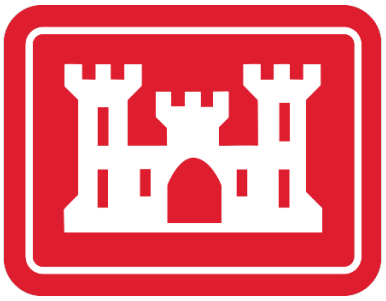
SANTA ANA RIVER MAINSTEM PROJECT:
ALCOA DIKE - PHASE II

County of Riverside, California

FINAL
SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT
AND
ENVIRONMENTAL IMPACT REPORT ADDENDUM



LEAD AGENCY:

U.S. Army Corps of Engineers

915 Wilshire Boulevard, Suite 930

Los Angeles, California 90017

May 2021

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FINDING OF NO SIGNIFICANT IMPACT

ALCOA EMBANKMENT – PHASE II PROJECT

RIVERSIDE COUNTY, CALIFORNIA

The U.S. Army Corps of Engineers, Los Angeles District (Corps) has conducted an environmental analysis in accordance with the National Environmental Policy Act of 1969, as amended (NEPA), for proposed modifications and refinements to Phase II of the Alcoa Dike project, a feature of the Prado Dam Separable Element of the Santa Ana River Mainstem Project (SARMP). The Supplemental Environmental Assessment (SEA), dated May 2021, addresses modifications and refinements to the dike design along with associated road and utility modifications, and addresses inclusion of a segment of regional bicycle and equestrian trail within the project as a betterment, with an out grant to be issued to Riverside County. This SEA has been prepared by the Corps as a supplement to the Final Supplemental Environmental Impact Statement (SEIS) for Prado Basin and Vicinity, dated November 2001 and to the August 2018 Final SEA. Phase I construction was initiated in 2019.

The proposed modifications to the Alcoa Dike features include: Construction of one additional 48-inch drainage structure extending through the main dike embankment; extension of the dike an additional 170 feet in length along Temescal Wash to tie into Lincoln Avenue; and extending the flood wall at Auburndale by 26 feet for a total length of 176 feet of flood wall and a 36 foot wide swing floodgate; an increase in the length of the dike alignment at the Lincoln Avenue tie-in adjacent to Temescal Wash; construction of one culvert comprised of four concrete boxes, each seven (7) feet by four (4) feet, extending through the Rincon Street roadway embankment between Pond I and II; redesign of the concrete v-ditch to an earthen contoured drainage ditch from Pond IA to Pond I; and a new borrow site and haul route were established for Phase II construction activities. Additionally, the drainage channel from the main dike to Temescal Wash near Auburndale Street described in the 2018 Final SEA/EIR Addendum was removed and will be replaced with a single culvert consisting of four reinforced concrete boxes (each 7’ by 4’) extending through the Rincon roadway embankments, and a concrete drainage swale. Minor revisions to the operation, maintenance, repair, replacement and rehabilitation (OMRRR) requirement have also been addressed, such as continuation of maintenance roads along the 170-foot dike extension, and maintaining a maximum 50-foot instead of a 15-foot vegetation-free zone (VFZ) from the toe of the dike on each side. Roadway realignments of Rincon Street to cross the dike at grade and Butterfield Connector to connect to Rincon Street on the reservoir side of the dike would be performed; and a portion of Auburndale Street would be restored with slight grading improvements so water will drain away from where the gate crosses the road. The finished ground next to Auburndale Street would be hydroseeded. New or amended out grants would be issued by the Corps’ Real Estate Division for such roadways where required. The Proposed Action also evaluates out grants for construction, operation and maintenance of a segment of the proposed Santa

Ana River Trail (SART) within and immediately adjacent to the project footprint, and for replacement and protection of the Santa Ana Watershed Project Authority's (SAWPA's) utility Brine Line. This SEA provides NEPA compliance to support the real estate actions of providing a right-of-entry for this work to occur. All areas to be temporarily impacted during construction will be reseeded with a native plant palette upon completion of construction activities. The Proposed Action is detailed in Section 2.0 of the SEA.

The Final SEA, incorporated herein by reference, evaluates two alternatives: The No Action Alternative (i.e., the Previously Approved Design Alternative), under which construction of the second phase of Alcoa Dike as described in the 2018 Final SEA would occur, with no modifications or additions as described in this SEA; and the Proposed Action, in which the proposed design modifications and refinements to the feature and associated roadways and utilities and increase in the VFZ, along with the identified real estate actions for the SART, would be implemented.

Construction of Phase II is scheduled to begin in September 2021 and would continue for approximately twenty-four (24) months.

An electronic public Draft SEA, prepared jointly with an EIR Addendum by Orange County Flood Control District, was made available on the Los Angeles District homepage and was distributed to known interested parties in December 2020, with a request for comments from December 14, 2020 to January 14, 2021. Comments received on that public Draft are included in Appendix B of the SEA, along with the Corps' response. None of the comments received changed the description of the Proposed Action or the analysis contained in the SEA.

For all alternatives, the potential effects were evaluated, as appropriate. A summary assessment of the potential effects of the Proposed Action are listed in Table-1 below:

Table-1: Summary of Potential Effects of the Proposed Action (including proposed minimization and avoidance measures)

	Insignificant effects	Insignificant effects as a result of mitigation	Resource unaffected by action
Aesthetics	☒	☐	☐
Air quality	☒	☐	☐
Aquatic resources/wetlands	☒	☐	☐
Invasive species	☒	☐	☐
Fish and wildlife habitat	☐	☒	☐
Threatened/Endangered species/critical habitat	☐	☒	☐
Historic properties	☒	☐	☐
Other cultural resources	☒	☐	☐

	Insignificant effects	Insignificant effects as a result of mitigation	Resource unaffected by action
Floodplains	☒	☐	☐
Hazardous, toxic & radioactive waste	☐	☐	☒
Hydrology	☒	☐	☐
Land use	☒	☐	☐
Navigation	☐	☐	☒
Noise	☒	☐	☐
Public infrastructure	☒	☐	☐
Recreation	☐	☒	☐
Socio-economics	☒	☐	☐
Soils	☒	☐	☐
Tribal trust resources	☐	☐	☒
Water quality	☒	☐	☐
Climate change	☐	☐	☒

Avoidance and minimization measures to be implemented as part of the Proposed Action are included in the SEA in Section 6.0. With the implementation of these measures, all potential impacts to environmental and human resources in and adjacent to the project area would be less than significant.

The Proposed Action will not result in additional effects to federally listed species that occur in the vicinity (including but not limited to endangered least bell's vireo (*Vireo bellii pusillus*), California gnatcatcher (*Polioptila californica*), and yellow-billed cuckoo (*Coccyzus americanus*; cuckoo)) or their designated critical habitats from those previously assessed for the Alcoa Dike project. Effects from the overall Alcoa Dike project were assessed in the U.S. Fish and Wildlife Service's (FWS) letter dated August 23, 2018, concerning Reinitiation of Formal Section 7 Consultation on the Santa Ana River Mainstem Flood Control Project at the Alcoa Dike. The Proposed Action is in compliance with the Endangered Species Act of 1973, as amended (16 USC§ 1531, et seq). The FWS concurred that no additional consultation was required for the Phase II modifications or to address the SART.

The impacts to potential Waters of the United States (WOUS) remain consistent with the Clean Water Act section 404(b)(1) Evaluation prepared as part of the 2018 SEA and in the project's Clean Water Act section 401 Water Quality Certification (WQC) obtained April 11, 2019. Implementation of the Alcoa Dike project feature, including the Proposed Action, is resulting in 2.03 acres of permanent impacts to the WOUS. The project remains in compliance with the Clean Water Act.

The Proposed Action would result in a total of 0.75 acre of new temporary impacts to non-native upland grassland in addition to 1.83 acres of new temporary and 0.01 acre of

new permanent impacts to existing riparian vegetation through vegetation clearing and ground-disturbing activities within the expanded project area. Of these impacts, 1.5 acres of temporary impacts and 0.02 acres of permanent impacts to native riparian vegetation would be a result of the Santa Ana River Trail out grant. The Proposed Action will also temporarily impact 50.5 acres of agricultural lands in the borrow area and will permanently impact 4.53 acres of native riparian habitat along W Rincon Street, that was previous considered to be a temporary impact. These additional impacts are attributed to design refinements associated with raising Rincon Street to match the elevation of the proposed dike and other road modifications. While the Draft SEA/EIR Addendum assumed that a 15-foot Vegetation Free Zone (VFZ) would be maintained and did not identify or describe the requirement for a 50-foot VFZ, the impact acreages presented in that document reflected the worst-case scenario of a permanent impact of 100.7 acres for the 50-foot VFZ.

To offset the temporary and permanent effects of Alcoa Dike and roadway re-alignment elements of the Proposed Action on riparian habitat and WOUS, the Corps will conduct onsite and offsite restoration activities in accordance with 401 WQC requirements and Phase I and Phase II SEA commitments. SART impacts will be restored within the trail's temporary construction easement by the trail proponent (Riverside County). No additional impacts will occur, and no offsets will be required as a result of the SAWPA brine line protection.

The Proposed Action also remains consistent with the overall project's existing programmatic agreement (PA) prepared under the National Historic Preservation Act. Pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended, a PA was executed for the SARMP in 1993 by the Corps, State Historic Preservation Officer (SHPO), and the Advisory Council on Historic Preservation. The PA details the procedures to be followed for each feature of the project. Under the Proposed Action, no additional consultation is required for the dike and associated utility relocations and protections or roadway modifications. One cultural resource was identified within the dike construction footprint (CA-RIV-5521) and seven cultural resources were identified within the borrow area, (CA-RIV-4727, CA-RIV-4728, CA-RIV-5253, CA-RIV-7136, CA-RIV-5573, CA-RIV-7676, and CA-RIV-7679). All eight cultural resources have been determined to be not eligible for the National Register of Historic Places through a consensus determination with the SHPO. The Proposed Action would not affect any significant cultural resources.

While the Alcoa dike and the associated utility relocations, protections and roadway modifications are covered by the SARMP PA, the SART is a separate undertaking under the National Historic Preservation Act. In 2017, the Corps consulted with the SHPO on the creation of nine (9) miles of the SART, a segment of which is addressed in the SEA. The Corps found that the creation of the trail would result in no adverse effect to historic properties and the SHPO concurred via letter dated July 26, 2017.

Based on the analyses in the SEA, implementation of the Proposed Action would result in short term and long-term, insignificant impacts to environmental resources including, but not limited to, biological resources, air quality, recreation, and water quality. All

applicable laws, executive orders, regulations, were considered in evaluation of alternatives. Based on the Final SEA, the reviews by other Federal, State and local agencies, and the review by my staff, it is my determination that the Proposed Action would not have a significant effect on the quality of the human environment; therefore, preparation of an Environmental Impact Statement is not required.

_____
DATE

_____
Julie A. Balten
Colonel, U.S. Army
Commander and District Engineer

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1 INTRODUCTION

1.1 Introduction

This Supplemental Environmental Assessment and Environmental Impact Report Addendum (SEA/EIR Addendum) for the Alcoa Dike Phase II portion of the Prado Separable Element of the Santa Ana River Mainstem Flood Control Project (SARMP), has been prepared jointly by the U.S. Army Corps of Engineers (Corps) and Orange County Flood Control District (OCFCD) as a supplement to the Final Supplemental Environmental Impact Statement (SEIS) and EIR for Prado Basin and Vicinity, dated November 2001 (2001 Final SEIS/EIR). This SEA/EIR Addendum also supplements the August 2018 Alcoa Dike Final SEA/EIR Addendum (2018 Final SEA/EIR Addendum). The 2018 Final SEA/EIR Addendum addressed the initial clearing and Dike construction within the project area, but due to insufficient design information at the time, it did not fully address all elements including road realignments and some utility relocations. The Phase I construction was initiated in 2019. A contract for Phase II construction is anticipated to be awarded in 2021. This SEA/EIR Addendum includes more detail about associated road and utility modifications, addresses minor design modifications to the Dike structure, and addresses inclusion of a segment of a regional bike trail and equestrian trail as a project betterment

This document complies with requirements of the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA) This document complies under the old NEPA regulations as this is the continuation of the original project with a few minor modifications to the original design. The Corps is the lead agency for compliance with NEPA, and the OCFCD, the non-federal sponsor for the Prado Dam separable element, is the lead agency for compliance with CEQA. The OCFCD will be responsible for operation, maintenance, repair, replacement, and rehabilitation of the Dike. Other agencies (i.e., cooperating, responsible, and trustee agencies) that may use this SEA/EIR Addendum in the decision making or permit process related to the Alcoa Dike Phase II construction will consider the information in this document along with other information that may be presented during the NEPA/CEQA process. Other responsible and trustee agencies were identified in the 2001 Final SEIS/EIR and 2018 Final SEA/EIR Addendum, and are listed again as follows:

- California Department of Fish and Wildlife (previously California Department of Fish and Game)
- Santa Ana Regional Water Quality Control Board
- Riverside County
- Southern California Edison
- Santa Ana Watershed Project Authority
- United States Fish and Wildlife Service
- California Department of Parks and Recreation
- City of Corona, and
- Orange County Water District.

This SEA/EIR Addendum is necessary to document and evaluate the impacts of design refinements on environmental resources, and to document any changed conditions in the project

area compared to the 2018 Final SEA/EIR Addendum. This SEA/EIR Addendum addresses design modifications for Alcoa Dike Phase II construction, as well as adjustments to roadways and utility relocations. Phase II construction will complete the portion of the Dike not constructed in Phase I, generally in the vicinity of road crossings including the south Lincoln tie-in near Butterfield Drive and the portions of the Dike crossing Rincon Street and Auburndale Street. Phase II construction will also incorporate design changes that have occurred subsequent to completion of the Phase I construction, as well as work requiring outgrants and outgrant modifications for other utilities, roadways, and the Santa Ana River Trail (SART).

Proposed design refinements and related actions for work not undertaken as part of or associated with 2018 construction include:

- Construction of Lincoln Avenue tie-in adjacent to Temescal Wash extending the Dike an additional approximate 170 feet in length;
- Construction of one additional 48-inch drainage structures extending through the main Dike embankment;
- An increase in the length of the Dike alignment at the Lincoln Avenue tie-in adjacent to Temescal Wash;
- Construction of one culvert comprised of four (4) concrete boxes, each seven (7) feet by (4) four feet, extending through the Rincon Street roadway embankment between Pond I and II;
- Redesign of the concrete v-ditch to an earthen contoured drainage ditch from Pond IA to Pond I;
- Extending the flood wall at Auburndale by 26 feet for a total length of 176 feet of flood wall and a 36-foot-wide swing floodgate;
- Vegetation Free Zone (VFZ) width of fifty (50) feet to comply with levee safety certification requirements;
- A new borrow site and haul route were established for Phase II construction activities;
- Work during Phase II is also proposed to include the following roadway modifications, for Lands, Easements, Rights-of-Way, and Relocations (LERR) obligations and/or at non-project cost and includes outgrant modifications and/or new outgrants by the Corps' Real Estate Division: Roadway re-alignment of Rincon Street to cross the Dike at grade;
- A portion of Auburndale Street would be restored with slight grading improvements so water will drain away from where the gate crosses the road. The finished ground next to Auburndale Street would be hydroseeded; and
- Butterfield Connector realignment to connect to Rincon Street on the reservoir side of the Dike.

Furthermore, other activities would be accommodated within and adjacent to the proposed new alignments of Rincon Road and Butterfield Drive:

- A segment of the proposed SART would be accommodated within and adjacent to the proposed new alignments of Rincon Road and Butterfield Drive. Right-of-way authorization from the Corps would be required for the construction, operation, and maintenance of the SART by Riverside County. The SART would be extended through a Corps mitigation site along Butterfield Drive up to Temescal Wash. The bike path segment (varying 14 to 16-foot-wide multi-use path) would be immediately adjacent to the road, while an equestrian trail would be offset but roughly parallel to that same alignment (10-foot-wide decomposed granite (DG) trail);
- The temporary replacement and protection of a segment of the Inland Empire Brine Line by the Santa Ana Watershed Project Authority, to enable the Brine Line to withstand the additional load where it crosses under project features. Right-of-way authorization from the Corps would be required;
- Related action: The replacement of Southern California Edison transmission, distribution, and telecom poles/circuits by the owner, disclosed below; and

1.2 Project Location

The Alcoa Dike project area is located in the city of Corona, Riverside County (Figure 1, Project Location), adjacent to Temescal Creek. The Phase I and Phase II features occur along the southeastern perimeter of Prado Basin (Figure 2). Alcoa Dike is one of several perimeter Dikes or embankments that are being constructed around the Prado Basin as part of SARMP (Figure 3), as documented in the 2001 SEIS/EIR. The Alcoa Dike project is located south of the Corona National Housing Tract Dike, east of the Corona Sewage Treatment Plant Dike, and would cross over Butterfield Dive, Rincon Street, and Auburndale Street. The feature was originally named for the Alcoa aluminum plant that at one time was located in this area of the basin. While that plant no longer exists in this location, the flood risk reduction that would be provided by this feature is still needed for other developments and private property in the area.

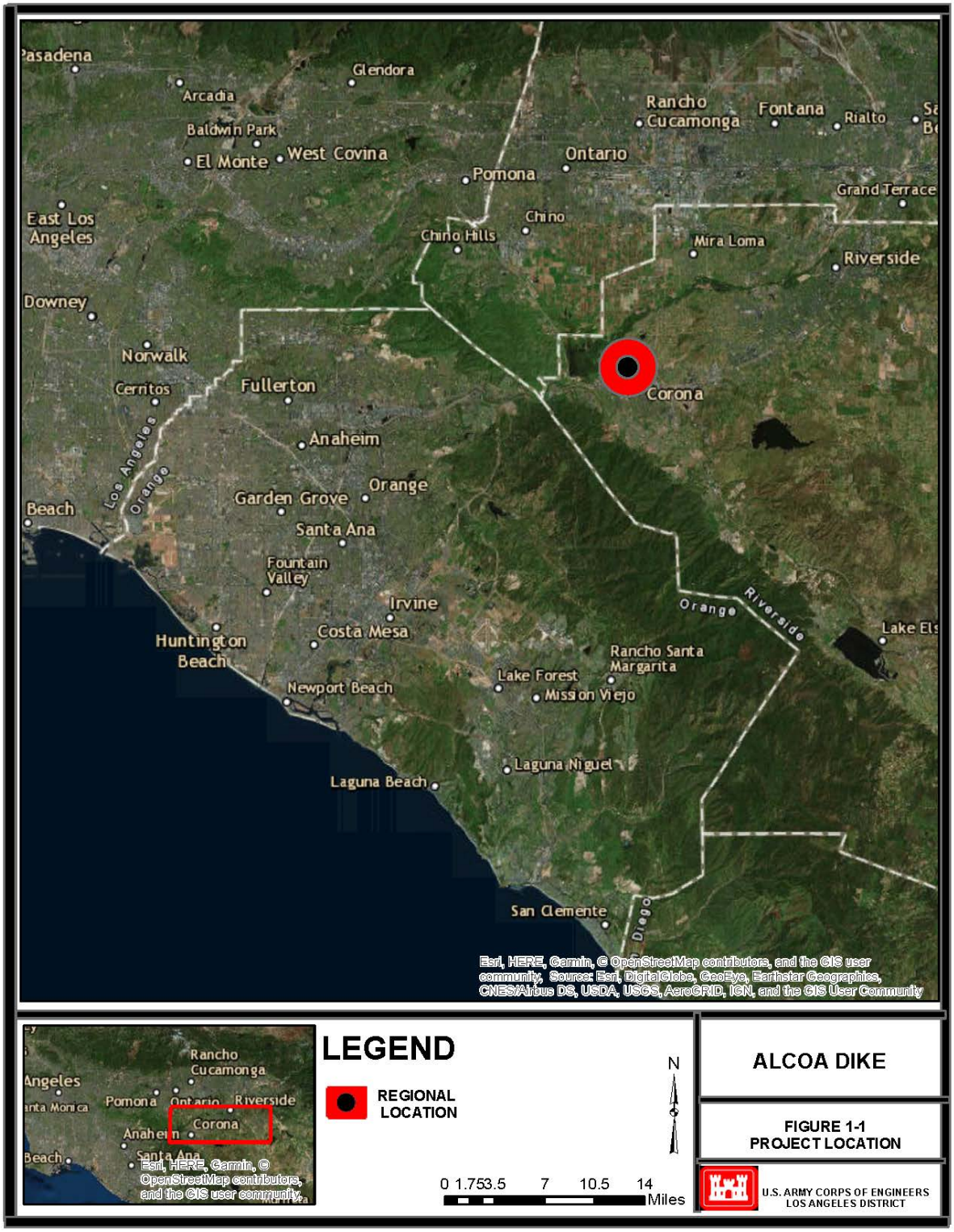

Figure 1 Project Location

1.3 Project Authority

The SARMP is located along a 75-mile reach of the Santa Ana River in Orange, Riverside, and San Bernardino Counties, California. The SARMP is a comprehensive flood risk management system that was authorized for construction by Section 401(a) of the Water Resources Development Act (WRDA) of 1986.

The recommended plan for the SARMP is contained in the Phase I General Design Memorandum (GDM) for the SARMP (Corps 1980) and included eight elements, which were subsequently reevaluated in the Phase II GDM (Corps 1988). The Phase II GDM modified the SARMP by redefining the authorized SARMP features and clarifying that the Standard Project Flood (SPF) term referred in most cases to the 190-year flood event. Construction of the SARMP commenced in fiscal year 1989.

In 2001, the Corps prepared an SEIS/EIR that addressed additional and modified features or elements in the vicinity of Prado Dam. The Corps also prepared a Limited Reevaluation Report (LRR) entitled Prado Dam Separable Element, Prado Basin & Vicinity, including Stabilization of Bluff Toe at Norco Bluffs Santa Ana River Basin, California, dated September 2001. This report was prepared pursuant to Section 309(a) of WRDA of 1996, which required the Corps to "review" the Prado Dam feature, a component feature of the SARMP. The LRR was approved by the Director of Civil Works on August 16, 2002. The LRR recognized, consistent with the Phase I GDM and Phase II GDM, that the purpose of the proposed Prado Dam improvements was to increase the reservoir storage capacity from 217,000 acre-feet to 362,000 acre-feet and to be able to release 30,000 cfs flows from Prado Dam into the downstream channels. In accordance with the determination in the LRR to construct Prado Dam as a separable element, the Prado Dam component was removed from the definition of the project in the Local Cooperation Agreement (LCA) by a second modification to the LCA dated February 24, 2003. A Project Cooperation Agreement for the Prado Dam feature as a separable element was signed on February 11, 2003, with OCFCD as the non-Federal sponsor.

The specific feature of the Prado Basin and Vicinity addressed by this SEA/EIR Addendum is the Alcoa Dike project.

1.4 Previously prepared documents

Below is a list of the relevant environmental documents that have been completed for SARMP. Throughout the analysis of this SEA/EIR Addendum, the following documents may be referenced:

- Limited Reevaluation Report (LRR/SEIS). Prado Dam Separable Element, Prado Basin & Vicinity, including Stabilization of Bluff Toe at Norco Bluffs Santa Ana River Basin, California. 2001.
- Final Supplemental Environmental Assessment (SEA) and Environmental Impact Report (EIR) Addendum for the Phase I Alcoa Dike portion of the Santa Ana River Mainstem Flood Control Project (SARMP), 2018.
- Formal Section 7 Consultation, Biological Opinion (BO) on the Santa Ana River Mainstem Flood Control Project at the Alcoa Dike, Corona Riverside California, FWS-WRIV-08B0408-18F1350, dated August 23, 2018.
- Upstream Dam Alternatives Supplemental EIR, United States Army Corps of Engineers, Los Angeles District, 1985.
- Phase II General Design Memorandum for the Santa Ana River Mainstem Project. 1988.

- Phase I General Design Memorandum and Supplemental EIR, United States Army Corps of Engineers, Los Angeles District, 1980.
- Survey Report and EIR, United States Army Corps of Engineers, Los Angeles District, 1975.

