement concepts and involved a variety of stakeholders, including landowners, resource and regulatory agencies, and local jurisdictions. As discussed in Section 1.1.1, SANDAG became the lead agency for the Enhancement Project in

2012. This current effort has used data and information contained in previous documents and studies prepared to guide development of the feasible alternatives analyzed in this EIR, as well as fieldwork and modeling conducted to update and refine those previous efforts.

In addition to previous efforts to identify lagoon enhancement opportunities, different environmental documents have been prepared that are referenced in this EIR, specifically addressing the nearshore and onshore materials reuse component of the Enhancement Project. As further discussed in Chapter 2 (Description of Project Alternatives), locations for potential materials reuse have been specified for this Enhancement Project based on historic project site boundaries, including the 2012 Regional Beach Sand Project (RBSP) implemented by SANDAG and the Navy Homeporting Project. Thus, the characterization and analysis of the materials disposal/reuse sites reference the following two previous environmental documents where relevant: *Environmental Assessment/Final Environmental Impact Report for the San Diego Regional Beach Sand Project II* (SCH # 2010051063; SANDAG 2011) and *Final Environmental Impact Statement for the Development of Facilities in San Diego/Coronado to Support the Homeporting of One NIMITZ Class Aircraft Carrier* (U.S. Navy 1995).

1.2 PROJECT OBJECTIVES

The overall purpose of the Enhancement Project is to enhance the biological and hydrological functions of Buena Vista Lagoon to address sedimentation and invasive vegetation encroachment, as well as resulting declining coastal biodiversity, degrading water quality, water circulation restriction, and increased vector concerns. Accordingly, the primary objectives of the Enhancement Project include the following:

- Enhance and maintain sensitive habitats and native species, including rare and endangered species, to promote coastal biodiversity within the region.
- Promote a system of native wetland and terrestrial vegetation communities that can be sustained given the opportunities and constraints of the lagoon and anticipated sea level rise.
- Create conditions that curtail the growth and expansion of cattails, bulrushes, and invasive species.
- Protect, improve, and maintain water quality (e.g., reduce eutrophication) to meet water quality standards and address the 303(d) listed water quality impairments.
- Reduce vector concerns (e.g., potential for mosquito-borne disease) by minimizing potential mosquito breeding habitat.

- Maintain or reduce current flood risk to existing infrastructure and adjacent development.
- Maintain or enhance public access to the lagoon and recreation opportunities that are consistent with resource protection.
- Minimize cost of construction and maintenance.

To achieve these objectives, the Enhancement Project would include a suite of actions, including the following:

- Enhancement in all basins
- Vegetation removal and/or management to increase circulation/decrease vectors
- Channel and infrastructure improvements where appropriate to increase circulation while not increasing risk of flooding
- Improvements to public access by construction of recreational amenities, where possible, including a public boardwalk and fishing access (where applicable)
- Adaptive management strategies to maintain enhanced functions of the lagoon into the future

Specific alternatives being evaluated are discussed in more detail in Chapter 2.

1.3 PUBLIC INVOLVEMENT AND THE CEQA ENVIRONMENTAL PROCESS

CEQA requires preparation of an EIR when substantial evidence supports a fair argument that a proposed project may have a significant effect on the environment. The purpose of an EIR is to provide decision makers, public agencies, and the general public with an objective and informational document that fully discloses the environmental effects of the project. The EIR process is intended to facilitate the objective evaluation of potentially significant direct, indirect, and cumulative impacts of the Enhancement Project, and to identify feasible mitigation measures and alternatives that would reduce or avoid the Enhancement Project's significant effects. In addition, CEQA specifically requires that an EIR identify those adverse impacts determined to be significant after mitigation.

1.3.1 NOTICE OF PREPARATION AND PUBLIC SCOPING PERIOD

In accordance with the CEQA Guidelines, a Notice of Preparation (NOP) was distributed on April 25, 2013, to approximately 660 public agencies, interested organizations, and members of

the general public. The purpose of the NOP was to provide notification that SANDAG planned to prepare an EIR and to solicit input on the scope and content of the EIR. Approximately 150 written comment letters were received from various agencies, organizations, and individuals.

A scoping meeting was held near the project site at Buena Vista Elementary School on May 9, 2013, during the 30-day public scoping period. The purpose of this meeting was to seek input from public agencies and the general public regarding the environmental issues and concerns that may potentially result from the Enhancement Project to be addressed in the EIR. More than 70 people attended the public scoping meeting. General verbal and specific written comments were accepted at this meeting. Additionally, verbal and written comments were accepted via phone, mail, and e-mail during the scoping period. A copy of the NOP, written comments received, and a transcript of verbal comments from the public scoping meeting are included as Appendix A of this EIR.

Throughout the environmental process, SANDAG has solicited input on key issues and concerns relevant to the project from public agencies, stakeholder and interest groups, and the general public. SANDAG has also attended additional meetings when requested by stakeholders to provide progress updates and assist in developing project alternatives. Some of these stakeholders include not only individuals, but the following agencies and organizations:

- City of Oceanside
- City of Carlsbad
- California Department of Fish and Wildlife (CDFW)
- St. Malo Property Association
- Carlsbad Beach Owners HOA
- Buena Vista Lagoon Foundation (Foundation)
- Nextdoor Buena Vista Lagoon Association
- Buena Vista Lagoon Joint Powers Committee (Buena Vista Lagoon JPC)

1.3.2 Comments Received and Areas of Known Controversy

As discussed, comments received during the 30-day public scoping period included verbal comments from the scoping meeting and written comments submitted both at the scoping meeting and separately during the scoping period. The primary issues raised during the scoping process are summarized by issue area in Table 1-2.