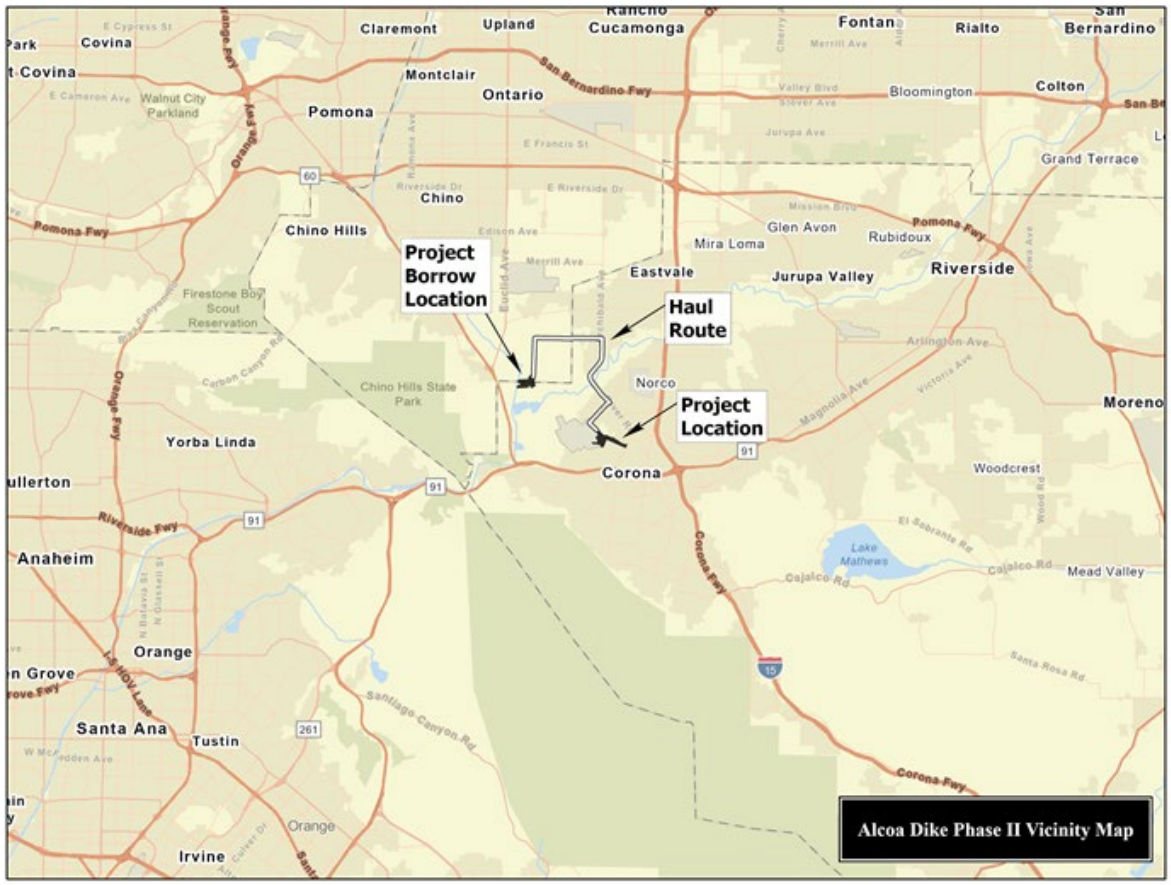

Figure 2 Project Vicinity Map

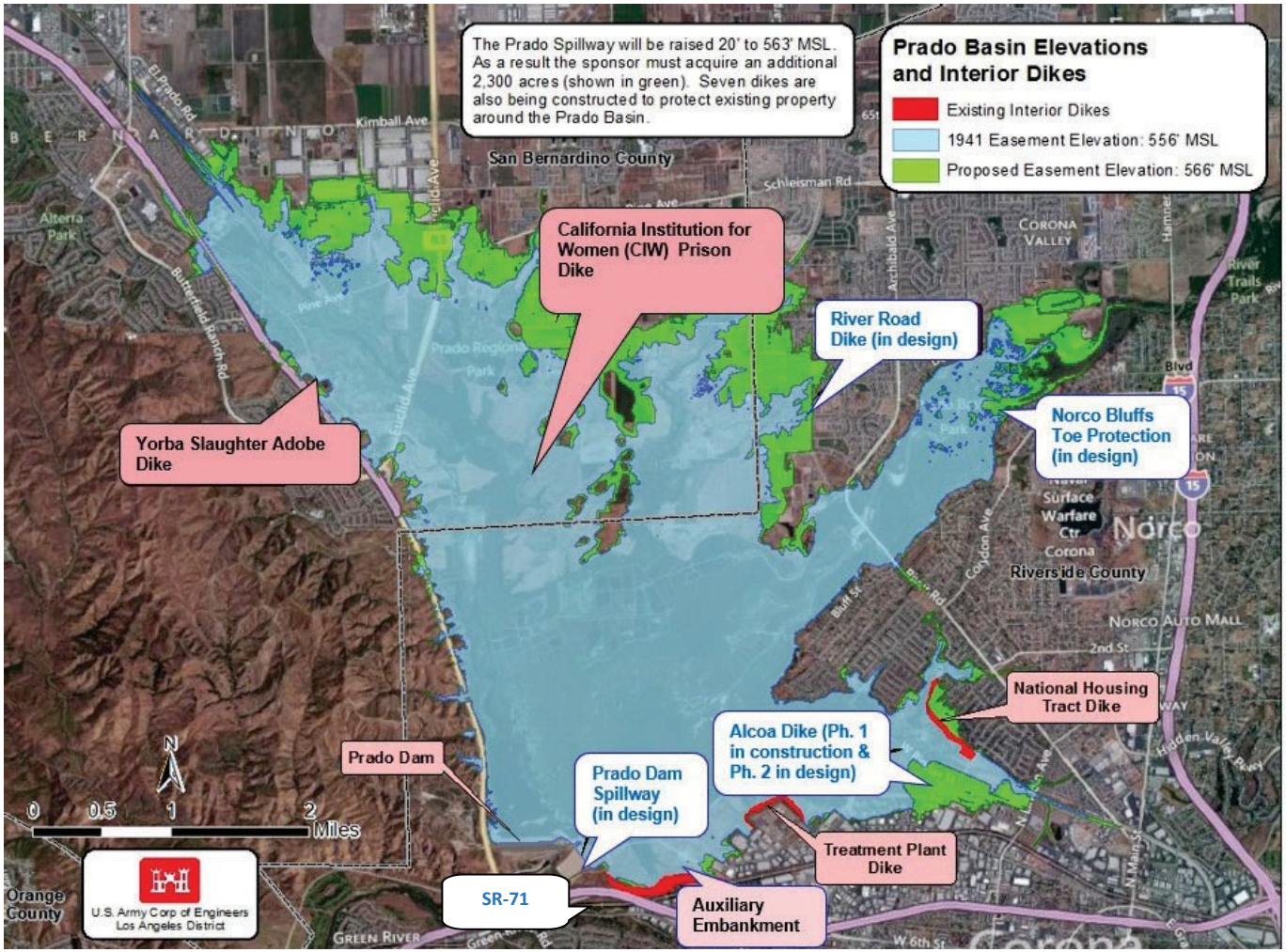

Figure 3 Existing and Proposed Perimeter Dikes in Project Vicinity

2 PROPOSED ACTION AND ALTERNATIVES

2.1 Objectives, Purpose and Need

The federal objective of water and related land resources project planning is to contribute to national economic development (NED). Such contributions are considered increases in the net value of the national output of goods and services expressed in monetary units. These contributions are to be consistent with the protection of the nation's environment, pursuant to applicable executive orders and other federal planning programs, including the consideration of state and local concerns. The NED objective of the approved SARMP is to provide flood risk management for portions of Orange, Riverside, and San Bernardino Counties, while maximizing contributions to NED.

The Alcoa Dike feature is part of the Prado Dam separable element of the SARMP. The feature was analyzed in the 1988 Phase II GDM/SEIS and the design was further revised in the 2001 Final SEIS/EIR and the 2018 Final SEA/EIR Addendum. During completion of the feature's Plans and Specifications, the design of the Phase II Alcoa Dike embankment (Proposed Action or proposed project) was further refined. The main objective of the Proposed Action would be the same as the originally approved Alcoa Dike embankment, which is to reduce the flood risk and thereby protect the lives and properties of public and privately owned development in the project area.

Statement of Need

Due to the planned increase in height of Prado Dam to provide additional flood risk reduction to the surrounding communities, all properties located between elevation 556 feet and elevation 566 feet behind the Dam would be within the expanded flood pool of the basin, subject to inundation (Figure 4 Flood Risk Management Areas due to Proposed Project). The figure shows the difference between 556 ft contour (blue) and 566 ft contour (pink) for flood risk associated with raising the dam spillway (566 ft contour increased area is designed to protect). Inundation of the basin area requires land acquisition and utility/facility replacements in the absence of a structural feature to prevent inundation of the area. In the subject area, heavily used roadways such as Rincon Road and Auburndale would be subject to removal or replacement in the absence of a structural feature.

Design refinements and other changes are needed to the temporary and permanent construction footprint since the 2018 Final SEA/EIR Addendum. Modification to the design was deemed necessary to avoid environmental, cost, and timing consequences for flood risk management purposes. The Corps is also responding to a request from Riverside County for inclusion of a segment of the multipurpose trail known as the SART.

Statement of Purpose

The purpose of the Proposed Action is to provide protection from predicted future inundation associated with the planned increased height of the Prado Dam spillway that would otherwise extend up to the 566-ft pool elevation in the project area, address requests for road modification and utility outgrants to comport with the Alcoa Dike design, and to address the request for inclusion of the Riverside County's segment of the SART.

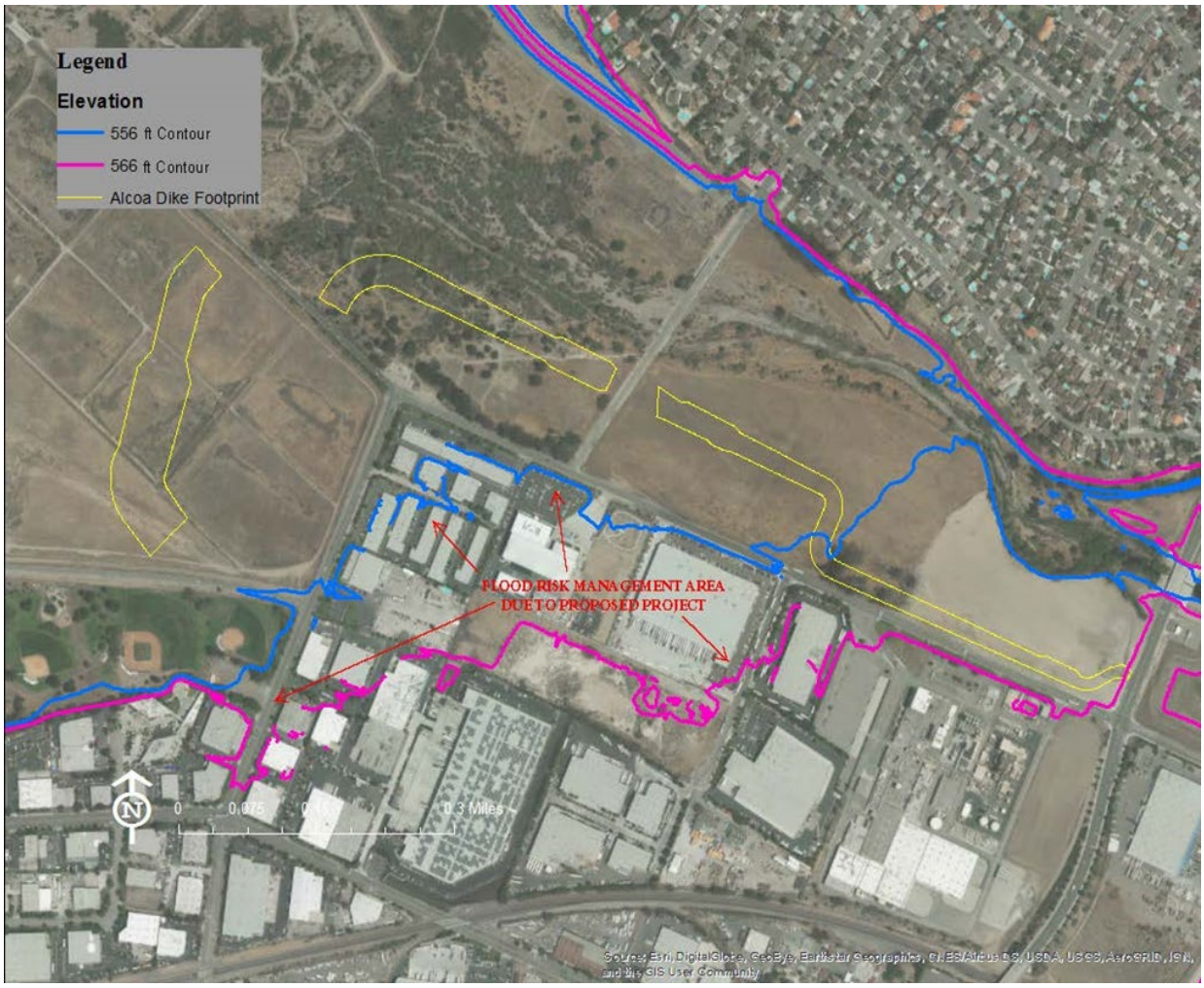

Figure 4 Flood Risk Management Areas due to Proposed Project

2.2 Comparison of Previously Approved Design and Proposed Action

A comparison of the Previously Approved Design and the Proposed Action is shown below in Table 2-1.

Table 2-1 Differences between Previously Approved 2001 and 2018 Dike Designs and the Dike Design, if Proposed Action is adopted

Previously Approved Design as Described in the 2001 Final SEIS/EIR	Previously Approved Design as Described in the 2018 Final SEA/EIR Addendum	Proposed Action Modification and Refinements for SEA/EIR Addendum – Alcoa Dike Phase II
Approximately 5,550 ft of bank protection. (project feature).	Approximately 7,530 ft of bank protection; minor design changes to embankment include height increase of 1.5 ft to 3 ft (project feature). Approximately 4,700 ft of this bank protection was completed during Phase I construction.	Construction of the remaining 3000 ft of the previously approved bank protection, plus an additional 170 ft (for a total Dike length of approximately 7,700 ft) would be constructed during Phase II, extending the alignment of the Dike to tie into Lincoln Avenue closer to Temescal Wash (project feature).
Ponding area for interior drainage behind the Dike located at the northwest corner of the intersection of Rincon Street and Auburndale Street (project feature).	Three additional ponding areas or detention basins (total of four) with a total storage volume of 83.3 acre-feet for interior drainage behind the Dike (project feature). Three of the four ponding areas (detention basins) were built during Phase I construction.	Construction of the remaining basin (1a), as shown in figure 5, would be built during Phase II construction. The Proposed Action would not change the number, design or total storage volume of these project features.
Two 48-inch drainage structures added extending through the main Dike embankment (total of three), one culvert with 4 reinforced concrete boxes (7' by 4'), extending through the Rincon roadway embankments between Pond I and II, and a concrete drainage swale from Pond IA to Pond I (project feature).	Two proposed 48-inch drainage structures extending through the main Dike embankment, two other culverts extending through roadway embankments, a concrete v-ditch and 48 inch drainage pipe to Temescal Creek, a drainage channel from the main Dike to Temescal Wash adjacent to and east of Auburndale Street, and a drainage channel from the main Dike to Temescal Wash adjacent to and west of Lincoln Street (project feature). One of the two drainage structures was built during Phase I construction.	As part of Phase II construction as proposed, the other drainage structure described in the 2018 Final SEA/EIR Addendum and one additional 48-inch drainage structure extending through the main Dike embankment would be constructed, for a total of three 48-inch drainage structures. The drainage channel from the main Dike to Temescal Wash adjacent to and east of Auburndale Street described in the 2018 Final SEA/EIR Addendum and built during Phase I would be removed and replaced/modified with the construction of one culvert with 4 reinforced concrete boxes (7' by 4'), extending through the Rincon roadway embankments between Pond I and II, and a concrete drainage swale from Pond IA to Pond I (project feature).
--	Two 15-foot maintenance access roads - one on each side along the toe of the embankment (project feature).	Under the Proposed Action, the two 15-ft maintenance access roads would be extended along the

Previously Approved Design as Described in the 2001 Final SEIS/EIR	Previously Approved Design as Described in the 2018 Final SEA/EIR Addendum	Proposed Action Modification and Refinements for SEA/EIR Addendum – Alcoa Dike Phase II
		additional 170 ft of embankment - one on each side along the toe of the embankment (project feature).
Raising of Auburndale Road (sponsor road relocation) to match the top elevation of proposed Dike.	Horizontal swing floodgate at Auburndale Road and reinforced concrete floodwall on each side of the floodgate (project feature). Not completed, will be constructed in Phase II.	Construction of the previously proposed horizontal swing floodgate at Auburndale Street and reinforced concrete floodwall on each side of the floodgate. In design of Phase II, the floodwall was extended 26 ft, resulting in a total length of 176 ft of floodwall and a 36 ft wide swing floodgate (no change) (project feature).
--	Raising of Rincon Street to match the elevation of the proposed Dike, and road modification to Rincon Street to meet current design standards. (sponsor road relocation). Not completed, will be constructed in Phase II.	Final design for the raising of Rincon Street to match the elevation of the proposed Dike and road modification to Rincon Street did not change from the original design and were incorporated to meet current design standards as previously described in the 2018 Final SEA/EIR Addendum (no change) (sponsor road relocation).
--	Road realignment of Butterfield Drive (City of Corona paid element – not a project feature or project-required relocation). Not completed, will be constructed in Phase II.	Road realignment of Butterfield Drive did not change from the original design and would be constructed as previously described in the 2018 Final SEA/EIR Addendum (no change) (City of Corona paid element, outgrant).
	VFZ shall be limited to 15 ft native grasses in compliance with Corps Dam and Levee Safety Regulations	Modification to the VFZ width from 15 ft to 50 ft to comply with levee safety certification requirements.
		Santa Ana Watershed Project Authority (SAWPA) utility Brine Line replacement and protection (outgrant from the Corps).
		SART segment installation located within the existing footprint of the Phase II Alcoa Dike, (Betterment, outgrant from the Corps).
		The replacement of Southern California Edison transmission, distribution, and telecom poles/circuits at owner cost, new (Related Action)

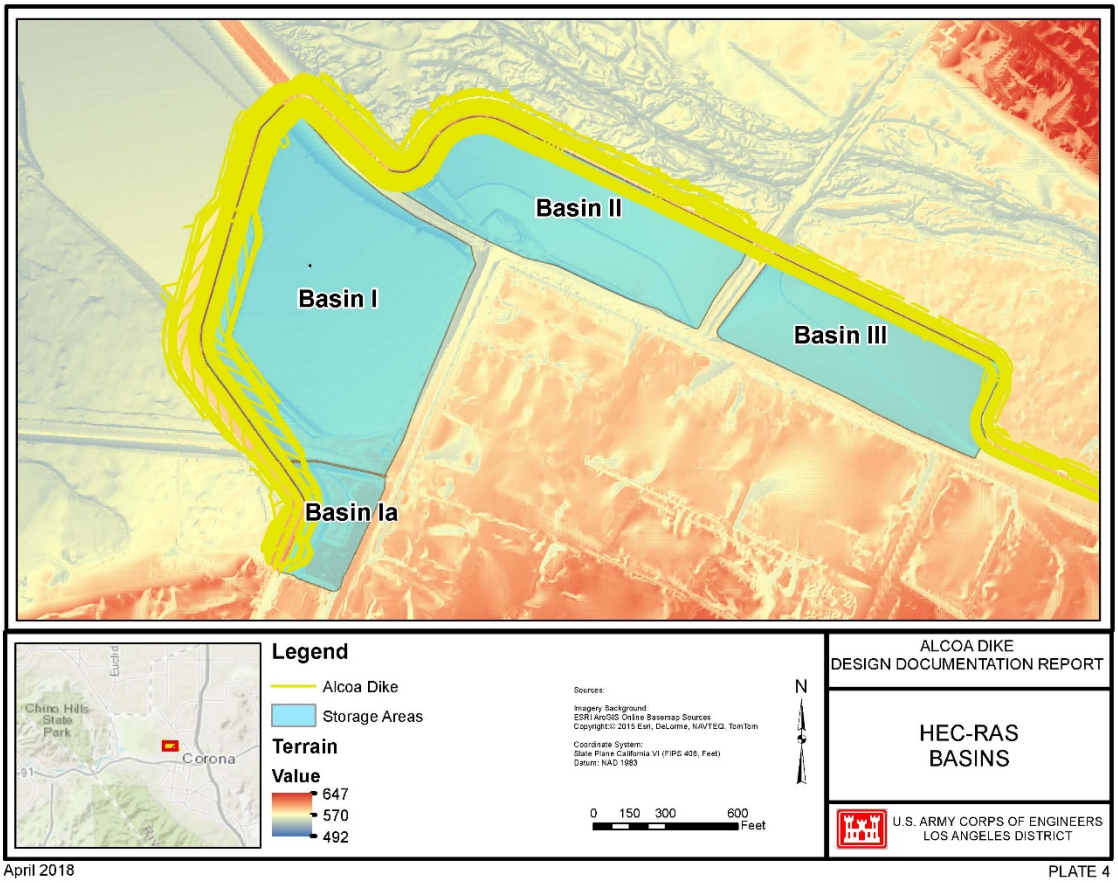

Figure 5 Showing the location of the ponds and the remaining pond Ia to be constructed in Phase II project.

2.3 Alternatives Evaluated and Eliminated

No Construction Alternative

The Alcoa Dike embankment as originally designed was approved for construction in the record of decision for the 2001 Final SEIS/EIR and in the Finding of No Significant Impact in the 2018 Final SEA/EIR Addendum, and continues to be a required project feature to allow for operation of Prado Dam subsequent to raising of the spillway height. Thus, not constructing this flood control improvement feature would not meet the project purpose and need. Therefore, the No Construction alternative has been removed from consideration and is not carried forward for further analysis.

2.4 Project Alternatives (Alternatives Considered for Environmental Analysis)

Two alternatives have been carried forward for this SEA/EIR Addendum. Also refer to 2018 Final SEA/EIR Addendum for detailed analysis. These alternatives are:

- Previously Approved (2018) Design Alternative, i.e. the No Action Alternative.
- Proposed Action

2.4.1 Previously Approved Design Alternative

The Previously Approved Design Alternative is defined as constructing the Alcoa Dike embankment according to the plan presented by the Corps in the 2018 Final SEA/EIR Addendum. The proposed Dike would reduce flood risk to the infrastructure, and private and public developments located just outside of the existing rights-of-way in the southeastern part of the Prado reservoir. The entire parcel (plus other privately owned development) is located within the proposed expanded Prado Basin reservoir inundation limit at elevation 566 foot. Studies indicate that it would be more economical to construct a Dike between the reservoir and these properties than to acquire these properties for flood control purposes.

Operation, maintenance, repair, replacement and rehabilitation (OMRRR) actions under this Previously Approved Design Alternative will continue to be the same as identified in the 2018 Final SEA/EIR Addendum, Proposed Action Alternative, sub-section 2.5. Proposed design refinements would not be made, and the Corps would need to prepare separate NEPA documentation to support any Real Estate decisions regarding utility relocations or trail construction. Any previously permitted removals/replacements for roads and utilities in the project footprint continue to be the owner's responsibility to maintain (with or without the proposed changes).

2.4.2 Proposed Action

The Proposed Action is similar to the Previously Approved Design Alternative and associated local sponsor real estate actions, including road and utility modifications, except for the changes identified in Table 2-1 above. This SEA/EIR Addendum addresses design modifications for construction, including adjustments to roadway and utility replacements. This SEA/EIR Addendum also evaluates outgrants and outgrant modifications for other utilities, roadways, and the SART.

Road Realignments: As with the Previously Approved Design Alternative, the Proposed Action would be located on federal land within the city of Corona in Riverside County and would be adjacent to the existing Smith Avenue and Rincon Street. The alignment of the proposed Dike was adjusted from the 2001 alignment as previously described in the 2018 Final SEA/EIR Addendum to minimize impacts on existing facilities such as streets, utilities, percolation ponds, and other industrial and commercial development. Despite the adjustments, the proposed Dike would also have to cross over Rincon Street, Butterfield Drive and Auburndale Street. Both the 2018 Final SEA/EIR Addendum and this SEA/EIR Addendum design included modifications to incorporate a floodgate at Auburndale Street that would eliminate the need to reconstruct Auburndale Street, but Rincon Street would be modified to cross the Dike at grade. As described

in the 2018 Final SEA/EIR Addendum the reservoir side of the roadway slopes would be protected with 15 inches of stone over 12 inches of bedding. For Proposed Action, the alignment further extends in the northerly direction, across Butterfield Drive, approximately 1,800 feet on to Corps owned property until it crosses Rincon Street. The alignment continues in the easterly direction parallel to Temescal Wash for approximately 2,200 feet on land owned in fee by the City of Corona. (Figure 4). The Butterfield Connector roadway will be realigned to connect to Rincon Street on the reservoir side of the Dike to match the elevation of the proposed Dike. The road modification to Rincon Street did not change from the original design and was incorporated to meet current design standards as previously described in the 2018 Final SEA/EIR Addendum.

Drainage and Dike Modifications: Under the Proposed Action, Phase II construction consists of construction of the remaining drainage structure and detention basin as described in the 2018 Final SEA/EIR Addendum, with one additional 48-inch drainage structure proposed to extend through the main Dike embankment, for a total of three 48-inch drainage structures (Figure 5). Three of the four ponding areas (detention basins) described in the 2018 Final SEA/EIR Addendum were built during Phase I construction. Construction of the final remaining basin (1a) would be built during Phase II construction. The length of the Dike alignment at the Lincoln Avenue tie-in adjacent to Temescal Wash would increase, extending the Dike an additional approximate 170 feet in length. The previously proposed reinforced concrete floodwall on each side of the floodgate at Auburndale Street would be extended by 26 feet, resulting in a total length of 176 feet of floodwall and a 36 feet wide swing floodgate. The drainage channel from the main Dike to Temescal Wash adjacent to and east of Auburndale Street described in the 2018 Final SEA/EIR Addendum built during Phase I will be removed and replaced/modified with the construction of one culvert with 4 reinforced concrete boxes (7’ by 4’), extending through the Rincon roadway embankments between Pond I and II, and a concrete drainage swale from Pond Ia to Pond I. The proposed project modifications also include extension of the two 15-foot maintenance access roads along the additional approximate 170 foot of embankment toe on each side to tie into Lincoln Avenue close to Temescal Wash, and a drainage swale to Temescal Wash adjacent to and west of Lincoln Avenue to provide interior drainage behind the Alcoa Dike. Temporary detours would be provided as necessary during construction.

Reinforced concrete boxes and an earthen drainage swale are proposed under the Rincon Street roadway embankment to replace the concrete v-ditch and a 48-inch drainage pipe that were described in the 2018 Final SEA/EIR Addendum. The earthen drainage swale would flow adjacent to and east of Auburndale Street and adjacent to and west of Lincoln Avenue that would drain water to Temescal Wash. The dimensions of the swale would include a 3-ft (foot) trapezoidal channel with 15-inch (in) thick riprap over 12-in. thick bedding, 10-ft trapezoidal channel with 15-in thick riprap over 12-in thick bedding, and 10-ft trapezoidal earthen channel.

A maximum 50-foot VFZ would extend out from the toe of the Dike on each side. This zone includes the 15-ft wide paved maintenance roads and an additional 35-foot area that would be planted with low growing, native grasses and maintained free of other vegetation in compliance with Corps Dam and Levee Safety Regulations as shown in the figure 6 below. Other areas disturbed by construction outside of the 50-foot zone would be seeded or planted with native shrubs and grasses.

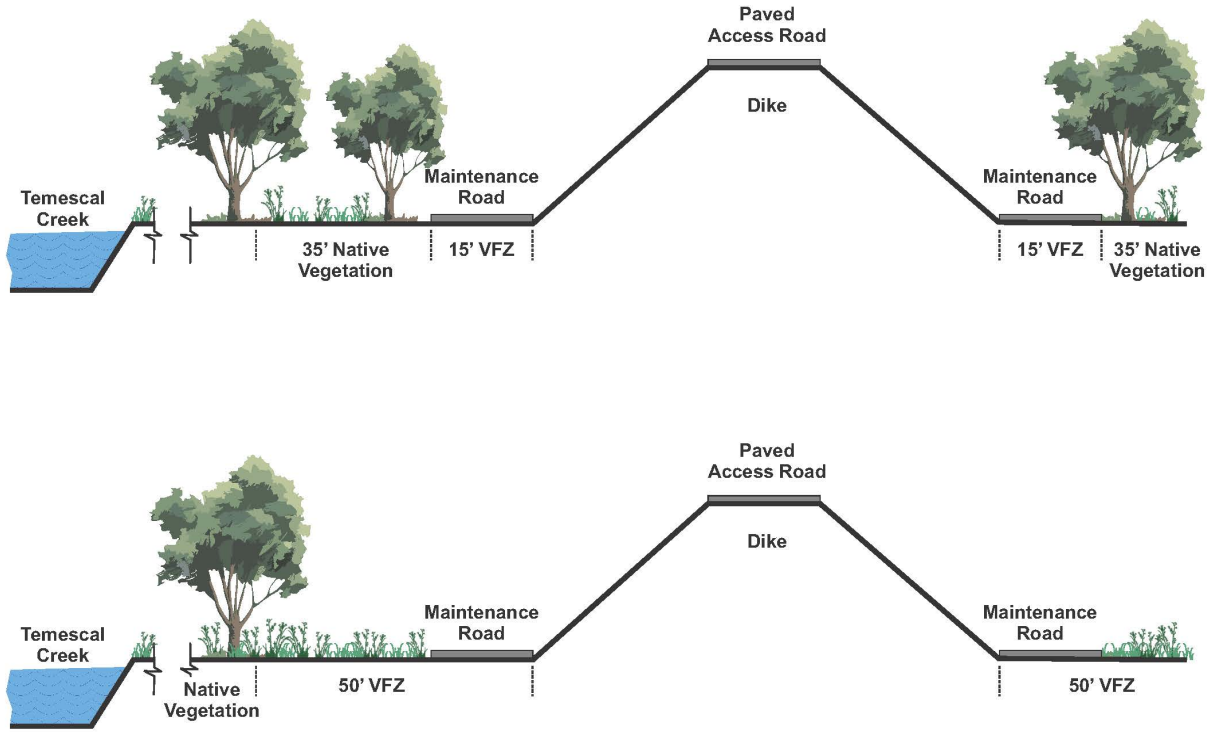

Figure 6 Showing the 15' Vs. 50' Vegetation Free Zone (VFZ) constructed in Phase II project.

SAWPA Inland Empire Brine Line (Outgrant): Alcoa Dike Phase II crosses the SAWPA Inland Empire Brine Line at two intersections, the California Rehabilitation Center lateral line (15 in /1 in) along Auburndale Street and the Brine Line Reach IV (3 in) parallel to Butterfield Drive. The proposed Brine Line Protection activities along Auburndale Street include removal of 80 linear ft. of existing Vitrified Clay Pipe / Ductile Iron Pipe, one manhole and one gate valve, and 75 linear ft. of new 18 in. High Density Polyethylene (HDPE) pipe along the same alignment and elevation as the existing pipe. This will require the construction of one manhole at the downstream end of the pipe segment being replaced and furnishing and installation of a new gate valve along the same alignment. No bypass would be required considering the line is inactive. Temporary dewatering may include two (2) wellheads, discharge piping and water treatment equipment if necessary, to meet discharge requirements. In addition, the Proposed Action parallel to Butterfield Drive would involve removal of 430 linear ft of existing reinforced concrete pipe (RCP) and furnish and install 411 linear feet of new 48-in HDPE pipe along the same alignment and elevation as the existing pipe. Two additional new manholes at the upstream and downstream ends of the pipe segment being replaced would also be added along the same alignment. A temporary bypass of flow is required and consists of two (2) pumps and bypass

piping. Temporary dewatering may include three (3) wellheads, discharge piping, and water treatment equipment if necessary, to meet discharge requirements.

SART (Outgrant and Betterment): A portion of the proposed SART would be located within the existing footprint of the Phase II Alcoa Dike consisting of a 12-ft-wide asphalt bike trail and a 12-foot-wide DG Hiker Equestrian Trail. Most of the trail construction for this segment would be built by the Alcoa Dike construction contractor through a Betterment Agreement. The trail proponent (Riverside County) would construct remaining features. This SEA/EIR Addendum provides NEPA compliance for the proposed construction of the trail and the action of issuing an outgrant for operation and maintenance of this trail segment; additional NEPA documentation would be prepared for other Prado Basin trail segments. Riverside County Parks and Recreation would maintain the trail per the outgrant. The trail passes through the Temporary Construction Easement (TCE) between the Alcoa Dike and the proposed Butterfield Connector and turns south at the terminus of Rincon Road and Butterfield Drive (Figure 8). The proposed SART would include 3H:1V fill slopes to meet existing ground. A 2,900-foot long "connector" segment of bike and equestrian trails would extend north of the Dike, along the edge of a Corps mitigation site that was restored to offset impacts of various SARMP features. Construction of the trail would begin after completion of the proposed Alcoa Dike. The trail project is not part of the flood control project.

Similar equipment as used for Phase I construction would be used for Phase II refinements assuming sequential construction (2018 Final SEA/EIR Addendum) as listed below in Section 2.4.3. Construction vehicles would access the site from Butterfield Drive, Rincon Street, Auburndale Street, Smith Avenue, and Lincoln Avenue. Two approximate 15-ft wide maintenance access roads would be located along each side of the toe of the embankment. The staging area would be minimized to 2.045 acres during Phase II construction (Figures 7 and 8).

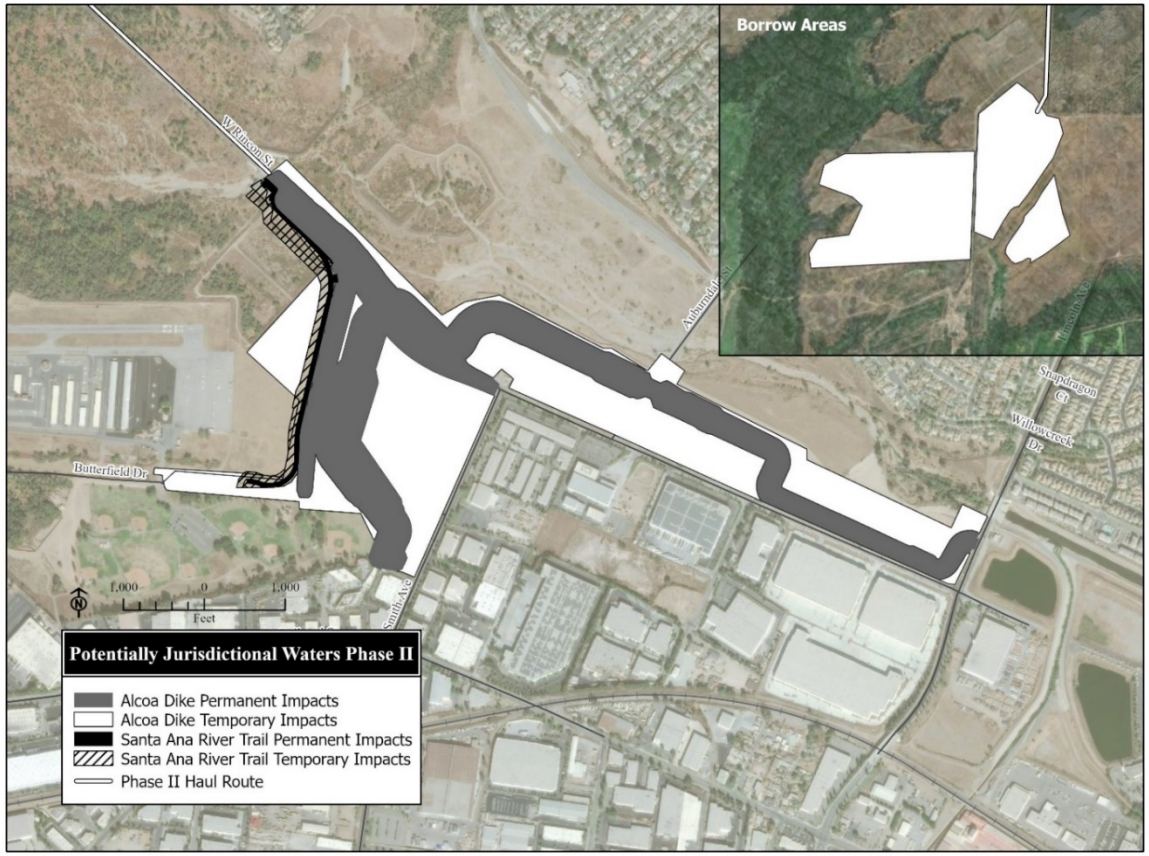

Figure 7 Project Site Plan

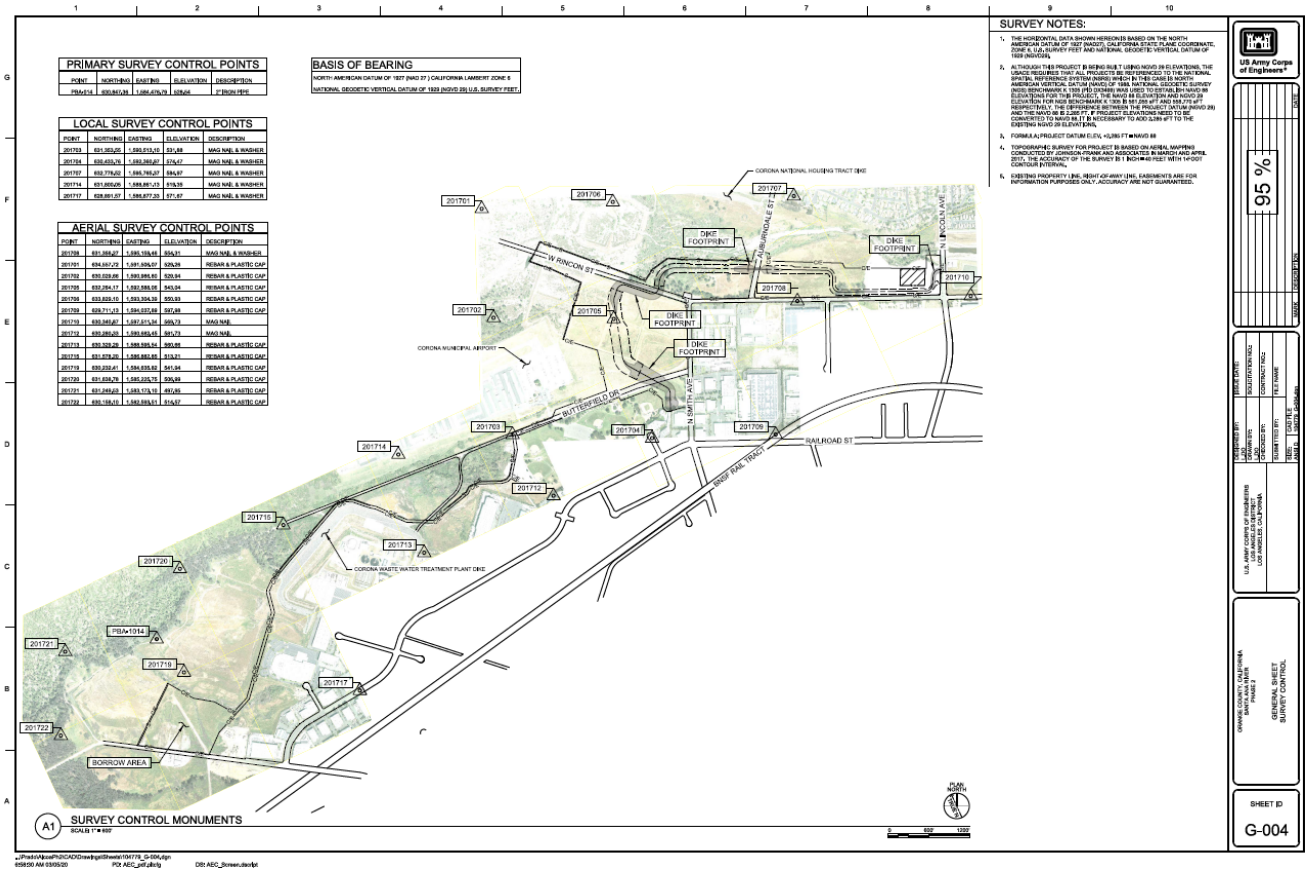

Figure 8 Phase II Alcoa Dike Project Design

2.4.3 Staging Areas, Haul Routes, and Construction Activities

The staging area would be modified to lessen the acreage footprint within the original footprint located at the reservoir side of the Dike near the intersection of Rincon Street and Lincoln Avenue, and would be 2.045 acres in size (see Figure 7 and 8).

Haul roads, vehicular access roads, disposal site, source of material for the construction of the embankment would be associated with the new borrow area approximately 7.7 miles to the northwest of the proposed project.

Construction of the Proposed Action would produce organic, inorganic, and unsuitable construction materials which must be disposed of in the manner and areas specified so that the proposed project site would be restored after completion of construction. Organic materials, trees, shrubs, and abandoned timber structures would be disposed of by hauling to a local commercial site. Topsoil containing organic material may not be disposed of at a commercial site but may be stockpiled and spread on embankment slopes or borrow areas as a part of site restoration. Disposal of these materials by burning or burying at the proposed project site would not be permitted. Inorganic materials would include, but are not limited to, broken concrete, rubble, asphaltic concrete, metal, and other types of construction materials. These materials would also be taken to a commercial landfill.

Material Source

Approximately 35,400 tons of riprap and 31,100 tons of bedding would be required for the construction of the embankment. Riprap would be imported from a local quarry located approximately 2.5 miles west of the project site. For the purposes of this analysis, it is assumed that the nearest quarry would likely be used. Approximately 181,300 cubic yards (cy) of onsite excavation and approximately 836,000 cy of fill would be required. Approximately 836,000 cy of fill and approximately 90,000 cy clay material would be imported from the new borrow site located approximately 7.7 miles northwest of the proposed project site (Figure 2 Project Vicinity Map).

Water Source

The construction contractor would determine and acquire a water source for construction of the proposed project. The most likely source is reclaimed water at Butterfield Park (City of Corona). City of Corona requires the use of reclaimed water for construction purposes and will not authorize temporary potable water meters to existing fire hydrants for construction activities.

Construction Equipment

Construction equipment would likely include a combination of concrete pumpers, manlift, 16 cy dump trucks, water trucks, waste trucks, haul trucks, scrapers, loaders, dozers, cranes, soil compactors, rollers, graders, vegetation chippers, hydroseed truck, and excavators.

Construction Duration and Phasing

Construction is scheduled to commence in September 2021 and last approximately 24 months. The proposed project would-be built-in stages, with multiple start dates and construction periods for various sections depending on land acquisition, schedule for the utility replacements,

environmental windows and weather delays. Construction phasing may result in an extension of the overall project duration, i.e. beyond the approximate duration of 24 months. The proposed construction hours would be 7:00 a.m. to 6:00 p.m., Monday through Friday and occasionally Saturday. Occasional overtime work may be required to maintain the construction schedule but would be in compliance with local noise ordinances.

2.4.4 Utilities

The Proposed Action would include minor changes to the proposed project area utilities as with the 2018 Final SEA/EIR Addendum. However, the proposed project will require protection in place of the utilities. As noted in 2018 Final SEA/EIR Addendum, the February 2010 Utility Investigation Report for Alcoa Dike prepared by AECOM for Orange County Public Works (aka Orange County Flood Control District (OCFCD)), any utilities within the vicinity of the project limits would either be relocated or removed prior to or during construction (by the utility owner or local sponsor), or protected in place. Approximately 450 feet of the Brine Line would be replaced for protection (within the same footprint/alignment) to handle the increase load and settlement.

Southern California Edison's Utility Replacement (Related Action)

Southern California Edison (SCE) plans to relocate transmission, distribution, and telecom poles/circuits to facilitate the Corps' Proposed Action. These facilities are located along W. Rincon Street, N. Smith Avenue, Butterfield Drive, and Auburndale Street, approximately 500 feet east of Corona Municipal Airport. SCE will complete the replacement separate from the Corps' Proposed Action. The planned work is described in this document because it is a related action, as the replacement is required due to Alcoa Dike construction. Two alternative options are being considered by SCE, as described below.

Preferred SCE Replacement work efforts will include the excavation by truck mounted auger/backhoe for existing wood pole removals and new wood pole installations, measuring approximately 2-3 feet in diameter and 5-12 feet deep. New steel poles will be installed in concrete footings and ground disturbance will be approximately 10 feet by 10 feet wide and up to 30 feet deep. Underground ground disturbance associated with trenching will be an approximate 3-foot wide, 6-foot deep trench and an approximate 12 foot by 18-foot-wide and up to 12-foot deep excavation will be needed for each vault. Work activities will take place within a 50-foot buffer around the Proposed SCE Project elements and a 25-foot permanent impact area (vegetation clear zone) around each new pole installation will be required. The proposed project is accessible from W. Rincon Street, Butterfield Drive, and N. Smith Avenue. No trimming of trees or shrubs will be required for the replacement and helicopters will not be used to support the proposed project. Telecommunication facilities will transfer existing wires on the newly relocated poles.

Temporary access for the pole installations west of the new Butterfield Connection will consist of an approximate 14-foot wide, 3,000-foot-long route located in the footprint of the proposed SART alignment. Overland travel will be used to the maximum extent practicable along this route, however, some scarification, moisture conditioning, and compaction may be necessary

depending on field conditions. Permanent access to these poles will be via the SART trail post-construction and a permanent turnaround area (up to 1,000 square feet) may be needed. Temporary access for the pole replacements along existing Butterfield Drive will be achieved via existing Butterfield Drive. Permanent access to these poles will use the Prado Dam driveway approach off of the new Butterfield Connection and/or the existing Butterfield Drive (if pavement remains intact) or the footprint of existing Butterfield Drive (if pavement is removed) resulting in no additional permanent impacts. A permanent turnaround area (up to 1,000 square feet) may be needed along this access route if SCE vehicles cannot back up safely. Temporary access to the underground work efforts will occur within the new Butterfield Connection footprint and permanent access will be via the new Butterfield Connection, since this underground line will be under the road. Access to the existing pole removals will be achieved from existing W. Rincon Street, and access for the poles to be topped will occur via N. Smith Avenue (Table 2-2).

Alternative SCE Replacement

Up to 11 existing wood poles (Mira Loma-Cleargen 66 kV transmission circuit and Kingsford 12 kV distribution circuit) along W. Rincon Street (west of N. Smith Avenue) would be removed/relocated as a result of Alcoa Dike construction and the realignment/raising of W. Rincon Street. These circuits would be relocated to the south to follow existing Butterfield Drive and the new Butterfield Connector (which would be located west of the Alcoa Dike). Up to seven (7) existing wood distribution poles (Pulaski 12 kV; 45-70 feet tall) would be replaced with up to seven (7) new wood and/or steel poles (75-100 feet tall) along the south side of existing Butterfield Drive (from N. Smith Avenue to approximately 1,200 feet west) to carry the joint transmission/distribution relocated circuits. Up to 16 new wood and/or steel poles (50-80 feet tall) would be installed west of the new Butterfield Connector to carry the relocated 66 kV transmission circuit. The relocated 12 kV distribution circuit would be installed underground beneath the new Butterfield Connector. This would include trenching of up to 3,000 feet and the installation of up to five (5) vaults. Furthermore, up to nine (9) existing wood poles along N. Smith Avenue would be topped to remove transmission elements and would contain distribution/telecom circuits only.

Ground disturbance associated with the proposed utility replacement would include the excavation by truck mounted auger/backhoe for existing wood pole removals and new wood pole installations, measuring approximately 2-3 feet in diameter and 5-12 feet deep. New steel poles would be installed in concrete footings and ground disturbance would be approximately 10 feet by 10 feet wide and up to 30 feet deep. Ground disturbance associated with trenching would include an approximate 3-foot wide, 6-foot deep trench and an approximate 5 foot by 20-foot-wide and up to 6-foot deep excavation for each vault. Work activities would take place within a 50-foot buffer around the proposed utility replacement elements. Access would be available from W. Rincon Street, Butterfield Drive, and N. Smith Avenue. No trimming of trees or shrubs or use of helicopters would be required for the proposed replacement. Telecommunication facilities would transfer existing wires on to the newly relocated poles (Table 2-2).

Table 2-2 Differences between Preferred SCE Replacement and Alternative SCE Replacement

Alternative	Facility Designation	Circuit Name	Access	Scope	Existing Height* (above ground)	New Height* (above ground)
Preferred and Alternative	Up to 11 Existing Wood Poles	Mira Loma-Cleargen 66 kV and Kingsford 12 kV	Existing paved road (W. Rincon St.)	Wood Pole Removal / Replacement for Alcoa Dike Project	45 (38.5) -75 (65.5)	N/A
Preferred and Alternative	Up to 7 Existing Wood Poles	Pulaski 12 kV (Existing)Mira Loma-Cleargen-Delgen 66 kV and Kingsford 12 kV (Relocated)	Existing paved road (Existing Butterfield Dr.)	Replace Existing Wood Poles with New Wood and/or Steel Poles	45 (38.5) -70 (61)	75 (65.5 wood, 75 steel) – 100 (88 wood, 100 steel)
Preferred Only	Up to 16 New Wood and/or Steel Poles	Mira Loma-Cleargen 66 kV	New Butterfield Connection (from W. Rincon St. or existing Butterfield Dr.)	Install New Wood and/or Steel Poles	N/A	50 (43 wood, 50 steel) – 85 (74.5 wood, 85 steel)
Alternative Only	Underground (up to 3,000 feet of Trench and 3 Vaults)	Mira Loma-Cleargen 66 kV	New Butterfield Connection (from W. Rincon St. or existing Butterfield Dr.)	Install New Cable and Vaults	N/A	N/A
Alternative Only	Up to 4 New Wood and/or Steel Riser Poles	Mira Loma-Cleargen 66 kV	New Butterfield Connection (from W. Rincon St. or existing Butterfield Dr.)	Install New Wood and/or Steel Riser Poles	N/A	50 (43 wood, 50 steel) – 85 (74.5 wood, 85 steel)
Preferred and Alternative	Underground (up to 3,000 feet of Trench and 5 Vaults)	Kingsford 12 kV	New Butterfield Connection (from W. Rincon St. or existing Butterfield Dr.)	Install New Cable and Vaults	N/A	N/A
Preferred and Alternative	Up to 9 Existing Wood Poles	Mira Loma-Cleargen 66 kV and Kingsford 12 kV	Existing paved road (N. Smith Ave.)	Top Existing Wood Poles to Remove Transmission	65 (56.5) -75 (65.5)	Exact height unknown, but will be lower than existing)

Alternative	Facility Designation	Circuit Name	Access	Scope	Existing Height* (above ground)	New Height* (above ground)
Preferred and Alternative	Up to 2 New Wood Poles	Kingsford 12 kV	Existing paved road (N. Smith Ave.)	Install New Wood Poles	~80	New pole height will not exceed existing

*Height in Feet

2.4.5 Future Operation, Maintenance, Repair, Replacement and Rehabilitation

The OMRRR would follow the same guidelines set-forth in the 2018 Final SEA/EIR Addendum, including routine inspections and minor repairs, of the Alcoa Dike embankment and its associated project features would be required after construction is completed. All permitted removals/replacements for trails, roads, or utilities in the project footprint are the owner's responsibility to maintain. The following activities may occur:

- Routine and special inspection and patrol with pickup trucks and sport utility vehicles weekly to daily during the flood season, and weekly to monthly during the non-flood season;
- Mobilizing dump trucks to haul stones and use of hydraulic excavators to place stones along eroded areas of the embankment to protect and reinforce the Dike as necessary during flood fight activities;
- Periodic weeding and patching stone and asphalt maintenance road pavement;
- Periodic clearing of debris around drainage structures
- Periodic mending of fencing and painting metal gates;
- Repair of floodgates and floodwalls;
- Maintenance and repair of detention basins;
- Periodic mowing, weeding or other maintenance of the 50 ft VFZ to prevent encroachment of deep-rooted or high growing vegetation that could interfere with inspection, maintenance or integrity of the dike structure.

3 AFFECTED ENVIRONMENT

3.1 Air Quality

The air quality conditions in this SEA/EIR Addendum proposed project area remain similar to those described in the 2018 Final SEA/EIR Addendum for the Alcoa Dike portion of the Santa Ana River Mainstem, Prado Dam Basin (SARMP).

As previously stated in the 2018 Final SEA/EIR Addendum the proposed project area is entirely within the Prado Flood Control Basin's Temescal Wash drainage area, which is part of the larger Prado Dam Reservoir Basin area, and is located in the central part of the South Coast Air Basin (SCAB) of California, an approximate 6,600 square mile (mi^2) area encompassing Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties. SCAB is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. Air quality in the SCAB is regulated by Federal, state, and regional control authorities.

As in the 2018 Final SEA/EIR Addendum, this Phase II baseline air quality in the project area can be determined from ambient air quality measurements conducted by the SCAQMD at the Pomona and Rubidoux stations, which are the closest monitoring stations to the Prado Dam Reservoir. While both Federal and state air quality standards for several air pollutants continue to be exceeded, recent data indicates overall improvements in air quality. In addition, criteria pollutants and the levels at which they occur in the project area were re-evaluated based on the updated borrow and haul route information will not differ from the originally calculated standards given in the 2018 Final SEA/EIR Addendum report.

3.2 Biological Resources

Biological resources within the vicinity of Alcoa Dike and other SARMP features were previously described in the 1988 GDM/SEIS, 2001 SEIS/EIR, 2012 (BO) amendment, and the 2018 Final SEA/EIR. The Biological Resources Affected Environment Section as discussed in Section 3.2 of the 2018 Final SEA/EIR Addendum is hereby incorporated by reference. Any changes in impacts to biological resources from the 2018 Final SEA/EIR Addendum are documented below.

Corps biologists and SAWA biologists have conducted numerous site surveys of the proposed project area and its vicinity to document existing biological resources and sensitive species over the past several years. Information from these surveys and a review of existing aerial imagery, literature, and databases was used to document biological resources in the 2018 Final SEA/EIR Addendum. Database and literature review included a review of the California Natural Diversity Database (CNDDB), and various listed and sensitive species lists generated by the California Department of Fish and Wildlife (CDFW), U.S. Fish and Wildlife Service (USFWS), and California Native Plant Society (CNPS).

3.2.1 General Setting

The General Setting surrounding the project area was extensively described in the 2018 Final SEA/EIR Addendum. The project region is located within the Santa Ana River (SAR) watershed in the western-most portion of Riverside County, California. More specifically, the project area is located in the City of Corona, adjacent to the Corona Municipal Airport, approximately 2.25 miles upstream of the Prado Dam embankment.

The proposed Phase II project footprint increased from the Phase I footprint in three small areas: downstream along Temescal Wash, northeast of Rincon Street; upstream along Temescal Wash immediately west of Lincoln Avenue, south of the bridge; and at the corner of the roadway at Rincon Street and Smith Avenue (Figure 9 as shown below) and Table 4.2.2.1-1 (Incremental Impacted Cover Types P2 Expanded Footprint) of the 2018 Final SEA/EIR Addendum. Although the project area includes native riparian habitats, there has also been a variety of human disturbances including urban development, airport activities/traffic, water diversion, conveyance (pipelines and canals), spreading, and flood control activities.

3.2.2 Vegetation

A thorough description and analysis of vegetation communities throughout the Prado Basin was provided in the 2001 SEIS/EIR and refined in Section 3.2.3 of the 2018 Final SEA/EIR Addendum. Aerial mapping and ground truthing were used to evaluate changes to vegetation communities from the latest 2017 survey. A 2020 site visit was also completed at the borrow area to map vegetation.

For consistency any descriptions of the plant communities in the project area follow those used in the 2001 SEIS/EIR. A total of four broad habitat categories were identified within the Phase I proposed project area, including native riparian, upland, non-native upland, and developed (Figure 10). Detailed descriptions of plant communities and plant species are included in Section 3.2.3 and Table 3.2.3 of the 2018 Final SEA/EIR Addendum and are described briefly below.