Table 1-2
Summary of Public Comments Received during the Public Scoping Process

Public Comments by Environmental Topic or Issue Area	Section Where Addressed in EIR
Aesthetics/Visual Impacts	
For all project alternatives, analyze the visual impacts to public and private views.	3.9
Air Quality/Greenhouse Gas Emissions/Sea Level Rise	
Evaluate the effects of the project with predicted climate change and sea level rise.	3.11 and 3.12
Biological Resources	
Analyze the potential of the project to encourage the establishment of invasive species.	3.5
Identify sensitive species with potential to occur on the project site and analyze impacts to those sensitive species.	3.5
Analyze the interface between upstream habitats and the lagoon ecosystem.	3.5
Discuss how the project would impact wildlife movement in the project area.	3.5
Conduct focused surveys for the state- and federally-listed light-footed Ridgway's rail (*Rallus longirostris levipes*). (Since release of the Notice of Preparation, the name of this species has been changed from light-footed clapper rail to light-footed Ridgway's rail.)	3.5
Analyze the project's consistency with existing regional conservation plans.	3.5
Identify potential impacts to stream or riparian habitats and include mitigation measures to compensate for impacts to such habitats.	3.5
Identify endangered, threatened, sensitive, and locally unique species and sensitive habitats, including rare plants and rare natural communities, on or in the vicinity of the project site.	3.5
Consider whether the project would result in the take of any endangered, threatened, or candidate species protected by the California Endangered Species Act (CESA) and, for CESA-listed species provide mitigation and monitoring that meet the requirements of an incidental take permit.	3.5
Prepare a jurisdictional delineation and include mitigation measures to compensate for any impacts to wetlands and jurisdictional waters.	3.5
Provide a complete assessment of flora within and adjacent to the project area following Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Natural Communities, as prepared by the California Natural Resources Agency and California Department of Fish and Game (CDFW).	3.5
Provide a discussion of direct, indirect, and cumulative impacts anticipated to biological resources.	3.5
Consider inclusion of mitigation and minimization strategies for impacts to biological resources.	3.5
Cultural Resources	
Conduct a records search to determine if the project area has been previously surveyed for cultural resources.	3.7
Engage in early consultation with Native American tribes to identify the potential for cultural resources to be present within the project area.	3.7
Evaluate potential impacts to submerged cultural resources.	3.7
Public Health and Safety/Vector Control	
Identify and determine whether current or historic uses at the project site have resulted in release of hazardous substances.	3.15
Identify known or potentially contaminated sites within the project area.	3.15
Identify procedures required for investigation and/or remediation, as provided by the California Department of Toxic Substances Control, should they be determined necessary, and identify the agency to provide regulatory oversight.	3.15
Address vector control problems due to expansion of cattail growth and mosquito management activities within the lagoon.	3.15

Public Comments by Environmental Topic or Issue Area	Section Where Addressed in EIR
Hydrology and Water and Aquatic Sediment Quality	
Evaluate the potential effects on water quality from dredging activities, including the potential to increase sedimentation and siltation.	3.2 and 3.4
Evaluate potential effects on water quality related to removing the existing weir.	3.2 and 3.4
Analyze the incremental impact of the project on the tidal prism of adjacent wetlands restoration projects.	3.2 and 3.4
Assess the risk of future contaminant buildup within the lagoon.	3.2 and 3.4
Include a discussion on channel velocities during tidal exchange.	3.2 and 3.4
Analyze impacts to stormwater management.	3.2 and 3.4
Consider preparation of a Watershed Management Plan to address potential upstream watershed inputs to the lagoon.	3.2
Permitting	
Analyze the project under the most current regulatory and permitting requirements.	1.4 and 3.1 through 3.15
Complete written notification to CDFW for determining need of Lake and Streambed Alteration Agreement.	1.4
Project Description and Design	
Consider including an elevated walkway in project design.	2.5.1
Include a description of the history of the lagoon and background information pertaining to its establishment as an ecological preserve.	1.1
Analyze the impacts of dredging the portion of the lagoon west of the railroad tracks.	3.1 through 3.15
Include a thorough and complete project description, including staging areas and access routes, to facilitate environmental review of potential impacts, mitigation measures, and project alternatives.	2.0
Suggest adding the term “coastal dependent” as a qualifier to the sensitive habitats and species in the project objectives.	1.2
Provide maps and figures that clearly identify the project boundaries and areas of impact.	2.0
For the saltwater alternatives, consider including a subtidal channel throughout all four basins of the lagoon to promote intertidal habitat.	2.6.2
Consider a removable weir so that opening of the inlet could be dynamic.	2.6
Consider reusing reeds removed from the lagoon as biofuel.	2.3
Include a description of the dredging process, including the length of time the initial dredging would occur and describe the maintenance dredging plan.	2.8
Consider increasing the number of parking spaces and access to the lagoon.	2.6
Project Schedule and Implementation Coordination with Other Projects	
Consider the impact of the Interstate 5 (I-5) freeway widening project on hydrologic conditions in the lagoon.	2.5.3 and 3.2
Describe the anticipated project activities and schedule from existing conditions to full implementation.	2.0
Public Services and Utilities	
Analyze the efficiency of wastewater infrastructure to prevent future spills into the lagoon and consider a long-term maintenance plan.	3.14
Recreation/Community Access	
Analyze potential effects of jetties in relation to beach erosion and access.	3.1 and 3.3
Assess how each alternative may affect the need for sand replenishment.	2.7
Consider preserving the local fishery.	3.1 and 3.5
Consider including more walking/hiking and bicycle paths.	3.1

Public Comments by Environmental Topic or Issue Area	Section Where Addressed in EIR
Suggested Project Alternatives	
Consider a hybrid alternative that would achieve a freshwater system east of I-5 and a saltwater system west of I-5 without the construction of a weir through modification of the lagoon bed at I-5.	2.4
Consider an alternative to widen the existing weir.	2.4
Consider an alternative that would achieve dynamic inlet conditions through removing the existing weir and replacing it with a bridge, as well as removing existing fill associated with Coast Highway.	2.4
Discuss the range of reasonable alternatives that would avoid or minimize potential impacts of the project.	2.4
Identify properties that may be appropriate for future acquisition and wetlands restoration.	2.3
Traffic and Circulation	
Discuss potential impacts to pedestrian and bicycle access.	3.10

Areas of known controversy include changes to existing freshwater habitat, changes to the weir (privately owned), the overall biological health of the lagoon, changes to fishing associated with changes in fish species tied to water regimes (fresh or salt), vector management, and flood control.