Native Riparian (Mulefat Scrub). Riparian vegetation in the project area is dominated by mulefat (*Baccharis salicifolia*) and is best classified as mulefat scrub. Other riparian species observed in this community include scattered Fremont cottonwood (*Populus fremontii*), arroyo willow (*Salix lasiolepis*), and black willow (*S. goodingii*). Giant reed (*Arundo donax*) is also present in this community. Riparian habitat supports a diversity of wildlife, including threatened and endangered species. In the Phase II project area, additional native riparian vegetation is found downstream along Temescal Wash, northeast of Rincon Street, and upstream immediately west of Lincoln Avenue, south of the bridge.

Non-native Upland (Non-native grassland and woodland). Non-native woodlands are dominated by invasive non-native, trees including Eucalyptus (*Eucalyptus* sp.), Chinese elm (*Ulmus parviflora*), Peruvian pepper trees (*Schinus molle*), and black locust (*Robinia pseudoacacia*). Non-native grasslands are dominated by weedy species such as brome grasses (*Bromus* spp.), barley (*Hordeum* spp.), and fescue (*Vulpia myuros*). In the Phase II project area, non-native grassland vegetation is found immediately west of Lincoln Avenue.

Developed. Developed areas include landscaping, public parks, baseball fields, roads, and commercial business. Park areas are typically comprised of turf grasses with scattered trees such as Peruvian pepper and Brazilian pepper trees (*S. terebinthifolius*). In the Phase II project area, additional developed areas include the corner of the roadway at Rincon Street and Smith Avenue.

Other (Agriculture). This land cover type was used to map the western half of the borrow area. It appears to be dry land farmed and was recently tilled at the time of the most recent site visit. This is a new cover type, not previously described in the 2018 Final SEA/EIR Addendum.

3.2.3 Special-Status Plant Species

Detailed descriptions of special-status plant species are included in Section 3.2.3.1 and Table 3.2.3.1-1 of the 2018 Final SEA/EIR Addendum. No federal or State listed threatened or endangered species were identified in the proposed project area, and none are expected to occur based on a lack of suitable habitat, suitable soil types, and the recognized distributions of these species in the region.

California Native Plant Society (CNPS) ranked species observed or with potential to occur include Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*) (observed), chaparral sand verbena (*Abronia villosa* var. *aurita*), paniculate tarplant (*Deinandra paniculata*), southern California black walnut (*Juglans californica* var. *californica*), white-rabbit tobacco (*Pseudognaphalium leucocephalum*), and Coulter's Matilija poppy (*Romneya coulteri*).

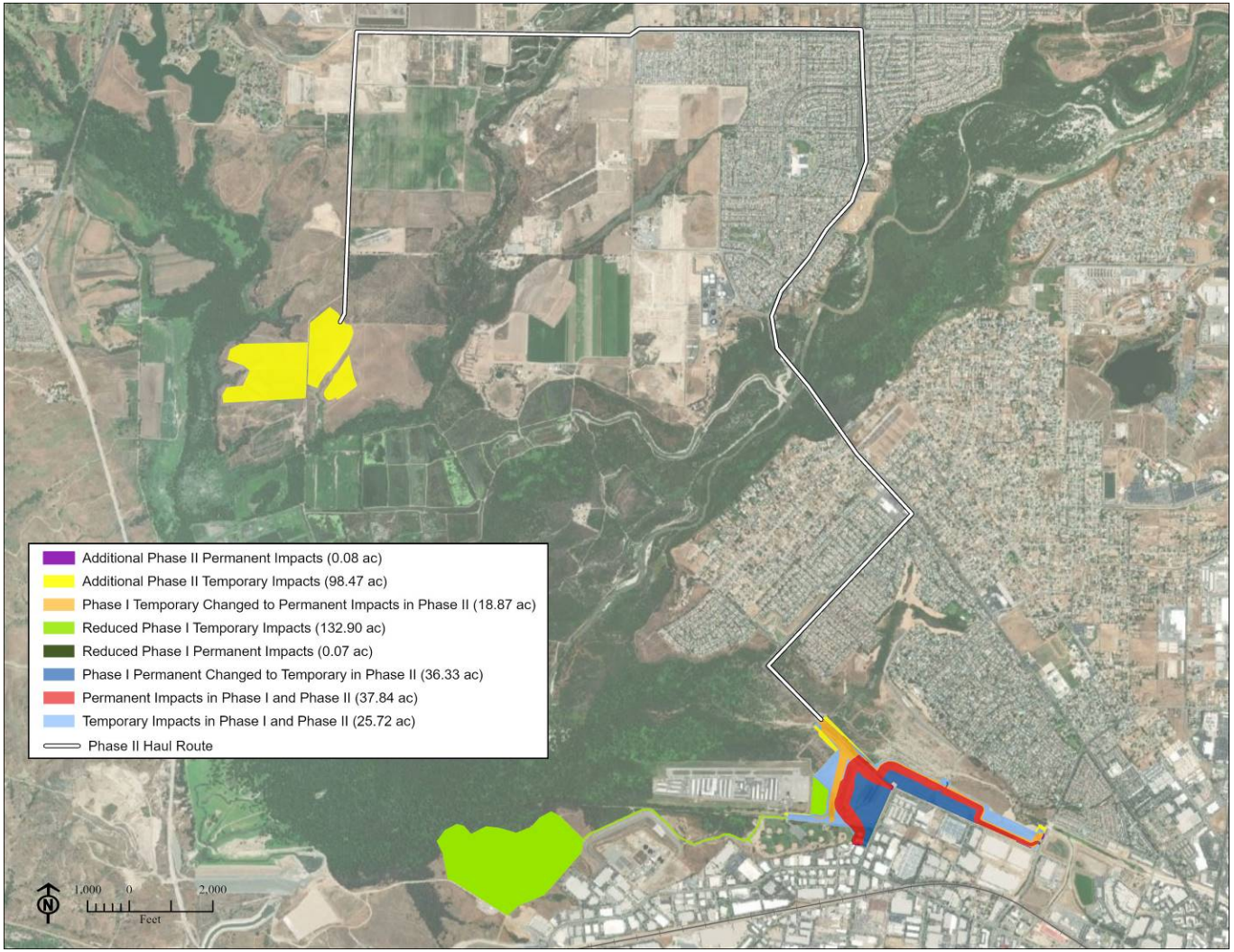

Figure 9 Phase I vs. Phase II Project Footprint

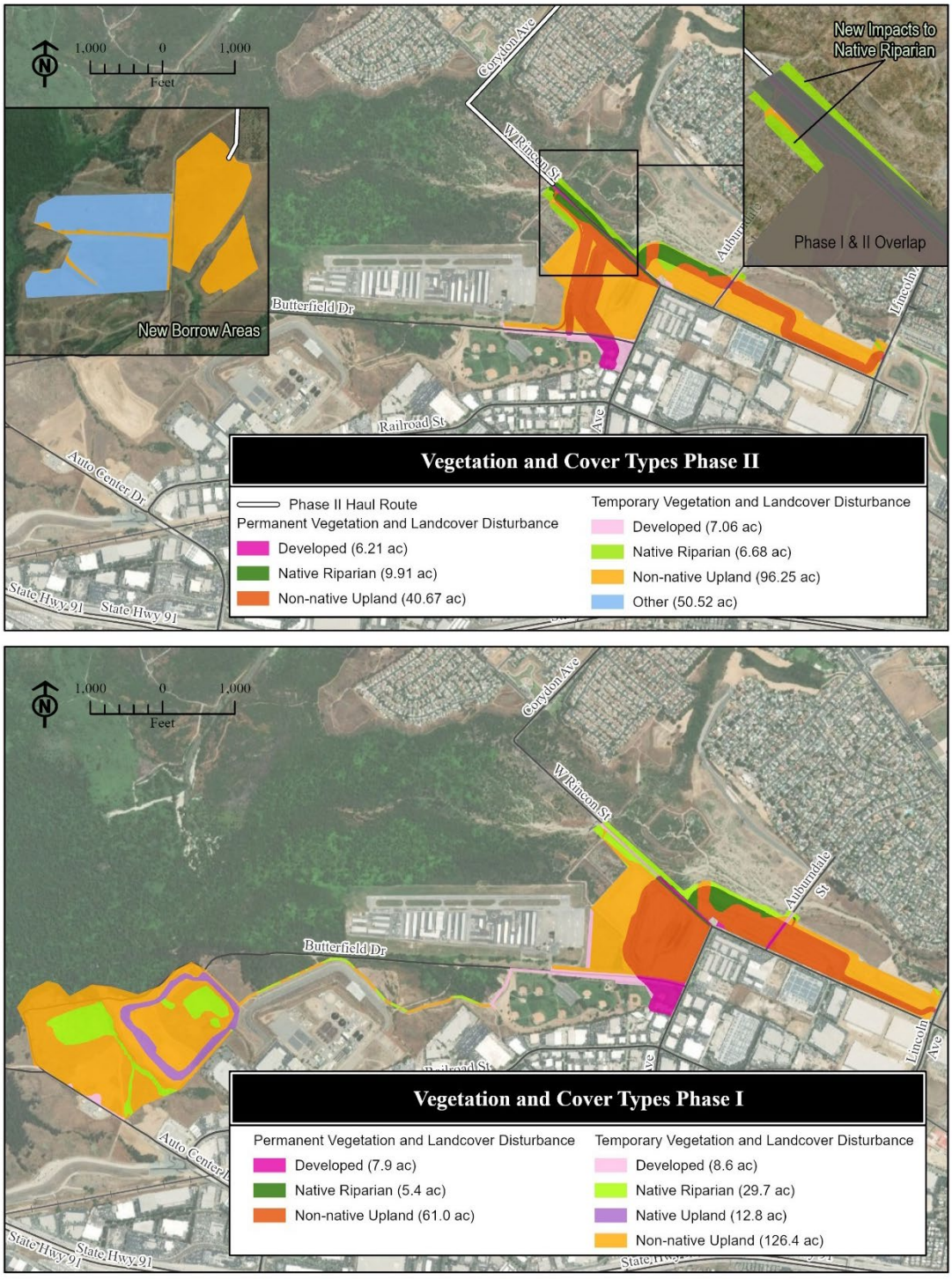

Figure 10 Phase I vs. Phase II Vegetation Communities

3.2.4 Jurisdictional Habitats

Jurisdictional waters are described extensively in Section 3.2.4 of the 2018 Final SEA/EIR Addendum. A formal jurisdictional delineation of the Phase I project site was completed in February of 2018 to identify jurisdictional waters and wetlands within the project site. An informal jurisdictional delineation of the borrow area was complete in 2020 and the limits of the borrow area were altered to avoid impacts. In the Phase I project area, both Temescal Wash and the percolation ponds/basins south of Rincon Road support areas identified as potential wetland and non-wetland "waters of the U.S." as well as "waters of the State" and CDFW jurisdictional waters. Several small ephemeral drainages are also present near the borrow area and along the haul route that are likely to meet the criteria as non-wetland "waters of the U.S." as well as "waters of the State" and CDFW jurisdictional waters.

In the Phase II project footprint, additional jurisdictional waters were mapped in the riparian areas along Temescal Wash northeast of Rincon Road and immediately west of Lincoln Avenue, south of the bridge (Figure 11).

3.2.5 Wildlife

Detailed descriptions of wildlife species are included in Section 3.2.5 and Table 3.2.5-1 of the 2018 Final SEA/EIR Addendum.

The Prado Basin, which occurs adjacent to the project area, supports extensive riparian and aquatic habitats that support diverse assemblages of wildlife, including threatened and endangered species, and provide access to water, shade, and cover. Relatively disturbed areas that are adjacent to existing riparian vegetation can be important to a suite of common and sensitive wildlife. Of particular importance are riparian areas that provide potential habitat for the federally threatened Santa Ana sucker (*Catostomus santaannae*), federally and State endangered least Bell's vireo (*Vireo bellii pusillus*), California gnatcatcher (*Polioptila californica*), and southwestern willow flycatcher (*Empidonax traillii exitmus*).

Temescal Wash and the adjacent riparian and upland habitats likely function as a movement corridor and/or dispersal habitat for a number of wildlife species. In some locations, natural lands adjacent to human disturbance have a lower species diversity.

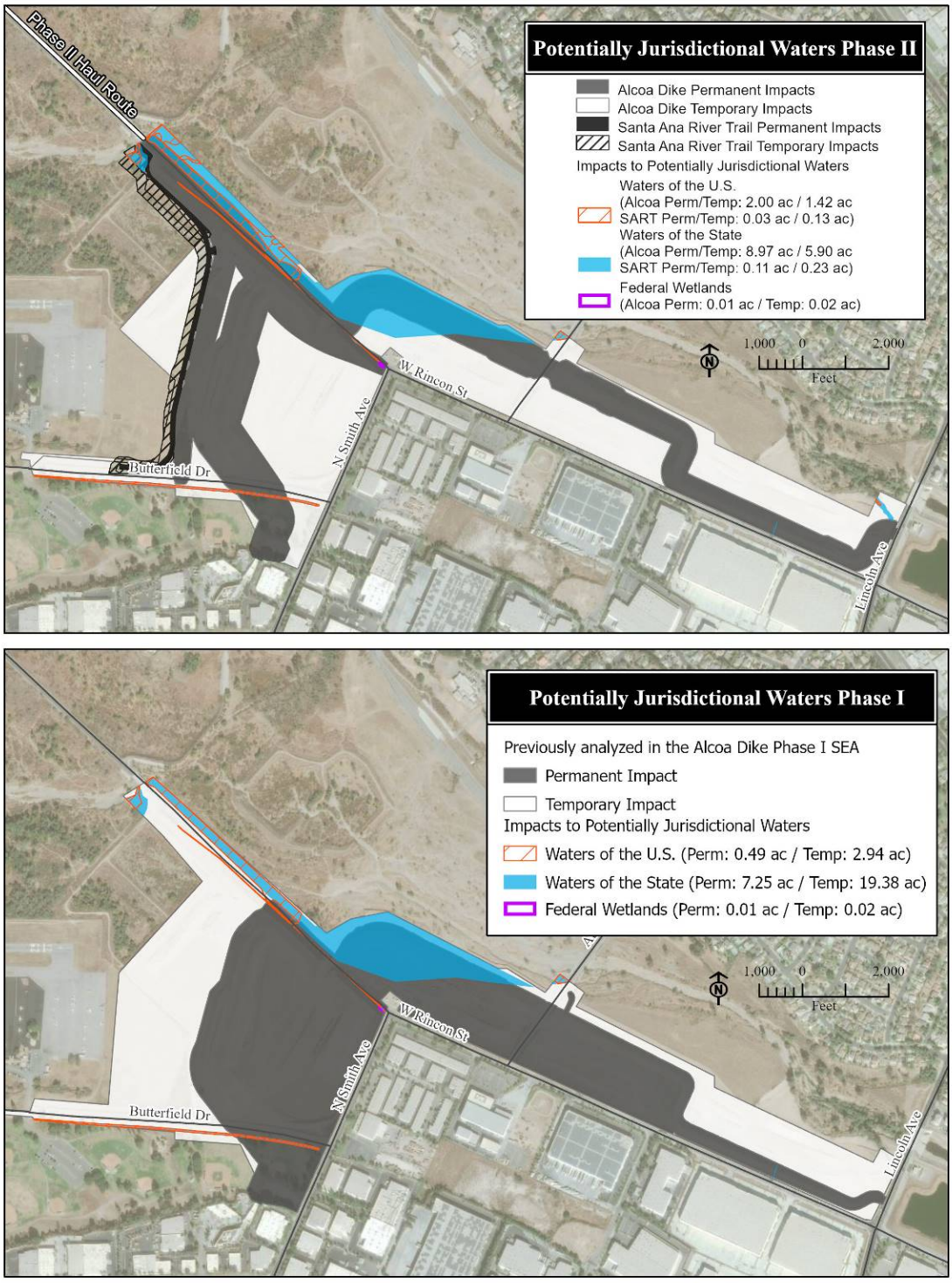

Figure 11 Jurisdictional Waters and Wetland within the Proposed Project Area.

3.2.5.1 Common Wildlife

Invertebrates. It is expected that invertebrates in the project area are represented by a composition of insect species that commonly occur in southern California. These include representatives of various orders, such as Orthoptera (grasshoppers, crickets), Odonata (dragonflies, damselflies), Hemiptera (true bugs), Coleoptera (beetles), Diptera (flies), Hymenoptera (bees, wasps, ants), and Lepidoptera (butterflies, moths), among others.

Fish. During high flow events connectivity exists between Temescal Wash and the SAR. Two native fish species have been reported from the mainstem of the SAR, which occurs just west of the project area, including Santa Ana sucker (Federally Threatened (FT)), and the arroyo chub (*Gila orcutii*) (Federally Sensitive (S)). Due to the lack of perennial flows within the project area and suitable substrate within Temescal Wash these species have a low potential to occur. The three most abundant non-native fish include common carp (*Cyprinus carpio*), fathead minnow (*Pimephales promelas*), and western mosquito fish (*Gambusia affinis*).

Amphibians. Commonly occurring amphibian species that are known or expected to are occur include Pacific treefrog (*Pseudacris regilla*), California treefrog (*P. cadaverina*), the non-native African clawed frog (*Xenopus laevis*), western toad (*Bufo boreas*), arboreal salamander (*Aneides lugubris*), and garden slender salamander (*Batrachoseps major*). No amphibians were observed within the Phase I project area during 2018, and previous surveys in 2010 and 2011 surveys and habitat assessments.

Reptiles. Seven reptile species, including western fence lizard (*Sceloporus occidentalis*), side-blotched lizard (*Uta stansburiana*), gopher snake (*Pituophis melanoleucus*), common kingsnake (*Lampropeltis getulus*), and western rattlesnake (*Crotalus viridis*) were documented within the Phase I project area during 2018, 2010 and 2011 surveys. Other common reptile species known to occur include southern alligator lizard (*Elgaria multicarinata*), western skink (*Eumeces skiltonianus*), striped racer (*Masticophis lateralis*), western yellow-bellied racer (*Coluber constrictor*), California black-headed snake (*Tantilla planiceps*), and southern Pacific rattlesnake (*Crotalus viridis*) (USGS, 2004).

Two California Species of Special Concern were observed within the Phase I project area: western pond turtle (*Emys marmorata*) and south coast garter snake (*Thamnophis sirtalis*). It also supports suitable habitat for special-status reptiles covered under the Multiple Species Habitat Conservation Plan (MSHCP), including orange-throated whiptail (*Aspidoscelis hyperythra*), coastal whiptail (*A. tigris stejnegeri*), and coast horned lizard (*Phrynosoma blainvillii*).

Birds. Bird diversity and abundance are especially high in the Prado Basin and surrounding riparian habitat, where more than 200 species of birds have been recorded. Of these, approximately 95 to 100 breed nearby in the Prado Basin, and many are likely to occur in the project area. Further, there is a well-known change in use by "migrant" species between the breeding season in spring and summer and in the winter.

Raptors, waterfowl, riparian obligates as well as grassland species are regular inhabitants of the project area. Some of the common species observed include, but are not limited to, mourning dove (*Zenaida macroura*), California towhee (*Pipilo crissalis*), American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), lesser goldfinch (*Carduelis psaltria*), song sparrow (*Melospiza melodia*), house finch (*Carpodacus mexicanus*), bushtit (*Psaltriparus minimus*), and black phoebe (*Sayornis nigricans*). Additional species known to use the vicinity of the project area include water birds such as great blue heron (*Ardea herodias*), great egret (*A. alba*), and mallard (*Anas platyrhynchos*).

Several raptor and vulture species were observed utilizing the vicinity of the project area for foraging, including turkey vulture (*Cathartes aura*), sharp-shinned hawk (*Accipiter striatus*), Cooper's hawk (*A. cooperii*), northern harrier (*Circus hudsonius*), white-tailed kite (*Elanus leucurus*).

Many special-status birds have been documented in the vicinity of the project site in recent years including least Bell's vireo, California gnatcatcher, Cooper's hawk, sharp-shinned hawk, burrowing owl (*Athene cunicularia*) (Bird of Conservation Concern (BCC)), northern harrier, and white-tailed kite.

Mammals. Twenty-three species of mammals, including three non-native species, have been observed in the nearby Prado Basin (Zembal et al., 1985). Two species of mammals, the California ground squirrel (*Spermophilus beecheyi*) and coyote (*Canis latrans*), were observed within the Phase I project area during the 2018, 2010 and 2011 surveys. A variety of common small mammals, known from the Prado Basin, are likely to occur including the western harvest mouse (*Reithrodontomys megalotis*), California vole (*Microtus californicus*), Botta's pocket gopher (*Thomomys bottae*), western brush rabbit (*Oryctolagus cuniculus*), and black-tailed jackrabbit (*Lepus californicus*). The only large native ungulate expected to occur in the project area is the mule deer (*Odocoileus hemionus*). Meso-predators known from the general area include gray fox (*Urocyon cinereoargenteus*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), and long-tailed weasel (*Mustela frenata*). Top carnivores that could occur in the vicinity of the project area include bobcat (*Lynx rufus*) and mountain lion (*Puma concolor*).

Portions of the Phase I project area support suitable foraging habitat for a variety of bat species; however, roosting habitat is limited to the large non-native woodlands. Pallid bat (*Antrozous pallidus*), western mastiff bat (*Eumops perotis californicus*), yuma myotis (*Myotis yumanensis*), and pocketed free-tailed bat (*Nyctinomops femorasaccus*), all CDFW Species of Special Concern, are known to occur in the area.

3.2.5.2 Wildlife Movement

Linkages and corridors facilitate regional wildlife movement and are generally centered around waterways, riparian corridors, flood control channels, and contiguous upland habitat. Drainage ways generally serve as movement corridors because they are natural elements in the landscape that guide animal movement (Noss, 1991; Ndubisi et al., 1995; R. Walker and Craighead, 1997,

in Hilty et al., 2006). Corridors also offer wildlife unobstructed terrain for foraging and for dispersal of young individuals. Requirements for relative size and characteristic of movement corridors are different for each species that uses them. When human activities fragment landscapes, movement corridors may be altered or eliminated. Continued use of these features by wildlife depends on their ability to find adequate space, cover, food, and water, in the absence of obstacles or distractions (e.g., man-made noise, lighting) that might interfere with wildlife movements.

The SAR and Temescal Wash are recognized as vital pathways for wildlife movement. Upland areas within the project footprint have previously been fenced, periodically cleared, and provide limited wildlife movement potential. Several migratory songbirds utilize the riparian vegetation within the SAR corridor for breeding, nesting, and foraging, or at a minimum, as transient rest sites during migration. In addition, large, wide-ranging animals, such as mountain lion, bobcat, and coyote have been documented within the SAR watershed and may utilize the SAR corridor and Temescal Wash in search of prey, water resources, or cover.

3.2.5.3 Special-Status Wildlife Species

Detailed descriptions of special-status wildlife species and their potential to occur are included in Section 3.2.5, Table 3.2.5-2, and Figure 3.2-3 of the 2018 Final SEA/EIR Addendum. Special-status wildlife include species listed as federally or State threatened or endangered, species proposed for listing, species of special concern, and those included in the Western Riverside MSHCP, with potential to occur within the proposed project area.

Two federal and/or State listed threatened or endangered species are known to occur in the project area: least Bell's vireo (FE, SE) and coastal California gnatcatcher (FT, CSC). Two federal and/or State listed threatened or endangered species have critical habitat overlapping the project footprint: least Bell's vireo (FE, SE) and western yellow-billed cuckoo (FT, SE). These species are discussed briefly below.

Other special-status species (FP, CSC, MSHCP) were identified within the project site including western pond turtle, San Bernardino ringneck snake, south coast garter snake, Cooper's hawk, sharp-shinned hawk, great blue heron, burrowing owl, Lawrence's goldfinch, turkey vulture, northern harrier, white-tailed kite, coyote, bobcat.

A suite of special-status species, although not observed, have high potential to occur in the vicinity of the project area. These species are discussed extensively in Section 3.2.5 and Table 3.2.5-2 of the 2018 Final SEA/EIR Addendum.

Least Bell's vireo FE, SE. The least Bell's vireo is listed as state and federally endangered and is a Western Riverside MSHCP covered species. This species occupies riparian woodlands (especially Southern Cottonwood Willow Riparian Forest, Southern Willow Scrub, and Mule Fat Scrub) in Southern California, with the majority of breeding pairs in San Diego, Santa Barbara, and Riverside counties (USFWS, 1998).

This species has been recorded breeding in the project area during numerous surveys conducted in the past, including during the 2017 nesting season (Figure 12). SAWA (2017) reported nine vireo territories within 200 feet of the Phase I project area, including two within the Phase I project area. Additional surveys by SAWA in 2019 reported six vireo territories within 200 feet of the Phase II project area (Figure 12). The Phase II project area encompasses about 72 acres of critical habitat as shown in Figure 12, of which approximately 3.26 acres are new impacts resulting from Phase II.

Coastal California gnatcatcher FT, CSC. The coastal California gnatcatcher is listed as federally threatened, a CDFW California Species of Special Concern, and a Western Riverside MSHCP covered species. The coastal California gnatcatcher occupies Southern California coastal sage scrub habitats and sometimes occurs in adjacent habitats including grasslands, chaparral, and riparian habitat. In California, coastal California gnatcatcher is a year-round resident of scrub-dominated plant communities from southern Ventura County southward through Los Angeles, Orange, San Bernardino, Riverside, and San Diego counties (Atwood, 1980).

This species was recorded in the project area during surveys conducted in 2017 (2017 SAWA), however nesting was not confirmed in 2018 or 2019 surveys (Figure 13). SAWA reported three pairs within 200 feet of the Phase I project area. No pairs were observed within the Phase II project footprint. Suitable habitat does not occur near the expanded Phase II footprint areas. Critical habitat for gnatcatcher occurs downstream of the Prado Basin in the vicinity of the Chino Hills and Santa Ana Mountains.

Western yellow-billed cuckoo FT, SE. The western yellow-billed cuckoo is listed as federally threatened, State endangered, and a Western Riverside MSHCP covered species. It occupies extensive riparian woodlands dominated by cottonwood and willow and is a rare and localized summer migrant in California.

This species has historically been occasionally observed in the Prado Basin, as recently as 2011. Marginal riparian habitat is present in the project area, and the species may be seen migrating or foraging. The Phase I project area included 8.27 acres of proposed critical habitat near the edges of the Phase I borrow area footprint. The Phase II project area does not overlap with cuckoo critical habitat due to reduced TCE around relocated borrow site.

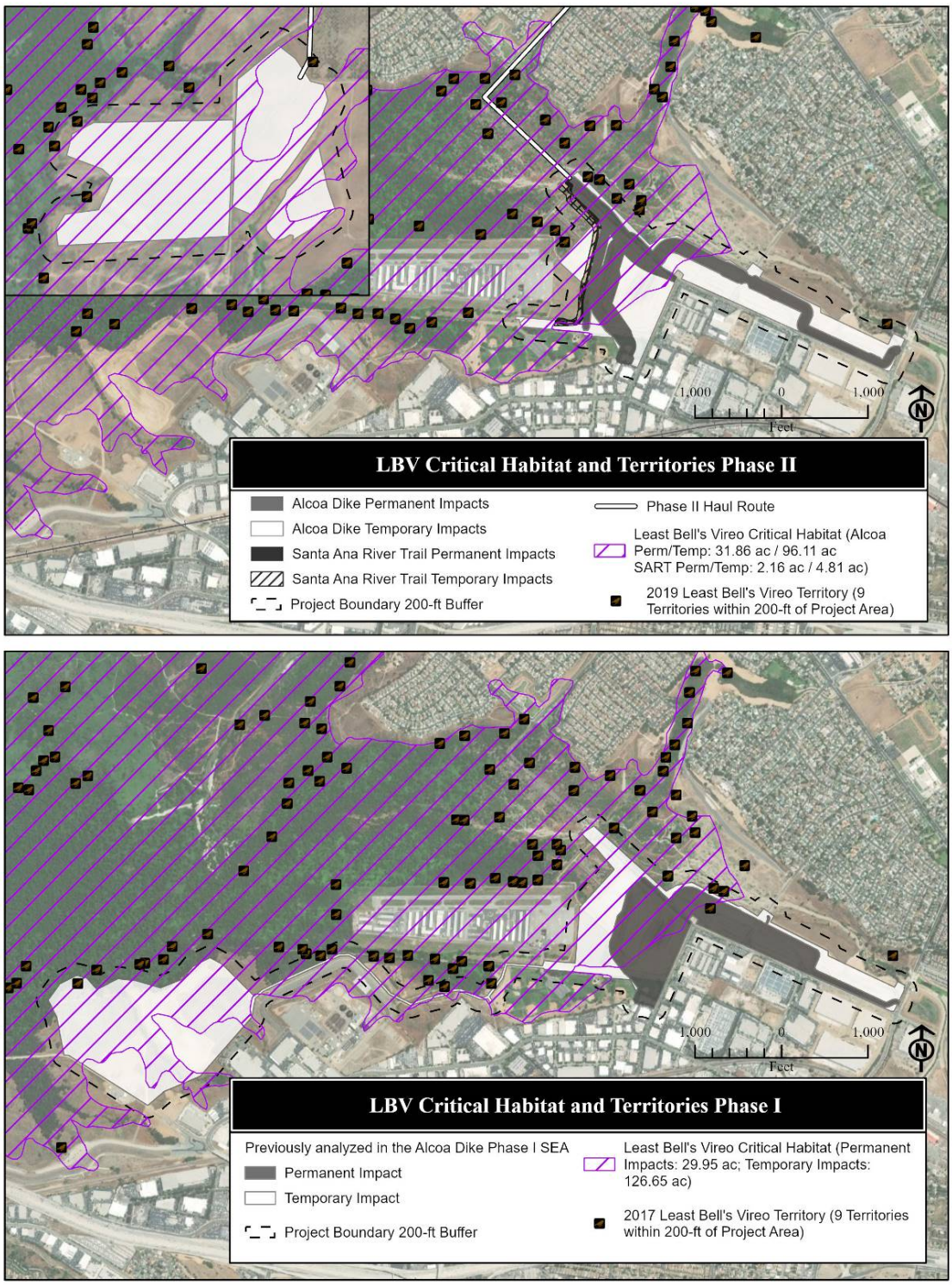

Figure 12 Least Bell's Vireo and Critical Habitat Occurrence

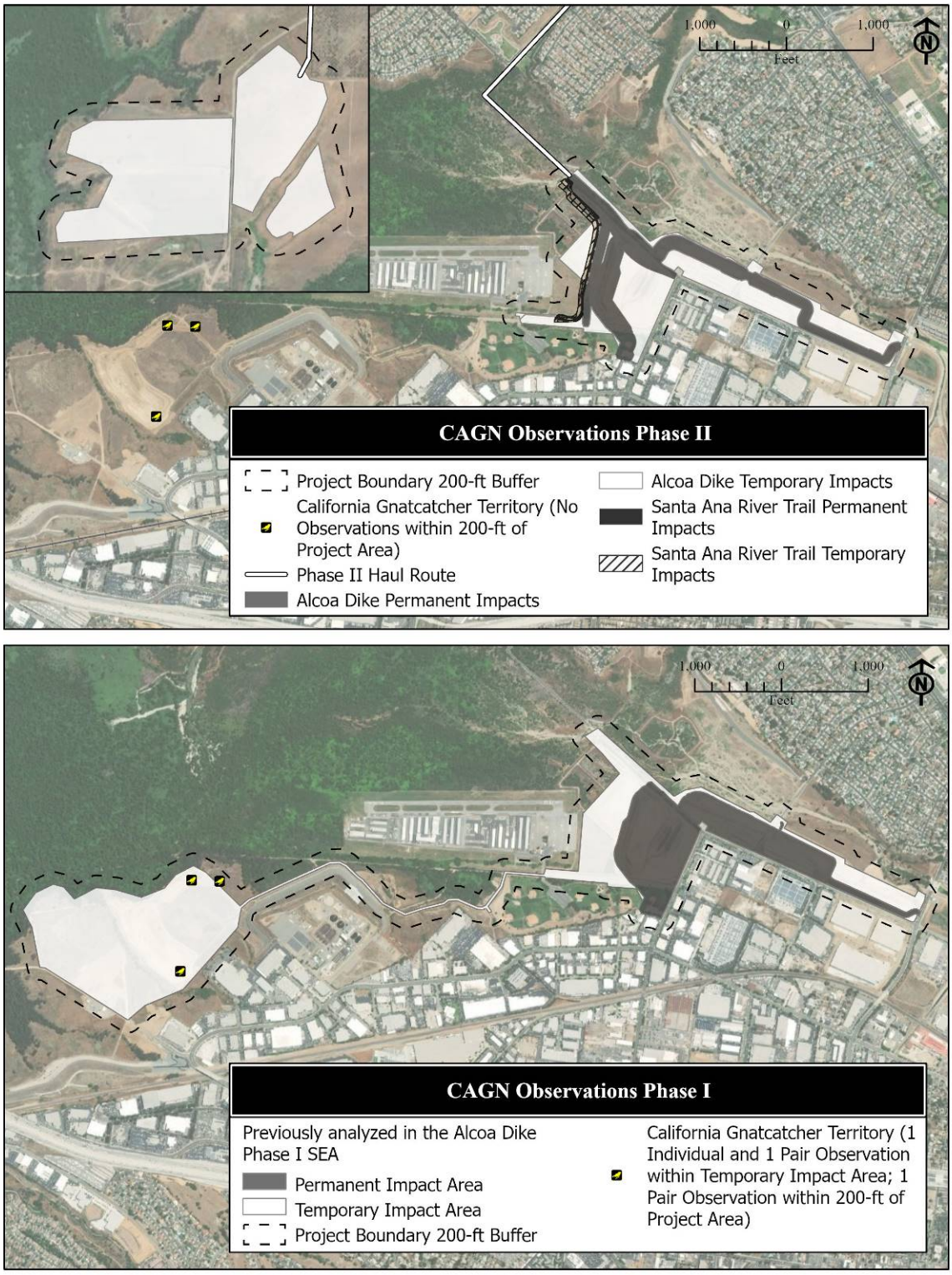

Figure 13 Coastal California Gnatcatcher Occurrence

3.3 Water Resources and Hydrology

The 2018 Final SEA/EIR Addendum provides information on the affected environment for water resources and hydrology in the proposed project area. For this SEA/EIR Addendum the existing conditions for water resources and hydrology has not changed.

3.3.1 General Setting

The proposed project area is located entirely within the Prado Flood Control Basin's Temescal Wash drainage area. The Prado Flood Control Basin is a flood improvement project on the main stem of the SAR. The Prado Basin is located within the SAR Basin, which encompasses parts of Orange, San Bernardino, and Riverside Counties (the proposed project area is located in Riverside County). This area is within the jurisdiction of the Santa Ana Regional Water Quality Control Board (RWQCB) and is subject to management direction of the Water Quality Control Plan (Basin Plan) for the Santa Ana Region.

The climate in this area is Mediterranean with hot, dry summers, and cooler, wetter winters. Most precipitation occurs between November and

, and is characteristically in the form of rainfall, although snow may occur at higher elevations. Under natural conditions, much of the SAR and its tributaries would be intermittent with little or no flow in the summer months, except in areas with high groundwater. The urbanization of the valley areas of the SAR Basin has significantly increased runoff into the river and tributaries. Rainfall occurring over an urbanized part of the basin generates higher peak discharges with a shorter peaking time and a greater volume than if it occurred over the natural basin (USACE, 1988 [p. IV-3]). Water from the upper SAR contributes to municipal and domestic supply, agriculture, groundwater recharge, hydropower generation, water contact and noncontact recreation, as well as fresh water and associated habitat

3.3.2 Temescal Wash and Santa Ana River

Temescal Wash, also known as Temescal Creek, originates in Lake Elsinore (Riverside County) as Elsinore Spillway Channel, flowing northwest for a length of 29 miles to its confluence with SAR in Prado Reservoir within the city of Corona, CA (Figure 11). It is the largest tributary to the SAR. The Elsinore Valley Municipal Water District develops the operating procedures for Lake Elsinore. According to the final report on these operating procedures developed in 1995, the maximum outflow into Temescal Wash allowed from the lake is 1,000-cfs.

Due to significant elevation differences within the Temescal Wash watershed, the nature of vegetation varies considerably within the watershed. In the upper reaches, i.e. above elevation 5,000-ft in the San Bernardino Mountains, pine, fir, juniper, and oak are found scattered throughout a chaparral cover of manzanita, scrub oak, and sage brush. At the lower elevations (foothills and lower slopes), scattered scrub oak, sagebrush, and annual range grasses dominate the vegetation type. The land use in the watershed also varies. Most of the watershed can be considered as agricultural or national forest, consisting mainly of dwarf shrub type vegetation. Commercial development covers the drainage area sparsely, primarily around Lake Elsinore and

Corona. The dominant hydrologic soil group (HSG) is D which consists chiefly of clay soils with high runoff potential.

The SAR originates in the San Bernardino Mountains and travels southwest approximately 60 miles where it reaches the Pacific Ocean near Huntington Beach. Urban runoff and effluent from wastewater treatment plants, as well as naturally occurring high groundwater levels, contribute substantially to the perennial flow that occurs in the Prado Basin and in the proposed project area.

The SAR serves several major purposes to the economic well-being and environmental values of the region. It provides extremely important wildlife habitat and supports aquatic organisms and several endangered species. Key items of importance to the inhabitants of Orange County are the issues of flood control and water supply. All of these beneficial uses have influenced the design of projects that have been planned and constructed to manage the flows in the river.

Approximately half of the base flow of the SAR receives treatment using artificial wetlands upstream from Prado Dam to remove nitrogen and other contaminants. On average, approximately 200,000 acre-feet per year (afy) of natural stream flow passes through Prado Dam into Orange County. Much of this flow is diverted downstream to basins operated by the OCWD, for the purpose of recharging underlying groundwater basins which provide the local water supply in that area. Summer flows in the SAR normally reach the recharge basins downstream of the Imperial Highway Bridge and rarely flow beyond the basins to Burris Pit. Water in this portion of the river is a blend of highly treated wastewater effluent, irrigation runoff water, imported water purchased for groundwater recharge, and groundwater forced to the surface by underground barriers. During periods of rainfall, particularly during the winter months (December to March), storm runoff bypasses the recharge basins and is transported in the river channel to the ocean. Historically, the SAR has been considered one of the greatest flood hazards in the west due to the potential property damage that would occur in response to a levee breach. New flood protection improvements recently constructed and underway have aimed at reducing the risk of flooding. (USACE, 2001)

Surface Water Quality. Surface water quality within and downstream of Prado Basin is determined by various contributors, including: Cucamonga Creek, Chino Creek, Temescal Creek, Santa Ana River, rising groundwater, municipal wastewater treatment plant effluent, mountain and lowland runoff, storm discharge, State Water Project discharges, and non-point sources such as urban and agricultural runoff. Per the National Water Quality Assessment (NWQA) Program, administered by the U.S. Geological Survey (USGS), the quality of surface and ground water in the Santa Ana Basin becomes progressively poorer as water moves along "hydraulic flow-paths," with the highest quality water associated with tributaries flowing from surrounding mountains and ground water recharged by these streams (NWQAP, 2011). Water quality may be altered by a variety of factors including but not limited to: consumptive use, importation of water high in dissolved solids, run-off from urban and agricultural areas, and the recycling of water within the basin.

Waterways in the SAR Basin are listed on the 2006 Clean Water Act Section 303(d) List of Water Quality Limited Segments Requiring Total Maximum Daily Loads for the following

pollutants: pathogens (Chino Creek, Reach 1 and Reach 2; Mill Creek, Prado Area; Santa Ana River, Reach 3; Prado Park Lake), high coliform count (Chino Creek, Reach 2; Cucamonga Creek, Valley Reach), and nitrate (Santa Ana River, Reach 3) (Santa Ana RWQCB, 2006). These pollutants most likely originate from non-point agricultural and urban sources that commonly occur throughout the watershed.

3.3.3 Groundwater

Groundwater is the main source of water supply in the SAR watershed, providing about 66 percent of the consumptive water demand. Inland aquifers underlie roughly 1,200 square miles of the watershed upstream of Prado Dam, which coastal aquifers underlie roughly 400 square miles downstream of Prado Dam. Thickness of these aquifers ranges from several hundred to more than 1,000 feet. Depth to ground water ranges from several hundred feet below ground surface near the mountains to near land surface along rivers, wetlands, and in the coastal plain. (NWQAP, 2011)

The proposed project area is underlain by the Inland Santa Ana Basin Subunit (Inland Basin). As described in the 2018 Final SEA/EIR Addendum, this area contains upwards of 1,000 ft of mostly recent alluvial deposits covering the irregular bedrock floor. In the region around the City of Corona, where the proposed project area is located, alluvium has been derived mostly from the Santa Ana Mountains. The sediments were laid down on alluvial fans and plains by streams draining the highland areas and consist generally of stringers and lenses of sand and gravel separated by layers of silt and clay.

Groundwater Quality. The Inland Basin is characterized by an unconfined aquifer system in which high-quality recharge is distributed over a broad area near the mountain front. As groundwater moves toward areas of discharge, water quality is determined by overlying land use activities. Other factors that influence groundwater quality in this area include interaction with the SAR, discharge of recycled wastewater to the river, and use of imported water in the basin. (USGS, 2002)

3.4 Earth Resources

The Corps has conducted numerous geotechnical and field investigations in the Prado Basin since the 1930s and as recent as 2019, including mapping of the various geologic formations and exploring the subsurface to determine the nature and extent of soil and bedrock materials, as well as the character of local faults. Prado Basin is situated at the southwestern edge of the Upper Santa Ana Valley, a broad inland alluvial plain which is part of the larger South Coastal Basin of southern California. This area is bounded to the north and northeast by the San Gabriel and San Bernardino Mountains, to the south by the San Timoteo Badlands, a series of granitic hills, and a low bedrock plateau, and to the west and southwest by the Chino Hills and Santa Ana Mountains.

The proposed project area is located entirely within the Prado Flood Control Basin of Riverside County, California. The proposed relocated borrow area is located approximately 7.7 miles northeast of the proposed project area. Bedrock does not outcrop within the limits of the borrow areas, or along the Alcoa Dike alignment. Geotechnical investigations conducted in 1980 identified sandstone representative of the Sycamore Canyon member of the Puente Formation at

an average depth of 35 ft, and up to 75 ft beneath the borrow area and at unknown depths along the Alcoa Dike alignment. Uplift of this region occurred during the past two- to three million years and deformed with Puente formation with extensive warping and faulting. Halocene (recent) alluvial materials were present along active stream channels and associated floodplain deposits of the SAR, Temescal Wash, and other water courses including incised stream channels on the Corona compound alluvial fan. Older, generally Late Pleistocene-age alluvial sediments were present as terrace deposits along the northeastern flank of the Santa Ana Mountains and along the SAR, as well as alluvial fan deposits in the Corona area.

3.4.1 Geology and Soils

Soils in the Prado Basin are largely derived from the alluvial materials that dominate the valley floor and slopes. Consequently, they are generally light, sandy, highly permeable, and easily eroded. As such, the allvium which characterizes the streambed of the SAR has been laid down over periods of river meandering and floodplain functions. The upper portions of the SAR streambed are rocky, with soils consisting of finer sands and silts throughout the middle and lower portions of the river. Soils of the coastal plain are similar to those of the middle and lower portions of the SAR. Soils in the project area are derived from the alluvial materials that dominate the valley floor and slopes. These soils are not considered prime farmland within the project area. (USACE, 2001)

Groundwater was encountered at elevation 533 ft, approximately 11 ft below ground surface. The sandy clay is medium stiff above the water table with SPT blow counts ranging from zero to 16, with an average of eight. Below the water table, the sandy clay is very soft to soft, with SPT blow counts ranging from zero to six, with an average of three blows/ft.

3.4.2 Seismicity and Faulting

Seismic faults are plane-like surfaces on which movement of the earth's rock formations and soils can occur. Faults generally cut through multiple stratigraphic formations at angles. When movement occurs on fault planes, propagation of seismic waves occurs; such seismic events introduce a certain risk of infrastructure damage due to earthquakes that are caused by the fault movements.

The seismic environment in southern California is largely defined by the San Andreas Fault, which trends in a northwest-southeast alignment. Land to the west of the San Andreas Fault is drifting north, which builds stresses throughout the region. These stresses are eventually relieved by movement along the San Andreas and other southern California faults. The regional stress accumulated is not equally distributed among faults, as some move more frequently than others. Other major northwest-southeast trending faults in the area include the San Jacinto, Whittier-Elsinore, and Newport-Inglewood. Many smaller and considerably less active or apparently inactive faults exist among the aforementioned larger faults. The seismic environment relevant to the Proposed Action is dominated by two fault zones, the San Andreas and the Whittier-Elsinore. The project area is located within a zone of potential surface fault offsets and ground cracking that could be triggered by an event along the Whittier-Elsinore fault zone.

Research into earthquake probabilities by the Corps determined that important seismic characteristics of the Whittier fault zone include the following:

- Maximum probable earthquake is 6.9 M (earthquake magnitude);
- Could cause up to 19 feet of horizontal offset;
- Maximum site acceleration from an earthquake estimated is 0.55 g (g is the force of gravity; an acceleration of 1 g is equal to a force of 32 feet/second/second); and
- Maximum measured site acceleration was 0.08 g (USACE, 2001).

Overall, the proposed project area has a 10 percent probability in 50 years of exceedance of 0.5 to 0.6 g from an earthquake event of M 6.8. Such an event most likely would occur on either the Whittier or Chino-Central Avenue Faults.

Although the project is located in a seismically active region, this area is generally characterized by diffuse and non-significant, low-magnitude seismicity. The *1988 Phase II GDM/SEIS* describes that four ancient landslides have been identified along the eastern slopes of the Chino Hills, located at the western edge of Prado Basin. These landslides are fairly limited in size, varying from 200 – 800 ft in width and 300 – 800 ft in length.

3.5 Land Use

The majority of the proposed project area currently consists of vacant land that consists of non-native grasslands, non-native woodlands, and riparian scrub; and the southwest end of the proposed project area would traverse Butterfield Park, which is 43.5 acres and consists of nine baseball fields, a soccer field, a jogging course, a picnic area, playground equipment, and restrooms. The Corona Municipal Airport is located immediately west of the proposed project area. Other existing land uses surrounding the proposed project area include light industrial development directly south, and single-family residential development ranging from 500 to 1,200 ft. to the north.

The proposed project area is located entirely within the City of Corona. The majority of the site is within the Open Space/General (OS/G) land use designation of the City's General Plan. This designation applies to "…lands permanently committed or protected for open space purposes due to their value as habitat, topography, scenic quality, public safety (e.g., flood control channels), or comparable purpose" (Corona, 2007). The southwest end of the proposed project area is within the Park land use designation and the southeast end is within the Light Industrial land use designation. The City's General Plan considers the Park designation as part of the Public and Institutional designation, which also includes schools and various civic facilities. The Light Industrial designation "...accommodates various low intensity, nonpolluting types of manufacturing operations, research and development, e-commerce, wholesale activities, and distribution facilities… intended to provide an employment base for Corona's residents" (Corona, 2007).

The majority of the proposed project area is within the Agricultural zone of the City of Corona's Zoning Ordinance. The southwest end of the proposed project area is within the Open Space zoning designation, and the southeast end is within the Light Industrial zoning designation. In addition, the entire site is within the Federal Emergency Management Agency's (FEMA) 100 Year Flood Zone. (Corona, 2012)

The staging area along the southeast portion of the proposed project area would affect vacant land at the corner of Lincoln Avenue and Rincon Street. There is light industrial development south of the proposed staging area, and a riparian area that would separate the staging area from single family residential development located approximately 600 ft to the north and east.

The proposed project area is also within the boundaries of *Western Riverside County Multi-Species Habitat Conservation Plan (MSHCP),* which is a comprehensive, multi-jurisdictional plan focusing on conservation of species and their associated habitats in the western portion of the County. The MSHCP is one of several large, multi-jurisdictional habitat-planning efforts in southern California with the overall goal of maintaining biological and ecological diversity within a rapidly urbanizing region, and is intended to allow the County and its cities to better control local land-use decisions and maintain a strong economic climate in the region while addressing the requirements of the State and federal Endangered Species Acts.

The City owns three parcels north of Rincon Street and west of Auburndale Street reserved as a mitigation site for work performed on the City's Foothill Parkway Extension project. The City proposed to exchange these sites for other county-owned properties in the vicinity that will meet the City's obligations. Per communication between the City of Corona, Orange County Public Works and USFWS during July 17-19, 2018, the city's proposed replacement mitigation sites have been approved by all parties.

3.6 Aesthetics

The proposed project area is in the vicinity of the Temescal Creek and the Lower SAR in Riverside County. Temescal Creek is approximately 29 miles in length, originating in Lake Elsinore and flowing northwest until its confluence with SAR in the Prado Flood Control Basin. The SAR is an approximately 100-mile long waterway that runs from the San Bernardino Mountains to Huntington Beach in southern California. These rivers and associated riparian habitats provide visual relief from the urbanization of the surrounding cities of Yorba Linda, Anaheim Hills, Corona, and unincorporated Riverside County. The Lower SAR runs from Prado Dam, in Riverside County, to its terminus approximately 30 miles downstream, at Huntington Beach, Orange County.

The proposed project would be located within the City of Corona. The greater project area is surrounded by the Prado Flood Control Basin to the west, single family residential development to the northeast, and light industrial development south of the proposed project area. The aesthetics within the project area are focused on views from Butterfield Park, Prado Regional Park, and the residential development.

Remnant aesthetically pleasing areas within the vicinity of the proposed project area include the undeveloped riparian areas along the river, Prado Regional Park, and Chino Hills State Park located approximately 3.5 miles west of the project site.

3.7 Recreation

Recreational resources and opportunities available in the proposed project area are generally dispersed recreation such as walking, biking, and outdoor enjoyment, while recreational uses that occur in the vicinity of the proposed project area include the Corona Municipal Airport, Butterfield Park, Clearwater Sports Fields, Auburndale Park, Fairview Park, Stagecoach Park,

River Road Park, Contreras Park, San Bernardino County's Prado Regional Park and the planned SART & Parkway.

In addition to the resources listed above, Riverside County Parks is currently planning a multi-use recreational trail (SART) that is planned to extend through portions of Prado Basin, to connect to other existing or planned segments up and downstream. As recommended by the SART project team, the proposed alignment for a segment of this trail would run adjacent to Alcoa Dike and along the edge of nearby roadways. As described in Section 2.4.2 of this SEA/EIR Addendum, the County's proposed plans include a 14-foot wide asphalt-paved bicycle trail and a 10-foot wide decomposed granite (unpaved) hiking/equestrian trail that would traverse adjacent to the Butterfield Connector in a north-south direction. The trail is considered a betterment and is being included in the Corps' construction contract as part of the Proposed Action.

Table 3-1 lists the amenities available at each of the parks and recreation facilities listed above in the vicinity of the proposed project area.

Table 3-1 Recreation Facilities and Amenities in Project Vicinity

Facility	Amenities
Corona Municipal Airport	Recreational airport with no commercial flights. Home to 350-400 general aviation aircraft. Top of the Dike (571.5 ft elevation) was designed to be well below the minimum required elevation (583 ft) with regards to flight paths to and from the airport.
Butterfield Park	Baseball fields, soccer field, jogging course, barbecue, covered shelters, playground equipment, picnic areas, restrooms, drinking fountains.
Clearwater Sports Fields	Sports field.
Auburndale Park	Tennis courts, basketball court, swimming pool, barbecue, covered shelter, picnic area, restrooms.
Fairview Park	Baseball field, basketball court, barbecue, covered shelter, playground equipment, picnic area, restrooms, drinking fountain.
Stagecoach Park	Playground equipment.
River Road Park	Barbecue, covered shelter, playground equipment, picnic area, restrooms, drinking fountains, bicycle rack.
Contreras Park	Basketball court, horseshoe pit, barbecue, picnic area, drinking fountain.
Prado Regional Park	Fishing, camping, hiking, biking and nature trails, disc golf, picnic facilities, meeting room, two 18-hole golf courses, Olympic shooting range, horseback riding, archery, playground with water play park, horseshoe pits, restrooms.
SART & Parkway	Environmental work completed February 2012. Construction began in 2019.

3.8 Noise

3.8.1 Noise Environment in the Proposed Project Area

The area surrounding the Alcoa Dike site is characterized by a wide variety of ambient noise sources. Along the southern periphery of the basin where commercial and industrial facilities as well as freeways are found, noise levels are generally high. These levels drop off substantially towards the central portions of the Alcoa Dike site, which is open space. Residential use to the north is expected to typically generate noise levels associated with personal vehicle and outdoor use activities. The primary noise sources within the Alcoa Dike project area includes: airport noise from Corona Municipal Airport located approximately 2,000 ft west of the site; rail traffic from Atchison Topeka & Santa Fe (AT&SF) Railroad lines bordering the site to the south; traffic on SR-91 to the south; traffic on Smith Avenue to the west and Lincoln Avenue to the east; and industrial development in the City of Corona to the south.

3.8.2 Sensitive Receptors in the Proposed Project Area

Some land uses are considered more sensitive to elevated noise levels because of the purpose and intent of the use. Places where people are meant to sleep, or places where a quiet environment is necessary for the function of the land use, are normally considered sensitive. For instance, residential areas, schools, places of worship, and hospitals are more sensitive to noise than are commercial and industrial land uses. The nearest sensitive receptors to the Alcoa Dike site include residential development approximately 600 ft north of the site. Additional sensitive receptors are located north of this residential area, including Auburndale Intermediate School, George Washington Elementary School, and Victress Bower School for Exceptional Students, which are located approximately 2,000 ft north of the site.