1.3.3 Public Comments on Draft EIR

The Draft EIR was circulated for public review and comment for 55 days (July 18-September 1, 2015), a period longer than the legal requirement, due to project complexity and in order to allow ample time for review of the environmental document. Comments regarding environmental issues analyzed in the Draft EIR, as well as the accuracy and completeness of the Draft EIR, were received from the general public, agencies, and organizations. These comments were submitted to the lead agency as follows:

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SANDAG has prepared written responses to all comments received during this period. These responses are included in the Final EIR as Appendix P, Public Comments on Draft EIR and Responses.

1.3.4 CEQA EIR PROCESS

Prior to approval of the Enhancement Project, SANDAG, as the lead agency and decision-making entity, is required to certify that this EIR has been completed in accordance with CEQA, that the Enhancement Project has been reviewed and the information in this EIR has been considered, and that this EIR reflects the independent judgment of SANDAG. CEQA also requires SANDAG to adopt "findings" with respect to each significant environmental effect identified in the EIR (Pub. Res. Code Section 21081; Cal. Code Regs., Title 14, Section 15091). For each significant effect, CEQA requires the approving agency to make one or more of the following findings:

- Alterations have been made to avoid or substantially lessen significant impacts identified in the Final EIR.
- The responsibility to carry out such changes or alterations is under the jurisdiction of another agency.
- Specific economic, legal, social, technological, or other considerations, which make infeasible the mitigation measures or alternatives identified in the Final EIR.

If SANDAG concludes that the Enhancement Project would result in significant effects that cannot be substantially lessened or avoided by feasible mitigation measures and alternatives, SANDAG must adopt a "Statement of Overriding Considerations" prior to approval of the Enhancement Project (Pub. Res. Code Section 21081[b]). Such statements are intended under CEQA to provide a written means by which the lead agency balances the benefits of the project and the significant and unavoidable environmental impacts. Where the lead agency concludes that the economic, legal, social, technological, or other benefits outweigh the unavoidable environmental impacts, the lead agency may find such impacts "acceptable" and approve the project.

In addition, public agencies, when approving a project, must also adopt a Mitigation Monitoring and Reporting Program describing the changes that were incorporated into the project or made a condition of project approval in order to mitigate or avoid significant effects on the environment (Pub. Res. Code Section 21081.6). The Mitigation Monitoring and Reporting Program is adopted at the time of project approval and is designed to ensure compliance during project implementation.

1.4 PERMITS/APPROVALS REQUIRED

One of the objectives of the CEQA process is to ensure that a project is consistent with relevant regulations, policies, and plans. Various approvals and permits would be necessary for implementation of the Enhancement Project. SANDAG is the lead agency pursuant to CEQA Guidelines Section 15367. The Enhancement Project and environmental documentation, including this EIR, would require approval by the SANDAG Board of Directors.

Table 1-3 lists additional applicable statutes and permit or approval requirements. Table 1-4 identifies the larger suite of regulations that the project would be subject to prior to implementation. Within that table, issue areas to which the regulations apply are also identified. Specific policies and regulations that require specific actions, permits, or consultation by the lead agency or project proponent are further discussed following the tables. This discussion is focused on those regulations that require an approval or action by a specific agency prior to implementation of the project, not all of the regulations that apply to the project. Full descriptions of relevant regulatory laws, statutes, policies, and plans and the issue area to which they are applicable are included in Appendix B. The specific analysis of how each regulation, policy, or plan applies to the Enhancement Project and its alternatives is included in each appropriate individual resource discussion in Chapter 3.

California Endangered Species Act (CESA)

CESA (Fish and Game Code Section 2050 et seq.) is administered by CDFW and prohibits the "take" of state-listed species except as otherwise provided in state law. State lead agencies are required to consult with CDFW to ensure that their authorized actions are not likely to jeopardize the continued existence of any state-listed species or result in the degradation of occupied habitat. Prior to implementation of the Enhancement Project, SANDAG would be required to initiate formal consultation with CDFW in accordance with Section 2081 to obtain an Incidental Take Permit, if required.

California Environmental Quality Act (CEQA)

CEQA is a California statute that requires state and local agencies to identify the significant environmental impacts of their actions and to avoid or mitigate those impacts, if feasible. A public agency must comply with CEQA when it undertakes an activity defined as a "project," which is an activity that must receive some discretionary approval and that may cause either a direct physical change in the environment or a reasonably foreseeable indirect change in the environment. The environmental review requires an initial review of the project and its