3.9 Socioeconomics

The proposed project area would be located within the City of Corona. For the purposes of this discussion of Socioeconomics, demographic data for the City is presented below, in Table 3-2.

Table 3-2 Demographic Data for the City of Corona

	Subject	2010 Estimate
Population	Total Population	161,614 (2012-2016 ACS 5-year estimate)
	Average Family Size	3.26 (2012-2016 ACS 5-year estimate)
	Median Age	34.4 (2016 ACS 1-year estimate)
Housing	Total Housing Units	51,331(2012-2016 ACS 5-year estimate)
	Vacant Housing Units	2,224
	Average Household Size	3.27
Employment and Income	Unemployment Rate	4.6% (City of Corona website)
	Median Household Income	$72,309 (2012-2016 ACS 5-year estimate)

	Subject	2010 Estimate
Ethnicity	White	69.9% (2012-2016 ACS 5-year estimate)
	Black or African American	4.8% (2012-2016 ACS 5-year estimate)
	American Indian and Alaska Native	0.5% (2012-2016 ACS 5-year estimate)
	Asian	11.5% (2012-2016 ACS 5-year estimate)
	Native Hawaiian and Other Pacific Islander	0.5% (2012-2016 ACS 5-year estimate)
	Two or more races	4.3% (2012-2016 ACS 5-year estimate)
	Persons of Hispanic or Latino Origin	43.2% (2012-2016 ACS 5-year estimate)

Source: US Census, 2010, unless otherwise noted

The data presented above was collected by the 2010 American Community Survey (ACS) 1-year estimates and 2012-2016 ACS 5-year estimates of the U.S. Census. These estimates are based on data collected between 2008 and 2016, and do not represent a single point in time.

Population

The City of Corona has an estimated population of 161,614, representing 6.8 percent of the Riverside County population. In addition, the median age in the City is 34.4, which is slightly lower than the County median age of 35.3 (2016 American Community Survey 1-year estimate). This difference may be attributable to the larger number of family aged persons (children under 18 and parents between the ages of 25 and 44) residing in the City of Corona.

3.9.1 Housing

The 2012-2016 ACS estimated that 51,331 housing units were located in the City of Corona, while a total of 39,271 housing units were noted in the 2000 Census. This represents a 30.7 percent increase in housing units since 2000.

3.9.2 Employment and Income

The unemployment rate for the City of Corona is estimated to be 4.6 percent. In comparison, the Riverside County unemployment rate is 5.6 percent (Bureau of Labor Statistics). The median household income is $72,309 in the City, as opposed to the County's median which is $57,972. The lower unemployment rate and higher median income suggest that the City of Corona is more affluent than Riverside County as a whole. (US Census, 2010)

3.9.3 Ethnicity

According to the 2012-2016 ACS 5-year estimate, the ethnic makeup of the City consists of Whites at 69.9 percent and Hispanics at 43.2 percent. These totals are greater than 100 percent

because Hispanics may be of any race, and therefore, are also included in other applicable race categories. Otherwise, the ethnic makeup of the City consists of Asians at 11.5 percent, African Americans at 4.8 percent, American Indian and Alaskan Native at 0.5 percent, and Native Hawaiian and Other Pacific Islander at 0.5 percent.

3.10 Transportation

Major roadways providing regional access to the Alcoa Dike project area include State Route 91 (SR-91) and Interstate 15 (I-15). These roadways are maintained by Caltrans. Local access to the site would be provided by Lincoln Avenue, which has on/off ramps to SR-91 directly south of the Alcoa Dike area. Construction vehicles would access the site from Butterfield Drive, Rincon Street, Auburndale Street, Smith Avenue, Lincoln Avenue and River Road. These local roadways are maintained by the City of Corona, with the exception of the River Road Bridge over Temescal Creek, which is maintained by Riverside County Transportation Commission. The following summarizes the lane configurations and directional configuration of roadways providing both regional and local access to the Alcoa Dike project area:

- **SR-91** is a fourteen lane east-west freeway along the southern border of the proposed project site.
- **I-15** is an eight lane north-south freeway merging with SR-91 to the east of the proposed project site.
- **Lincoln Avenue** is a four lane north-south roadway located directly east of the proposed project site and travels from SR-91 northward where it veers east past the site and connects with River Road and dead ends at Hamner Avenue just west of I-15.
- **Butterfield Drive** is a two-lane east-west roadway connecting with Smith Avenue and providing access to the western portion of the site.
- **Rincon Street** is a two-lane roadway traveling northwest-southeast and connects Smith Avenue to Lincoln Avenue, providing central access to the site. Rincon Street travels further west of Smith Avenue, through the proposed Dike alignment, up to Corydon Street.
- **Auburndale Street** is a two-lane roadway traveling southwest-northeast and bisects the site, connecting with Rincon Street.
- **Smith Avenue** is a two-lane roadway traveling southwest-northeast and connects Butterfield Drive to Rincon Street, providing central access to the site.

Annual average daily traffic (AADT) volumes measured for State Routes and local roadways in the vicinity of the Alcoa Dike project area are presented in Table 3-3.

Table 3-3 Annual Average Daily Traffic on Selected Roadways in the Proposed Project Area

Location	2010 AADT
SR-91 west of I-15	233,000
I-15 junction with SR-91	158,000

Location	2010 AADT
Lincoln Avenue north of SR-91	25,225[1]
Butterfield Drive west of Smith Avenue	1,776[1]
Rincon Street west of Lincoln Avenue	9,278[2]
Auburndale Street north of Rincon Street	2,033[1]
Smith Avenue south of Rincon Street	19,808[1]

[1] Year 2015 AADT, [2] Year 2017 ADT
Source: Caltrans 2016, City of Corona 2015 and 2017

Other transportation related land uses in the vicinity include Corona Municipal Airport located approximately 2,000 ft west of the site, and the AT&SF Railroad lines aligned east-west directly adjacent to the southernmost border of the site. Besides freight operations, Metrolink commuter trains also utilize this rail line. The proposed project is located roughly equidistant from two Metrolink stations – West Corona Metrolink Station approximately 1.3 miles west of the western terminus of the proposed Alcoa Dike, and the Metrolink North Main Corona Station at 250 East Blaine Street approximately 1.1 miles east of the eastern terminus of the proposed Alcoa Dike. This rail line is also currently used by Amtrak commuter carrier's Southwest Chief train, although the train does not stop at either of these stations. According to the Riverside County General Plan, no designated bike paths or pedestrian facilities are currently located within or adjacent to the proposed project area (Riverside County, 2015), although the City of Corona is currently planning a 22-mile multi-use recreational trail segment of the regional "crest to coast" SART in the vicinity.

3.11 Safety and hazards

This section focuses on existing public health and safety issues with regard to existing flooding potential and problems and recreational safety. FEMA is the Federal agency that advises jurisdictions on floodplain management issues and its mission is to reduce loss of life and property, and protect the nation's critical infrastructure from all types of hazards through a comprehensive, risk-based, emergency management program of mitigation, preparedness, response, and recovery. When the Prado Spillway is raised and the dam's water control manual is modified to allow water storage to extend up to 566 ft elevation, this area would have the potential to be inundated during extreme flood events, even though much of the area is currently prone to flooding, has been flooded historically as well, and the proposed project area is within the 100 year floodplain. Plugged and abandoned dry oil and gas borehole(s) may be present within the proposed project area. There are no geothermal wells within the project site and in the surrounding area. The nearest geothermal wells to the project site are more than 125 miles away near Salton Sea in Imperial County.

3.12 Cultural Resources

Cultural resources are locations of past human activities on the landscape. The term generally includes any material remains that are at least 50 years old and are of archaeological or historical interest. Examples include archaeological sites such as lithic scatters, villages, procurement

areas, resource extractions sites, rock shelters, rock art, shell middens; and historic era sites such as trash scatters, homesteads, railroads, ranches, and any structures that are over 50 years old. Under the National Historic Preservation Act (NHPA), federal agencies must consider the effects of federal undertakings on cultural resources that are listed or eligible for listing in the National Register of Historic Places (NRHP). Cultural resources that are listed or eligible for listing in the NRHP are referred to as historic properties.

The Alcoa Dike project is just one aspect of the larger SARMP. Federal preservation laws require that the agency define the area of potential effect (APE) for an undertaking. The APE is the geographic area within which historic properties may be directly or indirectly affected by an undertaking. In this case, the Corps consulted with the California State Historic Preservation Officer (SHPO) regarding the APE for the entire SARMP. The entire APE was surveyed for the presence of historic and prehistoric resources in 1985 by ECOS Management Criteria, Inc. (Brook and Langenwalter, 1985). This survey identified and inventoried NRHP resources along the Santa Ana River from Prado Dam Flood Control Basin all the way to the Pacific Ocean. Beyond the 1985 survey, several additional cultural resource investigations have specifically occurred within the Alcoa Dike project area and the borrow site location.

One archaeological site, CA-RIV-5521, is located within the Phase II Dike footprint. The site, a disturbed historic artifact scatter, was determined to be not eligible for the NRHP in 1995. In a change from the approved Phase I Project (2018 Final SEA/EIR Addendum), materials for Phase II would be brought in from an existing borrow site located approximately 7.7 miles northwest of the Dike. The borrow site has been separately considered under the National Historic Preservation Act. Seven sites were previously located within or adjacent to the borrow site, CA-RIV-4727, CA-RIV-4728, CA-RIV-5253, CA-RIV-7136, CA-RIV-5573, CA-RIV-7676, and CA-RIV-7679. All seven were determined to be not eligible for the NRHP through a consensus determination with the SHPO.

3.13 Public Services and Utilities

Due to the proposed project's location in the City of Corona the project area includes the typical array of municipal public services and utilities that support residential, commercial, and industrial uses. Public services and utilities serving the area include:

- Fire protection
- Police protection
- Schools
- Natural gas
- Electricity
- Water
- Wastewater
- Waste disposal and recycling

3.13.1 Public Services

Fire Protection

The City of Corona Fire Department provides a full range of fire protection services to the citizens of Corona. There are currently 7 fire stations located within the City of Corona. Corona Fire Station #3 located at 790 S. Smith Street is the closest to the proposed project area.

Police Protection

The City of Corona provides complete law enforcement to the City population with the Corona Police Department. The Corona Police Department is commanded by a Chief of Police. The Department has 174 sworn officers, 62 full-time support personnel, 9 animal control officers, and approximately 70 volunteers. In order to provide the community with the highest level of service available, the Police Department is administratively divided into three divisions, including: Investigation, Support Services, and Field Services.

Schools

The Corona-Norco Unified School District serves the school needs for the City of Corona. The School District has 47 schools (K-12) and has over 53,000 students enrolled. None of these schools are located within the proposed project area.

3.13.2 Utilities and Service Systems

The proposed project area is served by utility and service systems located in Riverside County and within the City of Corona. A variety of local purveyors in these areas provide and maintain utility and service system facilities associated with electricity, water, stormwater and wastewater, solid waste, and natural gas. Municipally operated lines provide sewer services in the area. Similarly, stormwater flows are conveyed by the flood control facilities within the City of Corona. Underground Service Alert (also known as USA or "Dig Alert"), a non-profit organization supported by utility firms, provides specific information on the location of underground utilities to contractors upon request, prior to construction. Table 3-5 summarizes the utilities providers serving the proposed project area.

Table 3-4 Utility and Service Providers by Jurisdiction

Jurisdiction	Utility or Service System Provider
City of Corona	**Natural Gas**– Southern California Gas Company **Electricity**– City of Corona Utilities; Southern California Edison **Water** – City of Corona Utilities **Wastewater** – City of Corona Utilities **Solid Waste and Recycling** – Waste Management **Landfills Used** – El Sobrante Landfill

Data on location of utilities within the project vicinity was collected by the Corps in 2020 or as referenced in the 2018 Final SEA/EIR Addendum. Entities were coordinated with, including

SCE. Any utilities within project limits such as the Brine Line, will either need to be protected in place, replaced, or relocated prior to or during construction.

3.14 CERCLA Hazardous Substances and Other Pollutants

A HTRW Survey Report of the Alcoa Dike PED Project was prepared, dated August 2018. A limited site investigation and sampling event was also conducted of the former City of Corona Wastewater Treatment Ponds in June of 2018. The 2018 Final SEA/EIR Addendum summary of observations from the reports is applicable to this SEA/EIR Addendum:

Sediment: Sediment/soil sampling was conducted within the existing percolation ponds to determine the presence or absence and/or extent of potential contamination within these areas due to former percolation pond operation. The sediment within the ponds was sampled and tested for presence of pesticides and metals that were the most likely contaminants to reside on the property due to the pond activities/operations. Observations and chemical testing laboratory results indicated that the sediment was determined to be not classified as a hazardous waste and not to be a risk to human health during construction and long-term maintenance activities for the Alcoa Dike structure. Sediment and or soils from the ponds can be excavated and disposed of offsite as non-hazardous waste and used for typical landfill cover or used onsite as construction fill.

Groundwater: Groundwater at the adjacent Corona Municipal airport is contaminated with residual petroleum contamination due to leakage into the soils from former underground fuel storage tanks (USTs). Because the USTs have long since been removed and the main source of soil contamination removed, the Santa Ana Regional Water Quality Control Board's environmental contamination case files for this property are closed. However, residual groundwater contamination remains in the unconfined aquifer in the area and is still being monitored on a long-term basis by sampling at various groundwater monitoring wells located on the airport's property. Also, there are two other contaminant properties (areas) of concern (former Alcoa Aluminum Plant and City of Corona Golf Course) that are located in close proximity to the Dike and that have a potential environmental contamination concern. These, along with the Airport site have been identified as ASTM equivalent Recognized Environmental Concerns (RECs) according to the findings in the HTRW Survey Report (shown in Appendix A of the 2018 Final SEA/EIR Addendum). Alcoa Aluminum Plant has potential residual contaminants of Arsenic, Perchlorate, and Volatile Organic Hydrocarbons (VOCs) in soil and groundwater. The Golf Course was a former area of a removed Underground Storage Tank (UST) that has left behind petroleum hydrocarbon contamination in soil and groundwater. The potential for groundwater media contamination at all three sites is greater than that of soil media. Also, because of the residual contamination and its close proximity to the Dike footprint/alignment, there is a greater possibility of encountering petroleum/volatile hydrocarbons in the groundwater at the construction site, especially during excavation and dewatering activities.

The Proposed Action is similar to the Previously Approved Design Alternative of the 2018 Final SEA/EIR Addendum and associated sponsor real estate actions except for the changes identified in Table 2-1. Features constructed by Phase I are unchanged. For Phase II, a new or different impact would only occur if it is associated with the project modifications discussed in Section 2,

or as a result of a changed environmental condition discussed in this Section. This section discusses environmental consequences for the as-yet-unconstructed work. Effects to various environmental aspects are addressed more specifically to provide an updated accounting of potential effects. The information is based on recent surveys, literature review, and coordination with regulatory agencies and technical experts.

4 ENVIRONMENTAL CONSEQUNCES

For all resources listed below, the impact analysis focuses on the changes or differences in impacts compared to the previously approved design alternative and the 2018 Final SEA/EIR Addendum.

4.1 Air Quality

The affected environment for air quality is presented in Section 3.1 and does not include any substantially different conditions than were present when the previous project was approved.

As described in Table 2-1, the Proposed Action includes the following primary design features that are modifications from the previously approved design contained in the 2018 Final SEA/EIR Addendum, as relevant to air quality for the estimated two year construction duration of Phase II: an increase in the length of the Dike alignment at the Lincoln Avenue tie-in adjacent to Temescal Wash; addition of a 48-inch drainage structure extending through the main Dike embankment for a total of 3 (three), 48-inch drainage structures; addition of one culvert with four concrete boxes extending through the Rincon Street roadway embankment; and re-design of a concrete and rip-rap trapezoidal swale to an earthen contoured drainage ditch that conveys surface drainage to Temescal Wash and a new borrow and haul route relocation. In addition, the Phase II project will complete the portions of the Dike not constructed in Phase I, including the south Lincoln tie-in near Butterfield Drive, and the portions of the Dike crossing Rincon Street and Auburndale Street. For purposes of this SEA/EIR Addendum, analysis of potential air quality impacts associated with project modification under the Proposed Action and the Previously Approved Design Alternative is provided below.

Significance Threshold

Impacts would be considered significant if the alternative:

- Equals or Exceeds General Conformity Rule Applicability Rates (NEPA);
- Exceeds SCAQMD daily construction thresholds (CEQA).

4.1.1 Proposed Action

The following assumptions were used in the analysis of impacts to air quality for the previously approved Phase I project and are the same for the Proposed Action:

- Project area for proposed Dike construction would involve approximately 247 acres. Emissions were estimated based on both on-road and off-road equipment using EMFAC 2007 emission factors. The daily emissions were based on the 52-week (650 days) work duration. However, since the General Conformity Applicability Rates are calculated on an annual basis, the total estimated emissions for the project were equally divided by two years (estimated duration for project construction and site restoration) and compared to the General Conformity Applicability Rates.
- Over an approximate 2-year work period (May 2021 through January 2023) covering approximately 650 workdays. Daily construction assumed a workday during daylight hours with a 6-day (Monday through Saturday) work week. It is possible that the Proposed Action would be built in stages, with multiple start dates and construction periods for

various sections of the project depending on land acquisition schedule, environmental windows and weather delays. Construction phasing may result in an extension of the overall project duration beyond 2023.

- Phases of work would include Site Preparation, Clearing and Grubbing, Grading, Construction, Concrete work, Road and Utility Relocation. Construction equipment for the proposed project would likely include a combination of water trucks, dump trucks, 16cy dump trucks, scrapers, tractors/loaders, dozers, cranes, spreaders, scrapers, rollers, graders, excavators, a man lift, brush clippers, hydroseed truck, Hwy 6x4 trucks, and pick-up trucks. The Brine Line and SCE work would include additional equipment including an excavator, a loader, a mounted auger/backhoe, a water truck, two (2) pickups and a welding machine for HDPE pipe.

The CalEEMod 2016.3.2 program was used to calculate estimated emissions for the previously approved Phase I project (2018 Final SEA/EIR Addendum). These estimated emissions also apply to the Proposed Action. Emission calculations include maximum daily emissions, in units of pounds per hour (lbs/hr), and maximum annual emissions, in units of tons per year, for criteria pollutants (ROG or VOC); NOx; CO; SO2; PM10; PM2.5; NO2, and annual greenhouse gas (GHG/CO2e) in units of Metric Tons/yr (MT/yr). CalEEMod uses sources such as the United States Environmental Protection Agency (USEPA) AP-42 emission factors, and California Air Resources Board (ARB) vehicle emission models. The summer lbs/day emissions for the proposed project are typically higher in air pollutant air emissions when compared to the winter lbs/day and therefore, the summer lbs/day are referenced as the maximum lbs/day instead of the winter lbs/day. The CalEEMod air quality calculations can be found in Appendix B of the 2018 Final SEA/EIR Addendum and are incorporated into this document by reference.

Emissions from equipment that generally stays on-site would constitute off-road emissions. On-road emissions would include emissions from haul trucks and water trucks as well as the workers' vehicles (pickup trucks).

The proposed project would result in air quality impacts from daily construction and during each year of construction. See Table 4-1 and 4-2 below for comparison of estimated daily emissions (maximum daily construction lbs/day) to SCAQMD threshold and comparison of estimated annual emissions (maximum construction tons/year) to Federal threshold.

Daily construction emissions are shown in Table 4-1. Estimated construction emissions are below the SCAQMD thresholds

Table 4-1 Comparison of Proposed Project Daily Construction Emissions to SCAQMD Lbs/Day

Construction	ROG	NOx	CO	SO2	PM10	PM2.5	GHG/CO2e (MT/yr.)
Proposed Project	4.8528	54.7202	34.2888	0.0646	22.6585	12.4028	6,449.9785

Table 4-1 Comparison of Proposed Project Daily Construction Emissions to SCAQMD Lbs/Day

Construction	ROG	NOx	CO	SO2	PM10	PM2.5	GHG/CO2e (MT/yr.)
Maximum Daily lb/day							
SCAQMD Daily lb/day	75	100	550	150	150	55	No criteria unless industrial facilities; 10,000 MT/yr CO2eq for industrial facilities

Table 4-2 Comparison of Proposed Project Annual Construction Emissions to General Conformity Applicability Rates and GHG annual emissions

Construction	VOC	NOx	CO	NO2	PM10	PM2.5	GHG/CO2e (MT/yr)
Proposed Project, Average Ton/Year	0.06	0.5059	3.8394	5.7923	1.0957	0.6663	614.1535
Federal Ton/Year	10	10	100	100	100	70	

Based on the above, the proposed project construction daily emissions for all air criteria pollutants and GHG/CO2e would be below the SCAQMD significant threshold and would result in less than significant impacts under CEQA. Currently there are no Federal significance findings for GHG emissions but are disclosed per NEPA. The SCAQMD/CEQA daily thresholds do not have Federal significance findings and therefore, SCAQMD/CEQA daily thresholds do not apply to a Federal action (Proposed Action). The proposed project construction annual emissions are below General Conformity Applicability Rates and would result in less than significant impacts under NEPA. With the implementation of air quality (AQ) Environmental Commitments AQ-1 through AQ-22 described in Section 6 of this document, potential daily and annual air quality construction emission impacts would be reduced. Impacts from emissions would be temporary and would return to pre-project conditions following completion of construction.

Future Maintenance. The Proposed Action Alternative would include routine inspections and minor repairs of the Alcoa Dike embankment and its associated features after construction is completed (see Section 2.4 for a detailed list of future maintenance activities). Operation, maintenance, repair, replacement and rehabilitation (OMRRR) work for the proposed project would more than likely occur only after a major storm or major flood event. Reseeding activities associated with OMRRR work would not likely require recurring restoration work. Based on the above, the proposed project would result in negligible air quality OMRRR impacts for daily and annual emissions. See Table 4-3 and 4-4 below for comparison of estimated daily emissions (maximum daily operation lbs/day) to SCAQMD threshold (Table 4-3) and comparison of estimated annual emissions (maximum operation tons/year) to Federal threshold (Table 4-4). Use of maintenance vehicles and equipment would impact air quality, however impacts are expected to be nominal given routine inspections would typically occur monthly, except during flood fighting events. During flood fighting events vehicles and equipment may be needed more frequently, and inspections could occur up to daily. During more severe flood events, launch stone may need to be replaced, which would require additional maintenance equipment outside of what would be used for routine inspections and minor repairs. The number and type of maintenance equipment needed during severe flood events would be dependent on repairs needed. Because these events are expected to occur infrequently, effects on air quality from future maintenance activities would be less than significant.

Table 4-3 Comparison of Proposed Project Daily OMRRR Emissions to SCAQMD Lbs/Day

O&M	ROG/VOC	NOx	CO	SO2	PM10	PM2.5	GHG/CO2e (MT/yr)
Proposed Project Maximum Daily lb/day	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
SCAQMD Daily lb/day	55	55	550	150	150	55	No criteria unless industrial facilities; 10,000 MT/yr CO2eq for industrial facilities

Estimated OMRRR emissions are negligible and below the SCAQMD thresholds for all air emission criteria pollutants and GHG/CO2e under CEQA. With the implementation of

Environmental Commitments AQ-1 through AQ-22, potential daily air OMRRR emission impacts would be reduced. Impacts from emissions would be temporary and would return to pre-project conditions following completion of OMRRR. Based on the above, impacts to daily OMRRR emissions would be less than significant under CEQA.

Table 4-4 Comparison of Proposed Project Annual OMRRR Emissions to General Conformity Applicability Rates and GHG annual emissions

O&M	VOC	NOx	CO	NO2	PM10	PM2.5	GHG/CO2 e (MT/yr)
Proposed Project Average Ton/Year	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
Federal Ton/Year	10	10	100	100	100	70	

Estimated annual OMRRR emissions are below General Conformity Applicability Rates. With the implementation of Environmental Commitments AQ-1 through AQ-22, potential annual air OMRRR emission impacts would be reduced. Impacts from emissions would be temporary and would return to pre-project conditions following completion of OMRRR. Based on the above, impacts to annual OMRRR emissions would be less than significant under NEPA.

Based on the calculations from the 2018 Final SEA/EIR Addendum, the Phase II proposed project daily construction and OMRRR emissions for all air criteria pollutants and GHG/CO2e would continue to be below the SCAQMD significant threshold and would result in less than significant impacts under CEQA. Furthermore, proposed project annual construction and OMRRR emissions are below General Conformity Applicability Rates and would result in less than significant impacts under NEPA. With the implementation of Environmental Commitments AQ-1 through AQ-22, potential daily and annual air construction emission impacts would be reduced. Impacts from emissions would be temporary and would return to pre-project conditions following completion of construction. Based on 2018 Final SEA/EIR Addendum calculations, impacts to daily and annual construction emissions would be less than significant under CEQA and NEPA, respectively.

4.1.2 Previously Approved Design Alternative

Under the Previously Approved Design Alternative, project modifications included under the Proposed Action would not be implemented, and the project would be constructed as described in 2018 Final SEA/EIR Addendum. Construction and OMRRR-related emissions would be the same as the Proposed Action and would not result in significant impacts to air quality.

4.2 Biological Resources

A detailed impacts analysis for biological resources is included in Section 4.2 of the 2018 Final SEA/EIR Addendum and is incorporated by reference. Additional or different impacts to

biological resources that may result from the Proposed Action focuses on the changes or differences in impacts compared to the previously approved design alternative and are identified herein.

Significance Threshold

An impact to biological resources would be considered significant if any project alternatives result in:

- A direct adverse effect on a population of a threatened, endangered, or candidate species or the unmitigated loss of designated critical habitat for a listed or candidate species, to the extent that the regional population is diminished.
- An unmitigated, net loss in the habitat value of a sensitive biological habitat or area of special biological significance.
- Substantial impedance to the movement or migration of fish or wildlife.
- Substantial loss to the population of any native fish, wildlife, or vegetation.
- Substantial loss in overall diversity of the ecosystem.

An evaluation of whether an impact to biological resources would be substantial must consider the resource in its regional or ecological context. While an impact may be locally significant, it may not substantially diminish or result in the permanent loss of an important resource in a regional or ecological context.

Direct impacts would occur when biological resources are altered, disturbed, destroyed, or removed during construction. Direct impacts would result from such activities as clearing, grading, or brushing of vegetation, or mechanical crushing from equipment and vehicles. Other direct impacts may include loss of foraging, nesting, or burrowing habitat for wildlife species, and soil disturbance that results in the introduction of exotic invasive species.

Potential indirect impacts may include increased erosion and sedimentation, changes to hydrology, or long-term degradation of natural vegetation communities. These changes may result in long term degradation of vegetation communities, habitat, and sensitive species.