Table 1-3
Federal, State, and Local Project Approvals and Permits Required

Agency	Permit/Approval
Federal	
U.S. Army Corps of Engineers (Corps)	• Permit under Section 404 of the Clean Water Act, 33 United States Code (USC) Section 1344 • Section 10 of the Rivers and Harbors Act of 1899, 33 USC Section 403 • Section 103 of the Marine Protection, Research, and Sanctuaries Act, 33 USC Section 1413 (Disposal at LA-5 only) • Fish and Wildlife Coordination Act, 16 USC Sections 661–666
National Marine Fisheries Service	• Magnuson-Stevens Fishery Conservation and Management Act, as amended 1996 (Public Law 104-267); Consultation • Endangered Species Act, 16 USC Sections 1531–1544 Section 7 Consultation with the federal lead agency
State Historic Preservation Officer/Tribal Historic Preservation Officer (SHPO/THPO)	• National Historic Preservation Act of 1966, Section 106 Consultation with SHPO/THPO (36 Code of Federal Regulations [CFR] Part 800)
United States Coast Guard/Department of Transportation	• Navigation Permit 33 CFR 66
U.S. Fish and Wildlife Service	• Endangered Species Act, 16 USC Sections 1531–1544 Section 7 Consultation with the federal lead agency (i.e., Corps) • Fish and Wildlife Coordination Act • Migratory Bird Treaty Act
State	
California Coastal Commission	• Coastal Development Permit • Consistency Certification, Section 30600(a) of the California Coastal Act, or Waiver of Federal Consistency Provisions
California Department of Fish and Wildlife	• Streambed Alteration Agreement, Section 1601 of the California Fish and Game Code • California Endangered Species Act Section 2081 Incidental Take Permit • Letter of Non-Objection
California Department of Transportation District 11	• Encroachment Permit for access to Interstate 5
Regional Water Quality Control Board	• Water Quality Certification under Section 401 of the Clean Water Act
State Lands Commission	• Lease for access
State Mining and Geology Board	• Surface Mining and Reclamation Action exemption
Regional/Local	
San Diego Air Pollution Control District	• Authority to Construct/Permit to Operate
City of Oceanside	• Encroachment and grading permits • Storm water permits • Local Coastal Plan (LCP) coastal development permit • Noise variance or exemption letter
City of Carlsbad	• Encroachment and grading permits • Storm water permits • LCP coastal development permit • Noise variance or exemption letter
North County Transit District	• Encroachment permit for access to railroad right-of-way

Table 1-4
Enhancement Project Regulatory Setting and Applicable Resource Sections

Regulation	Applicable Resource Sections
Federal Regulations	
Coastal Zone Management Act	Land Use/Recreation, Coastal Processes, Water Quality, Hydrology
Marine Protection, Research, and Sanctuaries Act	Land Use/Recreation, Coastal Processes, Water Quality, Hydrology
Clean Air Act	Air Quality
Clean Air Act Toxic Air Contaminants	Air Quality
Clean Air Act Section 202(a)	Global Climate Change and Greenhouse Gas Emissions
Clean Water Act	Water Quality, Biological Resources
Clean Water Act Section 303(d) Total Maximum Daily Loads	Water Quality
Clean Water Act Section 401 Water Quality Certification	Water Quality
Clean Water Act Section 402 National Pollutant Discharge Elimination Program	Water Quality
Clean Water Act Section 403 Ocean Discharge Criteria	Water Quality
Clean Water Act Section 404 Discharge of Dredge or Fill Material	Water Quality, Biological Resources
Council on Environmental Quality Guidance	Global Climate Change and Greenhouse Gas Emissions
Endangered Species Act	Biological Resources
Executive Order 11990 – Protection of Wetlands	Water Quality, Biological Resources
Executive Order 11988 – Floodplain Management Conditional Letter of Map Revision and Letter of Map Revision	Water Quality, Hydrology
Executive Order 12088	Air Quality, Water Quality, Public Health and Safety
Federal Antidegradation Policy	Water Quality, Hydrology
Executive Order 13112, Invasive Species	Biological Resources
Federal Transportation Administration (FTA) Vibration Guidance	Noise (Vibration)
Magnuson-Stevens Fishery Management and Conservation Act, as amended 1996 (Public Law 104-267)	Biological Resources
Mandatory Greenhouse Gas Reporting Rule	Global Climate Change and Greenhouse Gas Emissions
Migratory Bird Treaty Act	Biological Resources
National Flood Insurance Act	Water Quality, Hydrology
Noise Control Act of 1972	Noise
National Historic Preservation Act	Cultural Resources
Rivers and Harbors Act, Section 10	Water Quality
U.S. Geological Survey Landslide Hazard Program	Geology and Soils

Regulation	Applicable Resource Sections
State Regulations	
Assembly Bill 32: California Global Warming Solutions Act of 2006	Global Climate Change and Greenhouse Gas Emissions
Assembly Bill 32: Climate Change Scoping Plan	Global Climate Change and Greenhouse Gas Emissions
Assembly Bill 411: Beach Sanitation: Posting	Water Quality
Assembly Bill 1493	Global Climate Change and Greenhouse Gas Emissions
Alquist-Priolo Earthquake Fault Zoning Act	Geology and Soils
Building Codes	Geology and Soils
Administrative Code; Title 14, Section 4307	Cultural Resources, Paleontological Resources
California Clean Air Act	Air Quality
California Coastal Act	Land Use/Recreation, Coastal Processes, Water Quality
California Code of Regulations; Title 14 Division 1.5	Public Health and Safety
California Code of Regulations: Title 14 Section 630(b)(103)	Land Use and Recreation
California Code of Regulations Title 24	Noise
California Department of Fish and Game Code	Water Quality, Hydrology, Biological Resources
California Department of Transportation (Caltrans) Vibration Guidance	Noise (Vibration)
California Endangered Species Act	Biological Resources
California Environmental Quality Act	All resource areas
California Fish and Game Code Section 1602 Streambed Alteration	Water Quality, Hydrology, Biological Resources
California Fish and Game Code Section 3503 and 3503.5 Protection of Birds, Nests, and Raptors	Biological Resources
California Fish and Game Code Fully Protected Species	Biological Resources
California Government Code, Section 4216: Protection of Underground Infrastructure	Public Services and Utilities
California Government Code Sections 6253, 6254, 6254.10	Cultural Resources
California Government Code Section 65860	Cultural Resources
California Health and Safety Code Sections 7050.5, 7051, and 7052	Cultural Resources
California Native Plant Protection Act	Biological Resources
California Ocean Plan	Water Quality
California Penal Code, Title 14, Sections 622.5, 623	Cultural Resources
California Public Resources Code Section 5097.5	Cultural Resources
California Public Resources Code Sections 5097.9 to 5097.991	Cultural Resources
California Resolution Number 43	Cultural Resources
California State Lands Commission Public Trust Doctrine	Land Use/Recreation
California Street and Highways Code	Visual Resources
Construction General Permit	Water Quality, Hydrology, Geology/Soils
Executive Order S-1-07	Global Climate Change and Greenhouse Gas Emissions
Executive Order S-3-05	Global Climate Change and Greenhouse Gas Emissions
Executive Order S-13-08	Global Climate Change and Greenhouse Gas Emissions
Natural Community Conservation Plans and Habitat Conservation Plans	Biological Resources