Both direct and indirect impacts can be classified as either temporary or permanent, depending on the duration of the impact. Temporary impacts may be considered to have reversible effects on biological resources, where impacted areas would recover or be restored after the completion of project activities. Permanent impacts occur in areas that are dedicated to project use, resulting in the irreversible removal of biological resources in that area.

The following analysis considers direct and indirect impacts associated with construction, operation and maintenance. Impacts would primarily occur at and adjacent to the Phase I project site, previously analyzed, and the Phase II expanded project footprint.

Construction-related environmental commitments from the 1988 GDM/SEIS and the 2001 Final SEIS/EIR, and additional commitments developed for the 2018 Final SEA/EIR Addendum, will be implemented. A full list of environmental commitments can be found in Section 6 of the 2018

Final SEA/EIR Addendum, and commitments relevant to Phase II work (the Proposed Action) have also been included in Section 6 of this document.

4.2.1 Proposed Action

Vegetation

Vegetation impacts from Phase II are similar to those described in Section 4.2.2.1 of the 2018 Final SEA/EIR Addendum. Implementation of the Phase II project of Alcoa Dike would result in temporary and permanent impacts to native and non-native riparian vegetation, non-native upland vegetation, and developed areas in the expanded project footprint (Table 4-5). The additional loss of vegetated areas would be minor in the expanded Phase II project footprint, given the minimal acreage, the abundance of riparian habitat in the vicinity of the Prado Basin, and the existing low habitat quality in impacted areas.

Table 4-5 Impacted Cover Types Phase II Expanded Footprint

Cover Types	Impact Type (Acres)		
	Temporary	Permanent	Total
Native Riparian (Mulefat Scrub)	1.83	0.01	1.84
Non-native Upland (Non-native grassland)	44.02	0.00	44.02
Developed	0.3	0.06	0.36
Other Agriculture	50.52	0.00	50.52
TOTAL	**96.67**	**0.07**	**96.74**

Additional temporary and permanent impacts beyond the Phase I footprint would occur to native riparian (1.84 acres) along Rincon Street, and adjacent to Temescal Wash and non-native upland habitat (44.02 acres) and agricultural habitat (50.52 acres) in the new borrow area (Figure 10). Approximately 4.5 acres of additional permanent (instead of temporary) impacts to riparian vegetation would also occur within the footprint previously analyzed in the 2018 Final SEA/EIR Addendum (Table 4.2.2.1-1, Figure 4.2.1-1). These areas were previously considered as temporary impacts in the 2018 Final SEA/EIR Addendum but would be permanent impacts under the Proposed Action because of design refinements associated with raising Rincon Street to match the elevation of the proposed Dike and other road modifications. These additional permanent impact areas occur in portions of the existing percolation ponds/basins just west of Smith Avenue, which are frequently mowed, and the open area adjacent to Butterfield Drive; and at the easternmost end of the Phase 1 project area, west of Lincoln Avenue and south of the bridge. Habitat in these areas is primarily mapped as non-native upland, with riparian habitat mapped along Rincon Street.

Approximately 36.33 acres previously identified as permanent impacts in the 2018 Final SEA/EIR Addendum would become temporary impacts as a result of refined project designs

(Table 4-6, Figure 8). This includes a reduction of permanent impacts to native riparian vegetation by 0.74 acres, non-native uplands by 32.64 acres, and developed areas by 2.95 acres. These changes are attributed to a reclassification of impacts associated with construction and maintenance of the basin ponding areas from permanent to temporary. The basins would be seeded with native species and maintenance is not proposed for these areas.

Approximately 105 acres of previously considered temporary impacts in Phase I, occurring adjacent to the Corona airport to the east and in the borrow area, will no longer be impacted as part of the Phase II project activities (Figure 16). Habitat near the airport was primarily mapped as non-native upland. A new borrow area totaling 93.78 acres was mapped as non-native upland (43.3 acres) and other (50.5 acres) (Table 4-6) which included agricultural lands (Figure 15).

Tables 4-6 and 4-6-1 identify the additional temporary and permanent impacts associated with construction of the SART, separately from the additional or reduced impacts associated with other elements of the Proposed Action (including modifications to the Dike and roadway designs).

Table 4-6 Change in Permanent/Temporary Impact Areas (2018 Final SEA/EIR Addendum Design Alternative vs. Proposed Action

Cover Types	Phase I	Phase II (Phase I + expanded/ reduced footprint)	Change in Acres attributed to SART	Change in Acres attributed to Phase II
	Perm/Temp	**Perm/Temp**	**Perm/Temp**	**Perm/Temp**
Native Riparian	5.4 / 29.7	9.92 / 6.7	+0.02 / +1.5	+4.5 / -24.5
Non-native Upland	61.0 / 126.4	40.7 / 96.2	+2.1 / +0.3	-22.4 / -30.5
Native Upland	0 / 12.8	0 / 0	0 / 0	0 / -12.8
Developed	7.9 / 8.6	6.2 / 7.1	+0.5 / +0.1	-2.2 / -3.0
Other (Agriculture)	0 / 0	0 / 50.5	0 / 0	0 / +50.5
TOTAL	**74.3 / 177.5**	**56.8 / 160.5**	**+2.62 / +1.9**	**-20.2 / -20.3**

(Phase I vs. Phase II)

Table 4-6-1 Permanent/Temporary Impacts (SART Only)

Impact Type	Native Riparian	Non-native Upland	Developed	Total
New Temporary Impacts	1.5	0.3	0.1	1.90
Permanent Impacts	0.02	2.1	0.5	2.62

Direct impacts to vegetation would result from ground disturbing project activities such as clearing and grading for the construction of the Dike, access roads, ponding areas, road crossings, staging areas, stockpiling, and construction site access. Vegetation may also be crushed by equipment and vehicles.

Construction activities may also temporarily reduce habitat value in adjacent areas due to construction noise, dust, increased human presence, and increased vehicle traffic.

Indirect impacts to vegetation could include alterations in existing topography and hydrology regimes; more forceful surface runoff and increased erosion that may damage vegetation within and outside the project area; accumulation of fugitive dust; disruptions to native seed banks from ground disturbance; and the colonization of nonnative/invasive plant species.

The riparian plant communities in the proposed project area are considered sensitive habitat types for their role in the ecological function of the SAR corridor and the wildlife species inhabiting it. While non-native annual grasslands are not a protected community, they provide important foraging and refugia habitat for a variety of plant and wildlife species.

An existing Corps mitigation site occurs adjacent to the project area, encompassing the two northwesterly (previously constructed and abandoned) percolation ponds/basins west of Smith Avenue. A detailed description of this mitigation area is included in Figure 4.2.2.1-1 of the 2018 Final SEA/EIR Addendum. That document had assumed that no impacts to the mitigation site would occur.

However, the Phase II modified project features will permanently impact 2.2 acres and temporarily impact 3.84 acres of sparse riparian/grassland habitat that is growing along the steeply sloped edge of this mitigation site, adjacent to the existing road embankment. Of this total impact area, 1.5 acres of temporary impact and 0.02 acre of permanent impact would be due to SART construction as shown in the Figure 12-4 and Table 4-8-1. All the temporary impact areas will be restored on-site following the completion of the project. The SART proponent will be responsible for restoration of the additional 1.5 acres of temporary impacts caused by trail construction, and will also be responsible for improving an additional 0.02 acres of habitat within currently unrestored portions of the mitigation area to offset permanent impacts associated with the trail. It is envisioned that grading of the slope to accommodate the modified road alignment and trail would result in a flatter topography within the temporary impact area that could support better quality and higher density of riparian and other native habitats. Other (non-trail) permanent impacts would be offset through off-site restoration within other Corps-owned lands within Prado basin along Temescal Creek, within the same mitigation areas established to offset impacts from Alcoa Dike Phase I and Norco Bluffs construction (another

SARMP feature). The restoration potential of these mitigation areas is currently estimated to be sufficient to accommodate all mitigation needs for Alcoa Dike Phase I, Alcoa Phase II and Norco Bluffs. Planned restoration includes removing non-native vegetation to allow native riparian and other native habitats to grow in its place. The off-site mitigation areas were identified and analyzed in the 2018 Final SEA/EIR Addendum (Section 4.2.2.1, Figure 4.2.2.1-2).

The portion of the mitigation site that would be affected by construction is currently vegetated by scattered mulefat shrubs surrounded by non-native grasses. During the maintenance period, the Corps' contractor managed for invasive species such as giant reed, saltcedar (*Tamarix ramosissima*), and perennial pepperweed (*Lepidium latifolium*) and did not focus eradication efforts on annual grasses. The contractor also did not enhance the specific mitigation area with seeding and planting of native species. Project impacts will allow for the impacted habitat to be restored without an abundance of non-native grasses being present and will include the installation of native hydroseed and cuttings. The post-project restoration area will also be flatter and more suitable for restoration as riparian habitat. For these reasons, the post-project riparian habitat at the effected mitigation site is expected to be much higher quality habitat than was present pre-project and is more likely to support riparian birds, including least Bell's vireo.

The SART proponent as listed above will successfully restore onsite all sparse riparian vegetation that is permanently and temporarily disturbed during construction-related activities and will keep all disturbed areas free of exotic plants until riparian vegetation is reestablished. If the site(s) have not begun to recover within 5 years (i.e., 50 percent of the disturbed areas are not vegetated with young riparian vegetation), then the site(s) will be replanted with cuttings from native riparian species.

However, the Corps in compliance with the 2012 BO Amendment, the Corps will restore (through arundo and other non-native removal) one acre of riverine habitat for each acre of wetland/riparian habitat temporarily disturbed by the Alcoa Dike phase II project, and restore five acres for each acre of permanent impact to these vegetation communities. This will equate to 20.16 acres (4.53x5 minus 2.54x1) of off-site restoration, to compensate for -2.54 acre of temporary and 4.53 acres of permanent impacts of degraded wetland and riparian habitat types. *(The 1:1 mitigation requirement for temporary impacts assumes that the restored area will be actively maintained in perpetuity. The Corps also has the option of compensating for temporary impacts to riparian/wetland habitat by restoring three acres in an off-site location for each acre affected (3:1) and maintaining the restored area for a period of five years only).*

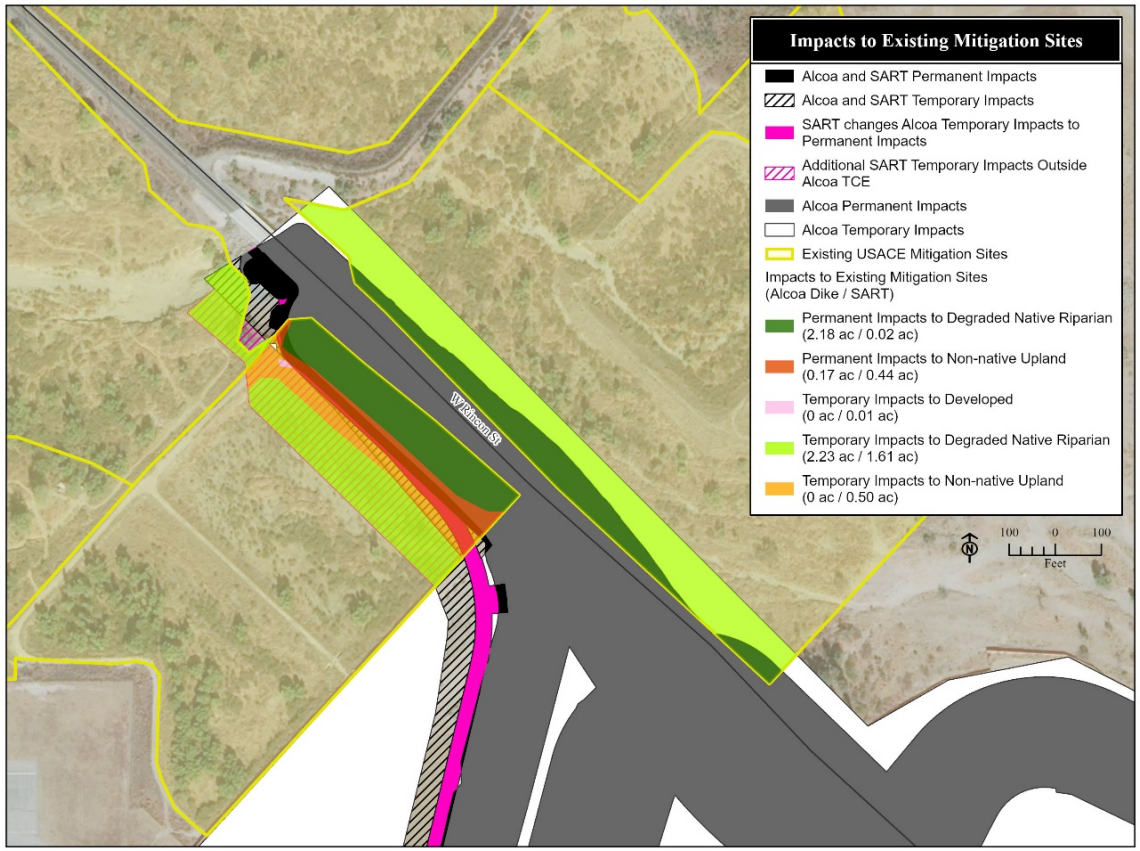

Figure 14 Impact to existing mitigation site from Alcoa Dike and SART alignment

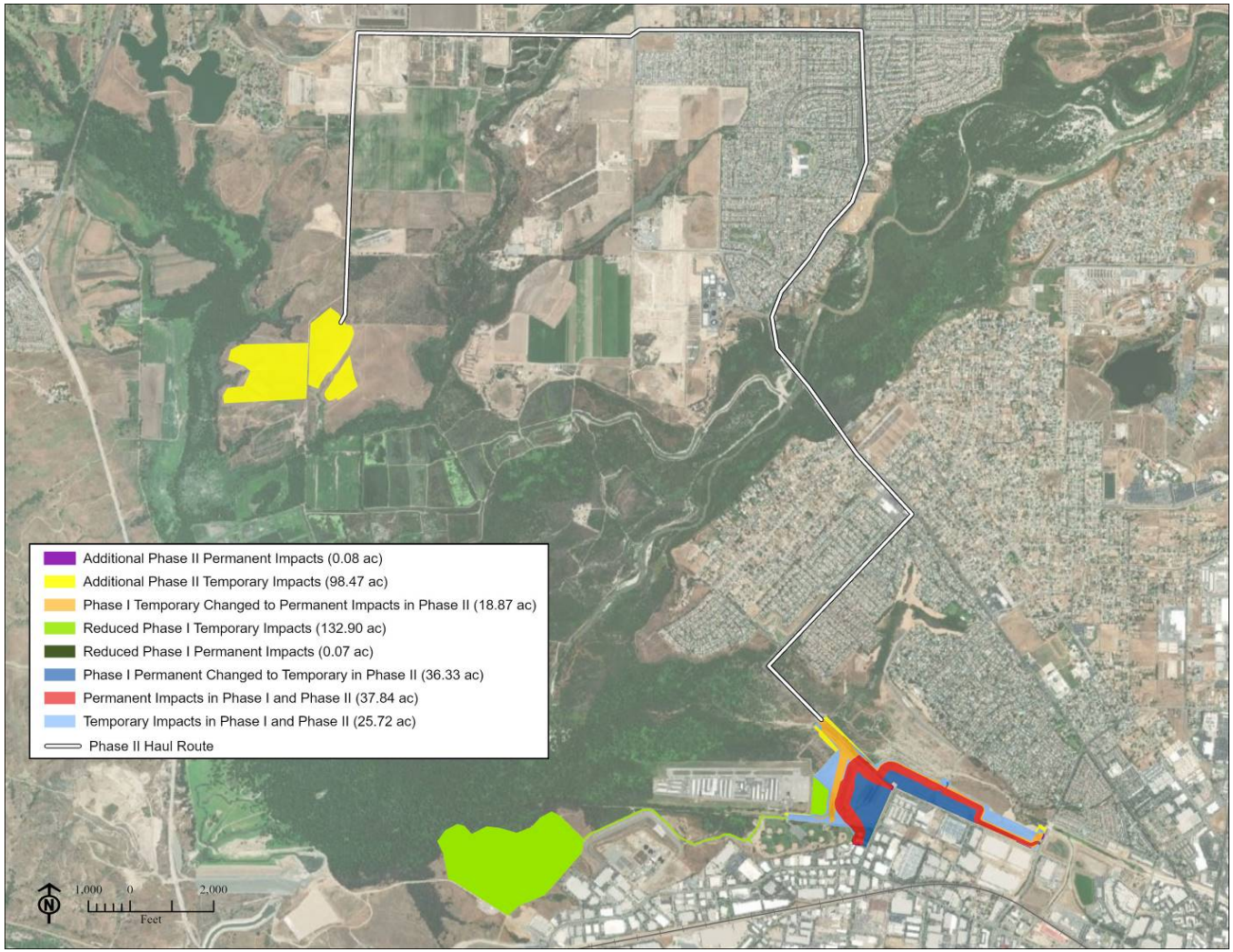

Figure 15 Change in Permanent and Temporary Impact Areas (Phase I vs. Phase II)

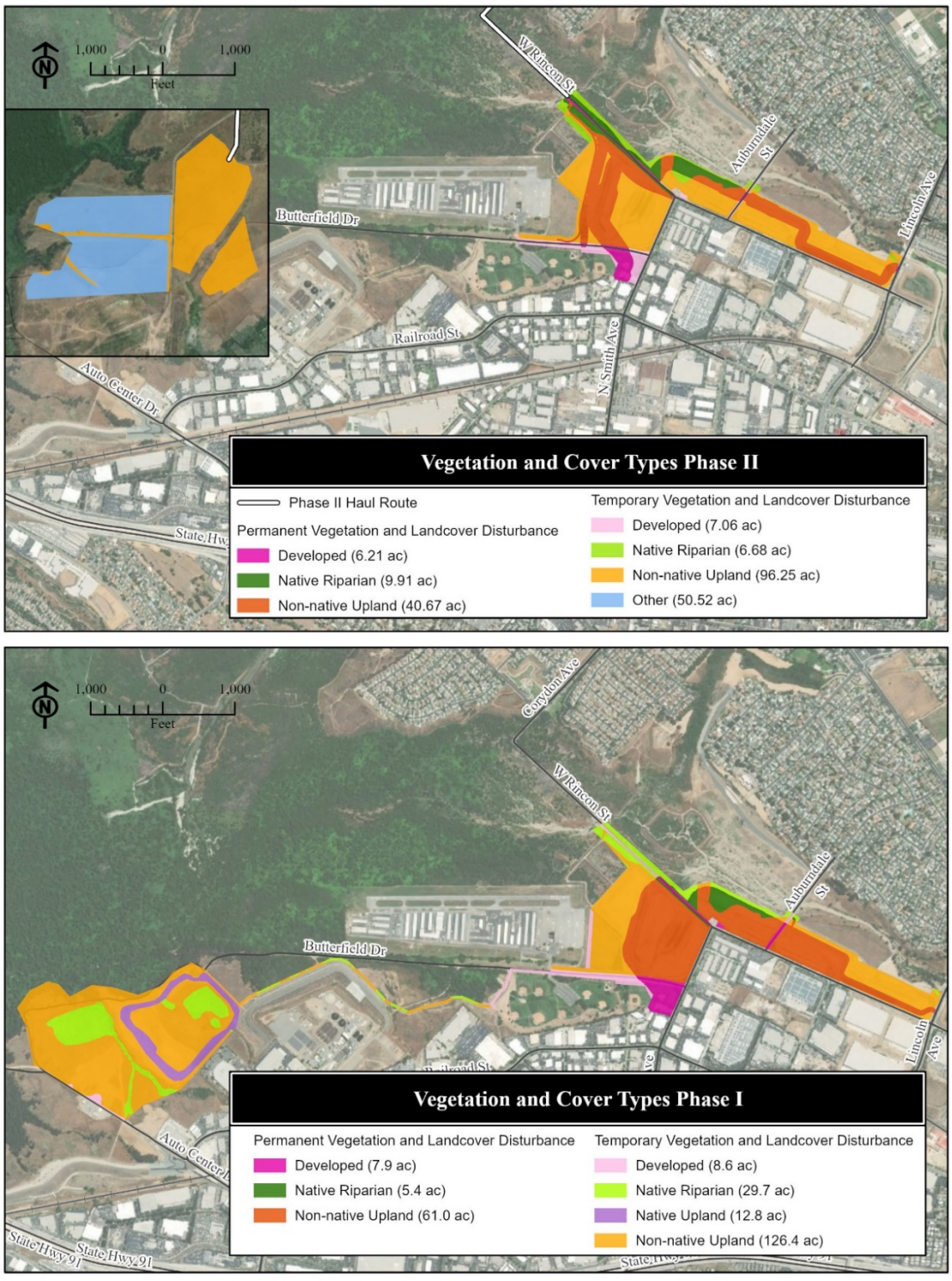

Figure 16 Change in Vegetation Community Impact Areas (Phase I vs. Phase II)

Construction activities may also temporarily reduce habitat value in adjacent areas due to construction noise, dust, increased human presence, and increased vehicle traffic.

Indirect impacts to vegetation could include alterations in existing topography and hydrology regimes; more forceful surface runoff and increased erosion that may damage vegetation within and outside the project area; accumulation of fugitive dust; disruptions to native seed banks from ground disturbance; and the colonization of nonnative/invasive plant species.

The riparian plant communities in the proposed project area are considered sensitive habitat types for their role in the ecological function of the SAR corridor and the wildlife species inhabiting it. While non-native annual grasslands are not a protected community, they provide important foraging and refugia habitat for a variety of plant and wildlife species.

The 2001 SEIS/EIR, 2001 BO, and 2012 and 2018 BO Amendments included a series of mitigation measures and environmental commitments that would be implemented to compensate for impacts to vegetation communities during construction of Santa Ana River Project features. These include measures to mitigate for temporary and permanent effects to aquatic, riparian, and upland habitats.

For Prado Basin projects, many of the anticipated permanent impacts had previously been mitigated following requirements in the 1988 GDM/SEIS and the 1989 BO. However, since impacts to riparian and wetland habitats at the Alcoa Dike project area would exceed those that were anticipated in 1988, the Corps will compensate for temporary and permanent impacts to these habitat types following the precepts in the 2001 SEIS/EIR and 2012 BO (as amended), including removing *Arundo donax* and other non-native vegetation from off-site mitigation areas.

An additional 0.01 acres of permanent impact and 1.83 acres of temporary impact to riparian habitat would occur beyond the Phase 1 analysis, which would be mitigated for in an off-site mitigation area. This off-site mitigation area was identified and analyzed as part of the 2018 SEA/EIR Addendum (Section 4.2.2.1, Figure 4.2.2.1-2). In addition to the additional impacts discussed above, 0.74 acres of the Phase I permanent impacts have changed to temporary and 5.11 acres of the Phase I temporary impacts have changed to permanent (Table 4-6-1).

All project design changes and an expanded project footprint will result in a net increase of 4.53 acres of permanent impacts to riparian vegetation and a net decrease of 2.54 acres of temporary riparian vegetation (Table 4-7). These net changes of Phase II impacts result in an additional requirement for offsite restoration of an additional 20.11 acres of riparian habitat, for a total combined requirement of 76.52 mitigation acres for both Phase I and Phase II (Table 4-8).

The largest cause for a reduction in permanent impacts within the Phase II footprint, is the change from permanent impacts to temporary impacts associated with the construction of four basins on the land side of the Dike (Figure 19). These basins are considered to be temporary impacts because they will be seeded with native grasses and herbaceous annuals and perennials. These native species will be allowed to persist in and around the basins and are expected to create forging habitat for many species of wildlife and nesting habitat for many grassland bird species.

As listed above, In compliance with the 2012 BO Amendment, and as described in the 2018 Final SEA/EIR Addendum, the Corps will restore (through *Arundo donax* and other non-native removal at an offsite location) one acre of riverine habitat for each acre of wetland/riparian habitat temporarily impacted (1:1), and five acres for each acre of permanently impacted (5:1) by the Alcoa Dike feature.[1] The SART impacts will be offset within or adjacent to that project footprint. For Alcoa Dike features, the Corps or project sponsors will also maintain areas that were temporarily impacted by construction of the Alcoa Dike feature free of exotic invasive species for 8 years. Changes to mitigation acres from the Phase I project are shown in Table 4-8 and 4-9.

Table 4-7 Changes in Impacts to Riparian Vegetation

Mitigation	Phase II (Expanded Footprint)		Phase II (Change of Impact Type)		Phase II (Net Change)	
	Temporary	Permanent	Temporary	Permanent	Temporary	Permanent
Riparian/Wetland Habitat	+1.83	+0.01	+0.74/-5.11	-0.74/+5.11	-2.54	+4.53

Table 4-8 Additional Mitigation Acreages (Phase I vs. Phase II)

Mitigation	Phase I			Phase II (Net Change)			
	Temp (1:1)	Perm (5:1)	Total Acres Mitigation	Temp (1:1)	Perm (5:1)	Additional Mitigation acreage for Phase II	Total Mitigation acreage for Phase I and Phase II
Riparian/ Wetland Habitat	(29.66 x 1) 29.66	(5.35 x 5) 26.75	(29.66 + 26.75) 56.41	(-2.54 x 1) -2.54	(4.53 x 5) +22.65	(-2.54 + 22.65) +20.11	(56.41+20.11) 76.52

Table 4-9 Additional Impacts Resulting from the SART – to be offset by trail proponents within the temporary impact area and immediate vicinity

Impact Type	Native Riparian	Total
New Temporary Impacts	1.50	1.50
Permanent Impacts	0.02	0.02

Table 4-10 below shows the acreage of permanent impacts to biological resources from the proposed 50-foot VFZ. While the Draft SEA/EIR Addendum assumed that a 15-foot VFZ would be maintained and did not identify or describe the requirement for a 50-foot VFZ, the impact

[1] *The 1:1 off-site mitigation requirement for temporary impacts assumes that the restored area will be actively maintained for the life of the project. The Corps also has the option of compensating for temporary impacts to riparian/wetland habitat by restoring three acres in an off-site location for each acre affected (3:1) and maintaining the restored area for a period of five years.*

acreages presented in that document and in the tables above reflected the worst-case scenario of a full 50-foot VFZ. Those impact acreages were also included in the 401 WQC and in coordination with the RWQCB and the USFWS on combined effects from the Alcoa Phase I and Phase II project. Both agencies have confirmed that amendments to the BO and 401 WQC would not be required for implementation of a 50-foot VFZ.

Table 4-10 Permanent Impacts to Biological Resource from the 50 feet VFZ

Biological Resource	50' VFZ
Native Riparian Vegetation	9.91
Non-native Upland Vegetation	40.67
Other Cover Types (Developed or Disturbed)	6.21
Least Bell's Vireo Critical Habitat	31.86
Southwestern Willow Flycatcher Critical Habitat	1.08
Waters of the U.S.	2.03
Waters of the State	8.97

Mitigation related to presence of coastal California gnatcatcher in the project's old borrow area is documented in Section 4.2.2.1 of the 2018 Final SEA/EIR Addendum. No additional impacts to gnatcatcher habitat would occur with implementation of Phase II.