Regulation	Applicable Resource Sections
Porter-Cologne Water Quality Control Act	Water Quality, Biological Resources
Seismic Hazards Mapping Act of 1990	Geology/Soils
Senate Bill 97	Global Climate Change and Greenhouse Gas Emissions
Senate Bill 922	Cultural Resources
Senate Bill 1374: Local Government Construction and Demolition Guide	Public Services and Utilities
Senate Concurrent, Resolution Number 87	Cultural Resources
Senate Bill X1-2	Global Climate Change and Greenhouse Gas Emissions
State Antidegradation Policy	Water Quality
State Implementation Plan	Air Quality
Surface Mining and Reclamation Act	Land Use, Chapter 1.0
Local Regulations	
Carlsbad Watershed Management Plan	Water Quality, Hydrology
Carlsbad Watershed Management Area Water Quality Improvement Plan	Water Quality, Hydrology
City of Carlsbad, Municipal Code, Section 8.48.010 Noise	Noise
City of Carlsbad, General Plan, Noise Element	Noise
City of Carlsbad, General Plan and Local Coastal Program, Land Use Plan	Land Use and Recreation
City of Carlsbad, General Plan, Land Use Element	Land Use and Recreation
City of Carlsbad, General Plan, Open Space and Conservation Element	Land Use and Recreation
City of Oceanside, Municipal Code, Chapter 38 Noise Control	Noise
City of Oceanside, General Plan, Noise Element	Noise
City of Oceanside, Grading Ordinance	Noise
City of Oceanside, Local Coastal Program, Land Use Plan	Land Use
City of Oceanside, General Plan, Land Use Element	Land Use
City of Oceanside, General Plan, Recreational Trails Element	Land Use
City of Oceanside, General Plan, Environmental Resource Management Element	Land Use
Construction Dewatering Permits	Water Quality
San Diego County Code Chapter 6. Resource Protection Ordinance	Cultural Resources
County of San Diego Guidelines for Determining Significance for Climate Change	Global Climate Change and Greenhouse Gas Emissions
San Diego County Vector Control Program	Public Health and Safety
San Diego Municipal Storm Water Permit	Water Quality, Hydrology
San Diego Regional Water Quality Control Board Basin Plan	Water Quality

environmental effects or a further, more substantial, review may be conducted in the form of an EIR. This EIR documents SANDAG's compliance with the requirements of CEQA for the Enhancement Project. SANDAG is the lead agency responsible for certifying the Final EIR, issuing Findings and a Statement of Overriding Considerations, as required, and filing the NOD.

California Coastal Act

The CCC was established in 1972 by voter initiative; the California Coastal Act of 1976 tasked the agency with protection of coastal resources through the issuance of Coastal Development Permits (CDPs). Under the Act, local governments are encouraged to adopt Local Coastal Plans (LCPs), which consist of a Land Use Plan (LUP) with goals and regulatory policies as well as a set of Implementing Ordinances. The northwestern portion of the lagoon is located within the jurisdictional boundaries of the City of Oceanside with the remainder located within the City of Carlsbad. Both cities have approved LCPs that classify Buena Vista Lagoon as Open Space (Oceanside 1985, Carlsbad 2014d). Potential materials placement sites are either addressed in one of the above LCPs or, in the case of placement seaward of the mean high tide line, under the jurisdiction of the CCC. Relevant policies specific to each LCP are discussed below under each jurisdiction.

Several sections of the California Coastal Act focus on shoreline construction, specifically Sections 30235, 30233, and 30706. All of these sections contain an element pertaining to the protection of existing structures and the protection of public beaches in danger of erosion. Under these sections, construction will be allowed through revetments, breakwaters, groins, or other means that alter natural shoreline processes; dredging of open coastal waters, lakes, wetlands, and other areas will be permitted only where less feasible environmentally damaging alternatives are not available. In particular, in Section 30233, dredging and spoils disposal, planned to avoid significant disruption to marine and wildlife habitats and water circulation, is allowed for restoration purposes. Section 30233 states further that dredge spoils suitable for beach replenishment should be transported to appropriate beaches or into suitable longshore current systems.

Prior to implementation of the Enhancement Project, but after SANDAG's certification of the EIR, the CCC would determine whether to approve a CDP for both the lagoon enhancement and materials placement component of the project, as applicable. It is anticipated the CCC would approve a consolidated CDP addressing the project as a whole; it is also possible that the project could obtain a permit from the CCC for work within the lagoon, and individual permits from the cities of Oceanside and Carlsbad for potential sand placement on city beaches.

California Fish and Game Code

Pursuant to California Code of Regulations, title 14, section 630(b)(103), the State Fish and Game Commission declared the lagoon to be the Buena Vista Lagoon Ecological Reserve.

Under Sections 1601–1603 of the Fish and Game Code, agencies are required to notify CDFW prior to implementing any project that would divert, obstruct, or change the natural flow or bed, channel, or bank of any river, stream, or lake. All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports wildlife resources are subject to regulation by CDFW under Fish and Game Code Section 1602.

The Fish and Game Commission defines "stream" as a body of water that flows at least periodically or intermittently through a bed or channel that has banks and supports fish or other aquatic life. This definition includes watercourses with a surface or subsurface flow that supports or has supported riparian vegetation. CDFW typically extends its jurisdictional limit to the top of a stream, the bank of a lake, or outer edge of the riparian vegetation, whichever is wider. Jurisdictional boundaries under Fish and Game Code Sections 1600–1616 (CDFW's Lake and Streambed Alteration Program) may encompass an area that is greater than that under the jurisdiction of CWA Section 404. Federal and state jurisdictions do overlap, but would remain distinct for regulatory administration and permitting purposes. Prior to implementation of the Enhancement Project, CDFW would determine whether to approve a Section 1602 Streambed Alteration Agreement.

California State Lands Commission Public Trust Doctrine

The ~~California~~ California State Lands Commission (CSLC) has exclusive jurisdiction over all of California's tide and submerged lands and the beds of naturally navigable rivers and lakes, which lands are sovereign lands, and swamp and overflow lands and State School Lands (proprietary lands). The CSLC has statutory authority (Division 6 of the California Resources Code) to approve appropriate uses of state lands under its jurisdiction and is the administrator of the Public Trust Doctrine over sovereign lands. Sovereign lands may only be used for purposes consistent with this public trust; uses include commerce, navigation, fisheries, open space, wetlands, and other related trust uses. The CSLC has an oversight responsibility for tide and submerged lands legislatively granted in trust to local jurisdictions (PRC Section 6301), extending to activities within submerged lands (from mean high tide line) and those within 3 nautical miles offshore. After certification of the EIR, but prior to implementation of the Enhancement Project, the CSLC would determine whether to issue a lease to SANDAG for activities below the mean high tide line (MHTL), including dredging in the lagoon and for materials disposal/reuse of excavated materials.

Clean Water Act

The principal law that serves to protect the nation's waters is the Federal Water Pollution Control Act, which was originally enacted in 1948, and is more commonly referred to as the Clean Water

Act (CWA). Congress revised the law in response to the public's growing concern of widespread water pollution in 1972, passing the Federal Water Pollution Control Act Amendments of 1972. The 1972 legislation established goals to eliminate the discharge of pollutants into the nation's waters and achieve water quality that is both "fishable" and "swimmable," and to prohibit the discharge of any pollutant to "waters of the U.S." from any point source (e.g., a discharge pipe) unless the discharge was authorized by a National Pollutant Discharge Elimination System (NPDES) Permit.

CWA Section 303 requires states to adopt water quality standards for all surface waters of the U.S. States, territories, and authorized tribes are required to develop a list of water bodies that are considered to be "impaired" from a water quality standpoint and develop action plans, referred to as Total Maximum Daily Loads (TMDLs), to improve water quality. TMDL refers to the amount of a specific pollutant that a river, stream, or lake can assimilate and still meet federal water quality standards as provided in the CWA. TMDL accounts for all sources of pollution, including point sources, nonpoint sources, and natural background sources.

Several sections of the CWA are important to water quality protection and management within Buena Vista Lagoon and are described in Appendix B:

- Section 303(d) – TMDLs
- Section 401 – Water Quality Certification
- Section 402 – NPDES Program – Municipal Permit
- Section 403 – Ocean Discharge
- Section 404 – Discharge of Dredge or Fill Material

The San Diego Regional Municipal Storm Water Permit (Order R9-2013-0001 [as amended by Order No. R9-2015-0001]) (Municipal Permit) regulates the conditions under which storm water and non-storm water discharges into and from municipal separate storm water systems (MS4s) are prohibited or limited. The Municipal Permit establishes prohibitions and limitations with the goal of protecting water quality and designated beneficial uses of waters of the state from adverse impacts caused by or contributed to by MS4 discharges. Under the Municipal Permit, Copermittees, including the Cities of Oceanside and Carlsbad, are required to implement storm water management requirements and controls, which include requirements for storm water best management practices (BMPs) during construction and post-construction, including implementing low impact development (LID) BMPs for development and significant redevelopment to reduce pollutants in storm water runoff from sites through more natural processes such as infiltration and biofiltration. Copermittees are also required to comply with hydromodification management plan (HMP) requirements to mitigate the potential for increased erosion in receiving waters due to increased runoff rates and durations often caused by

development and increased impervious surfaces. Each of the three alternatives has an associated increase in impervious surfaces and dry construction areas.

A series of regulatory actions would be required prior to implementation of the Enhancement Project:

- After certification of the EIR, the RWQCB would determine whether to issue a State Water Quality Certification in accordance with CWA Section 401, in connection with the Corps' Department of the Army (DA) permits for the discharge of dredge and fill material.
- After consultation and issuance of agency permits, the Corps would determine whether to issue a DA permit pursuant to Section 404 of the CWA (33 USC Section 1344), Section 10 of the RHA (33 USC Section 403), and Section 103 of the MPRSA, as appropriate for the project.
- Buena Vista Lagoon has been 303(d) listed as impaired by high nutrient levels, indicator bacteria, and sedimentation/siltation. The potential sources of the impairments are point and nonpoint sources. The TMDL action plan for indicator bacteria was scheduled by RWQCB for completion in 2008, and action plans for both eutrophication and sedimentation/siltation are scheduled for completion in 2019. The Enhancement Project could improve conditions currently contributing to the impairments identified in the 303(d) list. No regulatory action is needed at this time.
- The Enhancement Project would be required to comply with the Municipal Permit and implement construction and post-construction storm water BMPs to reduce pollutants in storm water runoff.

Coastal Zone Management Act (CZMA)

In 1972, U.S. Congress passed the CZMA to manage the nation's coastal resources. The CZMA is administered by the U.S. Department of Commerce, National Oceanic and Atmospheric Administration's (NOAA) Office of Ocean and Coastal Resource Management, and balances competing land and water issues in coastal zones. Federal activities within or affecting the coastal zone must, to the maximum extent practicable, be consistent with the state's coastal management program. After certification of the EIR, but prior to implementation of the Enhancement Project, SANDAG would request a consistency determination from the CCC.

Endangered Species Act

The federal ESA of 1973 (16 USC Sections 1531 et seq.) directs USFWS and NMFS (the Services) to identify and protect endangered and threatened species and their critical habitat, and to provide a means to conserve their ecosystems. Section 9 of the ESA makes it unlawful for a person to "take" a listed animal without a permit. Section 7 of the ESA directs the Services to use its existing authority to conserve threatened and endangered species and, in consultation with federal agencies, ensure that any action authorized, funded, or carried out by such agency does not jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Section 7(a)(2) requires federal agencies to consult with the Services to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species. In consultation for those species with critical habitat, federal actions must also ensure that activities do not adversely modify critical habitat to the point that it would no longer aid in the species' recovery. Prior to the issuance of any permits and implementation of the Enhancement Project, the federal lead agency under NEPA would initiate and complete formal consultation with the Services in accordance with 16 USC Sections 661–666, as needed.

Federal Emergency Management Agency – Conditional Letter of Map Revision and Letter of Map Revision

Amended Executive Order 11988 directs federal agencies to avoid adverse impacts associated with the modification of floodplains, and to avoid direct and indirect support of floodplain development wherever a practicable alternative exists. Each federal agency is responsible for reducing the risk of flood loss, minimizing the impact of floods on human safety, health, and welfare, and restoring and preserving natural and beneficial values served by flood plains. In addition, amended EO 11988 advises agencies to use a higher flood elevation and expanded flood hazard area than the base flood previously described in the EO 11988 to ensure that climate change and other future changes are more adequately accounted for in agency decisions. Furthermore, Executive Order 11988 requires the prevention of uneconomic, hazardous, or incompatible use of floodplains; protection and preservation of natural and beneficial floodplain values; and consistency with the standards and criteria of the National Flood Insurance Program (NFIP). The basic tools for regulating construction in potentially hazardous floodplain areas are local zoning techniques and Federal Emergency Management Agency (FEMA) Federal Insurance Rate Map (FIRM) mapping.

For projects that would affect the hydrologic or hydraulic characteristics of a flooding source, and thus would result in the modification of the existing regulatory floodway or effective Base Flood Elevations, a Conditional Letter of Map Revision (CLOMR) could be necessary. A

CLOMR is FEMA's comment on a proposed project that would make such hydrologic modifications. A Letter of Map Revision (LOMR) is FEMA's modification to an effective FIRM based on the implementation of physical measures that affect the hydrologic or hydraulic characteristics of a flooding source and thus result in the modification of the existing regulatory floodway. A CLOMR and LOMR must be prepared by the cities of Oceanside and Carlsbad and approved by FEMA before beginning any project construction activities, if applicable.

Magnuson-Stevens Fishery Management and Conservation Act, as amended 1996 (Public Law 104-267)

Federal agencies must consult with NMFS on actions that may adversely affect EFH, which is defined as those "waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." EFH assessments must include (1) a description of the proposed action, (2) an analysis of effects, including cumulative effects, (3) the federal agency's views regarding the effects of the action on EFH, and (4) proposed mitigation, if applicable. Prior to the issuance of permits and implementation of the Enhancement Project, the federal lead agency under NEPA would initiate and complete consultation with NMFS regarding EFH assessment, as needed.

Marine Protection, Research, and Sanctuaries Act (MPRSA)

In 1972, Congress enacted the MPRSA (also known as the Ocean Dumping Act) to regulate the ocean dumping of all material beyond the territorial limit (three miles from shore) and prevent/limit dumping material that "would adversely affect human health, welfare, or amenities, or the marine environment, ecological systems, or economic potentialities." Section 103 of MPRSA authorizes the Corps to issue permits, subject to EPA approval, for transport and disposal of dredged material (i.e., material excavated from navigable U.S. waters) at EPA-designated ocean disposal sites (e.g., LA-5). Prior to materials disposal at LA-5, the Corps would determine whether to issue a DA permit pursuant to Section 103 of the MPRSA.

National Environmental Policy Act, *as amended*

NEPA established a U.S. national policy promoting the enhancement of the environment and also established the President's CEQ. NEPA requires federal agencies to conduct an interdisciplinary analysis of the environmental consequences of their actions early in the decision-making process. CEQ regulations (40 CFR Parts 1500–1508) set the standard for NEPA compliance and require agencies to create their own NEPA implementing procedures. Consequently, NEPA procedures vary from agency to agency. Further procedural differences may derive from other statutory requirements and the extent to which federal agencies use NEPA analyses to satisfy other review requirements. This EIR does not include an environmental

analysis in compliance with NEPA for the Enhancement Project. Prior to implementation of the project, a federal lead agency (e.g., Corps) would be identified and responsible for conducting the NEPA process.

National Historic Preservation Act (NHPA)

The NHPA, as amended (16 USC Sections 470–470w), is the fundamental law concerning the protection of cultural resources on federal land, or cultural resources that may be affected by an undertaking that requires federal financial assistance, or a federal permit, license, or approval. Under the NHPA, its amendments, and its implementing regulations, federal agencies are required to responsibly manage federally owned or controlled cultural resources. Federal agency requirements pertinent to the Enhancement project are addressed in Section 106 of the NHPA and its implementing regulations. Section 106 of the NHPA requires federal agencies to take into consideration the potential effects of their undertakings on historic properties, and is generally applicable when an undertaking is the type of activity that has the potential to affect such properties. The purpose of Section 106 is to avoid unnecessary impacts to historic properties from federal undertakings. Section 106 regulations (36 CFR Section 800.16[1]) define historic properties as any prehistoric or historic district, site, building, structure, or object included, or eligible for inclusion, in the National Register of Historic Places (NRHP) (36 CFR Section 60). It requires that the SHPO and Native American tribes with historic ties to the area (and possibly other parties) be afforded an opportunity to comment on the undertaking. Prior to federal approval and implementation of the Enhancement Project, the NEPA lead agency would conduct consultation with tribes, SHPO, and the THPO in accordance with Section 106 requirements.

Rivers and Harbors Act, Section 10

Section 10 of the RHA, administered by the Corps, requires DA authorization for all structures (such as riprap) and activities (such as dredging) in navigable waters of the U.S. Prior to implementation of the Enhancement Project, the Corps would determine whether to issue a permit for applicable structures and activities.

Surface Mining and Reclamation Act of 1975 (SMARA)

SMARA (PRC Sections 2710–2796) provides a comprehensive surface mining and reclamation policy with the regulation of surface mining operations to ensure that adverse environmental impacts are minimized and mined lands are reclaimed to a usable condition. PRC Section 2207 provides annual reporting requirements for mines in the state, under which the State Mining and Geology Board is also granted authority and obligations. It is anticipated that the State Mining

and Geology Board would issue an exemption from the requirements of SMARA under PRC Section 2714.

1.5 ORGANIZATION OF THE EIR

This EIR is organized as follows:

The **Executive Summary** provides an overview of the information provided in detail in subsequent chapters. It consists of an introduction; a brief description of the Enhancement Project and alternatives considered; a discussion of issues raised by the public and agencies relative to project construction and operations; and a table that summarizes the potential environmental impacts in each category, the significance determination for those impacts, mitigation measures, and significance after mitigation.

Chapter 1 (Introduction) provides the project background; identifies the project objectives and need; and provides an overview of the public involvement and CEQA environmental review processes, including anticipated permitting needs, and a description of the organization of the EIR.

Chapter 2 (Description of Project Alternatives) addresses three possible alternatives for the Enhancement Project at an equal level of detail. Information on project alternative characteristics, including design features and construction methods, is provided. This chapter also describes the analysis and rationale for selecting the range of alternatives discussed in the EIR and identifies the alternatives considered by SANDAG that were rejected from further discussion during the environmental analysis process.

Chapter 3 (Environmental Analysis) describes the potential environmental effects of implementing the Enhancement Project via each of the alternatives. The discussion in Chapter 3 is organized into 15 environmental issue areas as follows:

- Land Use/Recreation
- Hydrology
- Oceanography/Coastal Processes
- Water and Aquatic Sediment Quality
- Biological Resources
- Geology and Soils
- Cultural Resources
- Paleontological Resources
- Visual Resources
- Traffic and Circulation
- Air Quality
- Global Climate Change, Greenhouse Gas Emissions, and Sea Level Rise
- Noise
- Public Services and Utilities
- Public Health and Safety

For each environmental issue, the analysis and discussion are organized into four subsections as described below:

Existing Conditions – This subsection describes the physical environmental conditions of the proposed project site generally at the time of publication of the NOP. This establishes baseline conditions to determine whether specific project-related impacts would be significant.

Significance Criteria – This subsection identifies a set of thresholds according to which the level of impact is determined.

Impact Analysis – This subsection provides information on the environmental effects of the Enhancement Project via three build alternatives and a no project alternative at an equal level of detail. It documents whether the impacts of the Enhancement Project would meet or exceed the established significance criteria. When appropriate, project benefits are also discussed.

Mitigation Measures – This subsection identifies feasible mitigation measures that would avoid or substantially reduce significant adverse project-related impacts. This subsection also indicates whether project-related impacts would be reduced to below a level of significance with implementation of the mitigation measures identified in the EIR. Residual significant and unavoidable adverse effects of the Enhancement Project that would result even after the mitigation measures have been implemented are also identified.

Chapter 4 (Comparison of Alternatives) describes and evaluates the comparative merits of the alternatives that would feasibly attain most of the basic objectives of the Enhancement Project and avoid or substantially lessen potentially significant project-related impacts. Additionally, Chapter 4 includes a discussion of the environmental effects of the No Project Alternative and discusses the environmentally superior alternative.

Chapter 5 (Cumulative Impacts) addresses the potentially significant cumulative impacts that may result from the Enhancement Project when taking into account other past, present, and reasonably foreseeable future projects.

Chapter 6 (Other CEQA Considerations) presents other mandatory CEQA discussions, including the following:

Impacts Found Not to Be Significant – This subsection identifies and summarizes the issue areas that were determined to have no adverse environmental effect or a less than significant environmental effect given the established significance criteria.

Significant Irreversible Environmental Changes – This subsection addresses the extent to which the Enhancement Project would result in the commitment of nonrenewable resources.

Growth–Inducing Impacts – This subsection describes the potential of the Enhancement Project to induce economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment.

Mandatory Findings of Significance – This subsection identifies issue areas that, if affected by the Enhancement Project, would be considered significant.

CEQA Appendix F Energy Evaluation – This subsection addresses the energy consumption of the Enhancement Project and the extent to which, if relevant and applicable, energy would be used in a wasteful, inefficient, or unnecessary manner.

Chapter 7 (List of Preparers) identifies those persons responsible for the preparation of this EIR.

Chapter 8 (Agencies and Individuals Consulted) provides a list of those agencies and individuals consulted in the preparation of this EIR.

Chapter 9 (Literature Cited) provides a bibliography of reference materials used in preparation of this EIR.

Chapter 10 (Acronyms and Abbreviations) presents an alphabetical list of acronyms and abbreviations used in this EIR.