The Corps will implement environmental commitments as documented in Sections 4.2 and 6.0 of the 2018 SEA/EIR Addendum to minimize and mitigate impacts from the Phase II project. These commitments include provisions for avoidance of nesting season, pre-construction surveys, monitoring, environmental training, permits and concurrences, spill prevention plans, BMPs, sound walls, revegetation and weeding of temporarily impacted areas, off-site mitigation for impacted riparian areas, and cowbird trapping.

For a full list of environmental commitments, see Section 6.0 of this SEA/EIR Addendum. No additional environmental commitments would be required for Phase II. Implementation of environmental commitments and mitigation measures would minimize impacts to less-than-significant levels.

Special-Status Plant Species

A detailed description of impacts to special-status plants is included in Section 4.2.2.1 of the 2018 Final SEA/EIR Addendum. No federal or State listed threatened or endangered species were identified in the proposed project area, and none are expected to occur based on a lack of suitable habitat, suitable soil types, and the recognized distributions of these species in the region. CNPS ranked species observed in the vicinity or with potential to occur include Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*) (observed), chaparral sand verbena (*Abronia villosa* var. *aurita*), paniculate tarplant (*Deinandra paniculata*), southern

California black walnut (*Juglans californica* var. *californica*), white-rabbit tobacco (*Pseudognaphalium leucocephalum*), and Coulter's Matilija poppy (*Romneya coulteri*).

Implementation of the proposed project could result in both direct and indirect effects to special-status plant species that may occur in the project area. Direct impacts could occur as a result of the removal or crushing of vegetation during construction activities.

Indirect impacts could occur from the accumulation of fugitive dust, the introduction and proliferation of non-native invasive plants, and increased soil compaction, erosion, or sedimentation. Noxious weeds may permanently degrade rare plant and wildlife habitats, and their proliferation as a result of project activities could adversely affect special-status plant species if they are present. Excessive dust can decrease or limit plant survivorship by decreasing photosynthetic output, reducing transpiration, and adversely affecting reproductive success. Soil compaction, erosion, and sedimentation resulting from project activities can also indirectly impact rare plants, if present.

Project related impacts to special-status plant species were previously analyzed in the 2018 Final SEA/EIR Addendum. No additional impacts to special-status plant species are expected, and environmental commitments as previously described would be implemented. For a full list of environmental commitments, see Section 6.0 of this SEA/EIR Addendum.

Implementation of environmental commitments and mitigation measures would minimize impacts to special-status plants, if present, to less-than-significant levels.

Jurisdictional Habitats (Waters/Wetlands)

Potential impacts to jurisdictional resources were analyzed in Section 4.2.2.1 of the 2018 Final SEA/EIR Addendum.

Jurisdictional areas occurring within the new borrow area will be completely avoided and no new impacts are expected.

As described in the 2018 Final SEA/EIR Addendum, direct impacts to jurisdictional waters would include permanent impacts due to construction activities. Indirect impacts could include alterations in existing topography, disruptions to native seed banks from ground disturbance, and the colonization of non-native, invasive plant species. Temporary impacts to jurisdictional waters would be short-term and would be minimized with the implementation of environmental commitments, as described in Section 6.1, and summarized below. Commitments include EC-BR-5 (Spill Prevention and Contingency Plan), EC-BR-9 (avoid water containing mud, silt or other pollutants from entering the stream, EC-BR-11 (Avoidance of all impacts to the low-flow channel of Temescal Creek), EC-WR-1 (Construction Stormwater Pollution Prevention Plan), and EC-WR-3 (Water Quality Permits). These measures will reduce erosion and would minimize impacts to less-than-significant levels.

Under the Proposed Action, permanent and temporary impacts to jurisdictional waters would be slightly greater than identified in the 2018 Final SEA/EIR Addendum design alternative impact analysis. The Proposed Action would result in 1.54 acres of additional permanent impacts and 0.04 acres temporary impacts compared to the 2018 design alternative described in the 2018 Final SEA/EIR Addendum as shown in Table 4-11 and Table 4-12 below. However, the impacts under the Proposed Action would be less than those included in the CWA 404(b)(1) analysis

performed in 2018 and the 401 Water Quality Certification (WQC) obtained for the project. The modifications and refinements to the design would be minimal and the 404(b)(1) analysis already reflects the current Proposed Action therefore no additional 404(b)(1) analysis or new 401 WQC was determined to be needed. See Environmental Compliance section for more a more detailed description.

Table 4-11 Additional Impacts to Jurisdictional Wetlands/Waters in Phase II Footprint

Federal, State Jurisdictional Habitat (Joint Jurisdiction)			
Impact Type	**Impact to Jurisdictional Waters (Acres)**		**Impact to Jurisdictional Wetlands (Acres)**
	State	**Federal**	**Federal**
Permanent	1.83	1.54	0
Temporary	0.00	0.04	0
Total Acres	**1.83**	**1.58**	**0**

Table 4-12 Impacts to Jurisdictional Wetlands/Waters (2018 Final SEA/EIR Addendum Design Alternative vs. Proposed Action (Phase I vs. Phase II)

Federal and State Jurisdictional Habitat (Joint Jurisdiction)								
	Jurisdictional Waters (Acres)				**Difference**	**Federally Jurisdictional Wetlands (Acres)**		**Difference**
Impact Type	**Phase I**		**Phase II**		**State/Federal**	**Phase I**	**Phase II**	
	State	**Federal**	**State**	**Federal**				
Permanent	7.25	0.49	9.08	2.03	+1.83 / +1.54	0.01	0.01	NA
Temporary	19.38	2.94	6.13	1.55	-13.25 / -1.39	0.02	0.02	NA
Total Acres	**26.63**	**3.43**	**15.21**	**3.58**	**-11.42 / +0.15**	**0.03**	**0.03**	**NA**

Wildlife

Impacts to wildlife are described extensively in Section 4.2.2.2 of the 2018 Final SEA/EIR Addendum. Implementation of the Phase II project would result in similar direct and indirect impacts to wildlife in the expanded project area.

Direct impacts may result from crushing or burial of individuals, vegetated habitat, nests, and burrows during construction. Indirect impacts may include construction noise, dust, human

presence, and an increase in opportunistic predators that may disturb or harass wildlife or impact their movement corridors.

No additional impacts to wildlife are expected to occur beyond those analyzed for the Phase I project.

The Corps will implement environmental commitments as documented in Sections 4.2 and 6.0 of the 2018 Final SEA/EIR Addendum to minimize and mitigate impacts from the Phase II project. These commitments include provisions for avoidance of nesting season, pre-construction surveys, monitoring, environmental training, permits and concurrences, spill prevention plans, BMPs, sound walls, native reseeding and weeding of the temporary disturbance areas, off-site mitigation for impacted riparian areas, and cowbird trapping.

For a full list of environmental commitments, see Section 6.0 of this SEA/EIR Addendum.

No additional environmental commitments would be required for Phase II.

Implementation of environmental commitments and mitigation measures would minimize impacts to wildlife to less-than-significant levels.

Wildlife Movement

The SAR, Temescal Wash, and associated uplands are recognized as vital pathways for wildlife movement. Several migratory songbirds utilize the riparian vegetation within the SAR corridor for breeding, nesting, and foraging, or at a minimum, as transient rest sites during migration. In addition, large, wide-ranging animals, such as mountain lion, bobcat, and coyote have been documented within the SAR watershed and may utilize the SAR corridor and Temescal Wash in search of prey, water resources, or cover.

The proposed Alcoa Dike will be a linear feature constructed roughly parallel to Temescal Wash and will not be a physical impediment to or block any known movement pathways along this corridor. Further, several existing infrastructure features, such as Prado Dam, State Routes 91 and 71, and Highway 15 are already in place and currently contribute significantly as impediments to regional wildlife movement, including movement through the SAR corridor where the project area is located.

Prior to the start of Alcoa Dike Phase I, a series of chain-link fences around the percolation ponds/basins at the intersection of N Smith Ave. and W Rincon St. impeded wildlife movement through the area. These fences along with several frequently travelled paved roads restricted wildlife movement through the area prior to the start of Phase I. Portions of these fences were removed during Phase I but others are still present and restrict wildlife movement. Vegetation removal from within Phase I and recent removal of much of the non-native vegetation in Temescal Wash further impacted wildlife movement through the area. In addition, it shall be noted that upstream of the project site, along Temescal Creek, wildlife would need to travel for more than four miles through developed flood control channels before reaching natural open space south of Magnolia St. For these reasons it is unlikely that the project site was used as a significant wildlife movement corridor prior to the start of the project. Most wildlife movement in the area is localized along Temescal Creek and is expected to remain largely unchanged with implementation of the project (see Figure 17). The project does not propose to change the existing bridge at Temescal Creek and Rincon St. and therefore no impacts to wildlife

movement at this location are anticipated. The SART may impact wildlife movement during the daytime when the SART is in use by recreationalists, but this is not expected to be significantly different than existing disturbance from vehicle and pedestrian traffic in area. At night, when most wildlife movement occurs, the bike trail would not be used as frequently and is not expected to impact wildlife movement. Proposed structural modifications to the Dike, roadways and culverts would not impede movement corridors. For these reasons the proposed project modifications are not expected to affect wildlife movement.

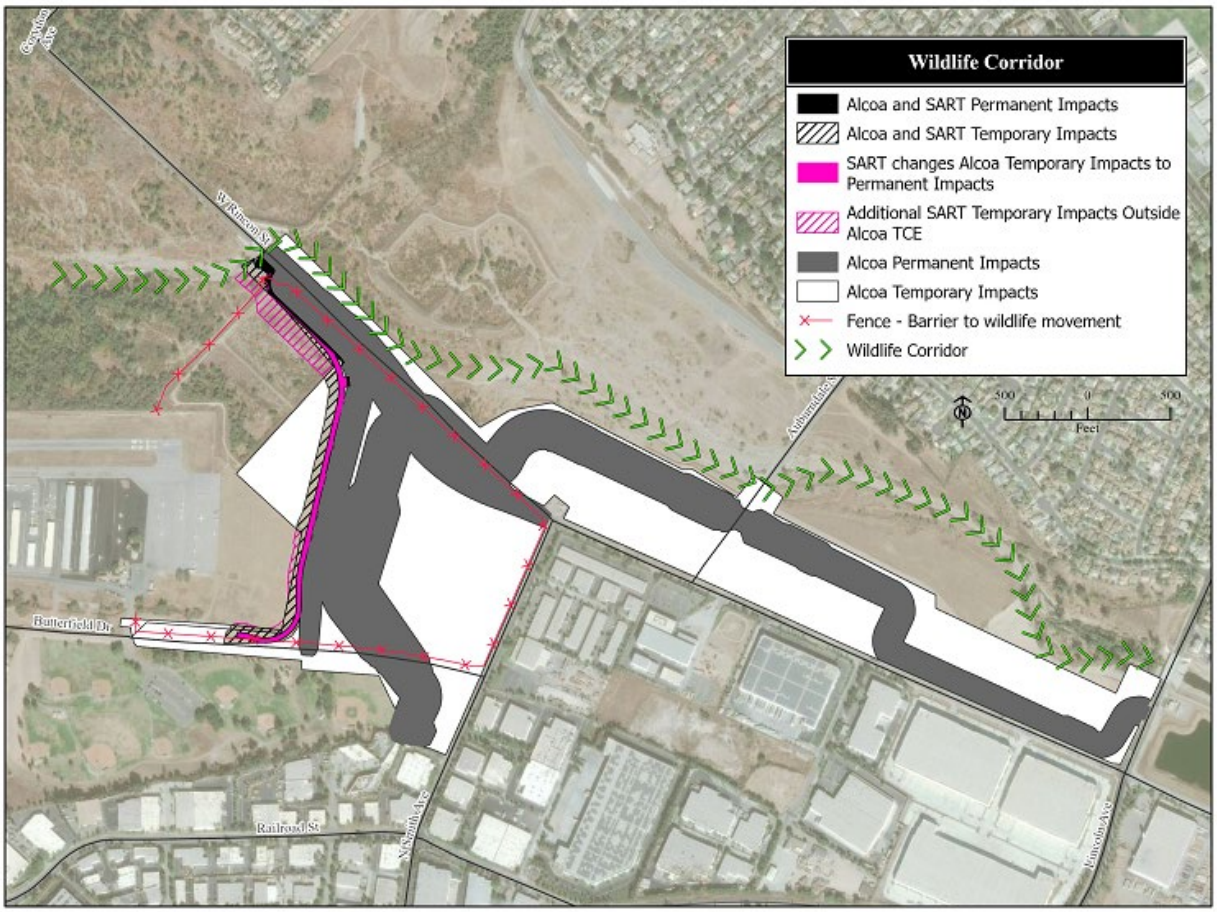

Figure 17 Wildlife Movement Corridors along Temescal Creek.

Implementation of environmental commitments and mitigation measures, as previously described, would minimize impacts to wildlife movement to less-than-significant levels.

Special-Status Wildlife

Impacts to special-status wildlife are extensively described in Section 4.2.2.2 of the 2018 Final SEA/EIR Addendum, and effects to Federally listed threatened and endangered species were addressed in a 2018 BO Amendment. Habitat in the vicinity of the proposed project area has the potential to support several federally and State listed wildlife species, and there is designated critical habitat overlapping the project footprint.

Two federal and/or State listed threatened or endangered species are known to occur in the project area: least Bell's vireo (FE, SE) and coastal California gnatcatcher (FT, CSC). Two federal and/or State listed threatened or endangered species have critical habitat overlapping the project footprint: least Bell's vireo (FE, SE) and western yellow-billed cuckoo (FT, SE). These species are discussed briefly below.

Other special-status species (FP, CSC, MSHCP) were identified within the Phase I project site including western pond turtle, San Bernardino ringneck snake, south coast garter snake, Cooper's hawk, sharp-shinned hawk, great blue heron, burrowing owl, Lawrence's goldfinch, turkey vulture, northern harrier, white-tailed kite, coyote, bobcat.

A suite of special-status species, although not observed, have high potential to occur in the vicinity of the project area. These species are discussed extensively in Section 3.2.5 and Table 3.2.5-2 of the 2018 Final SEA/EIR Addendum.

No additional or different impacts to special-status species beyond those described in the 2018 Final SEA/EIR Addendum are expected to occur even where additional riparian habitat would be impacted in the expanded Phase II footprint.

Implementation of environmental commitments and mitigation measures, as previously described, would minimize impacts to special-status wildlife to less-than-significant levels.

Least Bell's vireo FE, SE. Least Bell's vireo has been recorded breeding in the project area during numerous surveys conducted in the past, including during the 2017 nesting season. SAWA (2017) reported nine vireo territories within 200 feet of the Phase 1 project area, including two within the Phase I project area (as described in the 2018 Final SEA/EIR Addendum). Additional surveys by SAWA in 2019 also reported nine vireo territories within 200 feet of the Phase II project area. Four territories are located within 200 feet of the new borrow area and five are within 200 feet of the Phase II project area (see Figure 12). Of these nine territories, only one appears to be in the same location that a territory was present in 2017, all other territories are new or have shifted since 2017. However, this shifting or expansion of territories is not resulting in an additional or different effect beyond those addressed in the 2018 BO Amendment, because none occur within the expanded project footprint, and the project still includes sound walls and other avoidance/minimization measures that were identified in the 2018 Final SEA/EIR Addendum and BO. For these reasons, reinitiation with the USFWS is not required.

The Phase I and Phase II project area encompasses approximately 134.94 acres of critical habitat including 34.02 acres of critical habitat that will be permanently impacted and 100.92 acres that would be temporarily impacted. Approximately 4.1 acres of the currently calculated permanent impact area had previously been identified as a temporary impact area in the 2018 Final SEA/EIR Addendum and BO. Phase II is expected to result in new temporary impacts to 74.2 acres of critical habitat. but there will be an overall decrease of 25.7 acres for the project as a whole because of the reduced footprint of the Phase I borrow area. The new impacts to 74.2 acres of critical habitat, and the newly identified 4.1 acres of permanent impact area that were previously analyzed as temporary impacts are in locations that are primarily vegetated by non-native upland vegetation (non-native grasslands), sparse riparian/grassland mix, or agricultural

areas that do not provide the physical and biological features required for least Bell's vireo. None of these areas are currently occupied by vireo. Permanent impacts to riparian habitat and vireo critical habitat related to SARM construction will be offset through onsite and, or offsite restoration as identified in the 2018 Final SEA/EIR Addendum and BO, and will be based on the final calculation of actual impacts rather than pre-construction estimates, as required by the BO email and phone coordination with Rebecca Christensen of the USFWS in April 2020 and then on Feb 1, 4, and March 4, 2021 has confirmed that the 2018 consultation and BO adequately addressed effects of the Alcoa Dike project, and that an amendment to the BO is not required.

As addressed in the 2018 Final SEA/EIR Addendum and BO Amendment, construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. These documents also addressed potential direct and indirect effects to the 8 vireo territories within 200 feet of the project area and 1 territory within the Phase I project footprint.

The Corps will continue to implement environmental commitments and mitigation measures listed in the 2018 Final SEA/EIR Addendum, as applicable to Phase II. These include removing habitat outside the nesting season, pre-construction surveys, monitoring, environmental training, spill prevention plans, BMPs, sound walls, reseeding and weeding of temporarily impacted areas, and off-site mitigation for impacted riparian areas. Environmental commitments and mitigation measures, as outlined in the 2001 SEIS/EIR, 2001 BO, and 2012 and 2018 BO Amendments, are described extensively in Sections 4.2 and 6.0 of the 2018 Final SEA/EIR Addendum, and in Section 6.0 of this SEA/EIR Addendum. Proposed sound wall locations are shown below in Figure 18. The remaining affected area is developed/landscaped and, or non-native habitat. With the implementation of Mitigation Measure EC-BR-7, which requires offsite mitigation (through arundo and other non-native removal) for each acre of riparian habitat temporarily or permanently disturbed by SARM construction, and Environmental Commitment BR- 14A which requires the restoration and maintenance of temporarily disturbed areas to native habitat during SARM construction activities, adverse effects to the species and to critical habitat will continue to be minimized and no additional effects will occur beyond those identified in 2018.

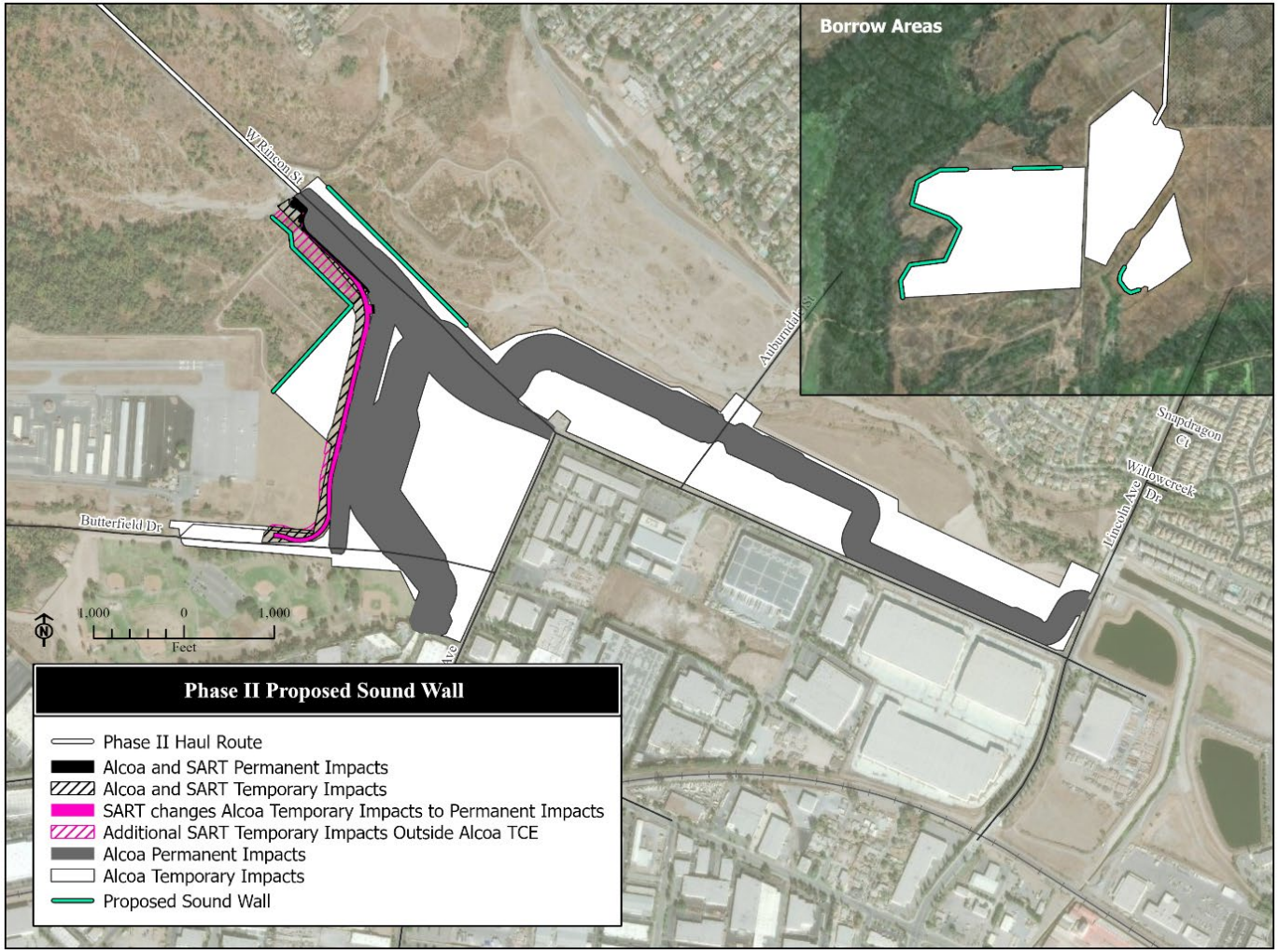

Figure 18 Phase II Proposed Sound Wall

Conclusion: The proposed Phase II project would have no additional or different effect on least Bell's vireo beyond those effects identified and addressed in the 2018 Final SEA/EIR Addendum and BO Amendment. The Proposed Action would not affect additional territories or occupied habitat. The total acreage of impacts to least Bell's vireo critical habitat is similar between Phase I and Phase II. Some of the impacts shifted from the Phase I borrow area to the Phase II borrow area. Neither borrow area contains habitat suitable for least Bell's vireo and does not provide the principal constituent elements/PBFs for this species. While some critical habitat impact areas or acreages have been adjusted based on Phase II design refinements, the Corps is continuing to maintain an accounting of all temporary and permanent impacts to riparian or floodplain habitat from all SARM features and ensure mitigation is completed per environmental commitments and BO requirements. The Corps has determined, and USFWS agreed via phone and e-mail coordination that reinitiation of Endangered Species Act consultation would not be required.

Coastal California gnatcatcher FT, CSC. No additional territories are known within 200 feet of the Phase II project footprint. Suitable habitat does not occur near the expanded Phase II footprint areas.

Critical habitat for gnatcatcher occurs downstream of the Prado Basin in the vicinity of the Chino Hills and Santa Ana Mountains, and would not be impacted by the proposed project.

As addressed in the 2018 Final SEA/EIR Addendum and BO Amendment, construction of the Alcoa Dike feature results in temporary loss of suitable habitat for resident gnatcatcher and disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Those documents also addressed direct and indirect effects to this species related to noise, light, and fugitive dust during construction.

The Corps will continue to implement environmental commitments and mitigation measures listed in the 2018 Final SEA/EIR Addendum, as applicable to Phase II. Environmental commitments and mitigation measures, as outlined in the 2001 SEIS/EIR, 2001 BO, and 2012 and 2018 BO Amendments, are described extensively in Sections 4.2 and 6.0 of the 2018 Final SEA/EIR Addendum, and in Section 6.0 of this SEA/EIR Addendum.

Conclusion: The Proposed Action would have no additional or different effect on coastal California gnatcatcher beyond those identified and addressed in the 2018 Final SEA/EIR Addendum and BO Amendment. Reinitiation is therefore not required for the Proposed Action.

Western yellow-billed cuckoo FT, SE. No cuckoos have been observed within the project footprint; however, marginally suitable riparian habitat is present, providing a low probability that this species may pass through or forage in the project area. Due to the reduction in TCE around the Phase I borrow area, critical habitat for cuckoo, as described in the 2018 Final SEA/EIR Addendum, would no longer be impacted by the proposed project. The Proposed Action is not expected to affect occupied or suitable nesting habitat for this species.

Implementation of environmental commitments and mitigation measures, as previously described, would avoid any potential impacts to cuckoo from construction of the Phase II project. Environmental commitments and mitigation measures, as outlined in the 2001

SEIS/EIR, 2001 BO, and 2012 and 2018 BO Amendments, are described extensively in Sections 4.2 and 6.0 of the 2018 Final SEA/EIR Addendum, and in Section 6.0 of this SEA/EIR Addendum.

Conclusion: The Proposed Action would have no effect on the western yellow-billed cuckoo.

Future Maintenance. Future maintenance activities may include routine inspections and monitoring of project structures by using access roads constructed for this project, periodic weeding, patching grouted stone, vegetation free/asphalt road maintenance, periodic clearing of debris around drainage structures; and, periodic repairs to fencing and gates.

Most inspections and minor repairs would be confined to paved maintenance and access roads. Impacts to native vegetation and wildlife would be minimal.

During inspections and repairs, nesting birds and other wildlife could be disturbed by noise, human activity, and fugitive dust from driving on unpaved access roads. However, these impacts are expected to be minimal, short term, and would not directly affect adjacent habitat. If repairs are required, potential effects to nesting birds and wildlife would be similar to those described for construction of the proposed project, but would be of a smaller magnitude as repair activities would not generally include substantial ground disturbance and would be completed over a short time period (usually one day to one week of minor construction activity).

Impacts due to implementation of future maintenance would be less than significant.

4.2.2 Previously Approved Design Alternative

Under the No Action Alternative, the design modifications included under the Phase II Proposed Project would not be implemented, and the Alcoa Dike would be constructed as previously approved. Impacts, mitigation measures and environmental commitments would be as described under the 2018 Final SEA/EIR Addendum. The SART construction and Brine Line replacement and protection in place would not occur. Potential effects to biological resources, including short-term construction impacts and long-term operational impacts, would occur as described in the 2018 Final SEA/EIR Addendum. Mitigation measures that were proposed to compensate for potential effects to wildlife species and movement would continue to be implemented. Therefore, potential effects to biological resources from the Previously Approved Design Alternative would continue to be less than significant.

4.3 Water Resources and Hydrology

The affected environment for water resources and hydrology is presented in Section 3.3 and does not include any substantially different conditions than were present when the Phase I Alcoa Dike Project was previously approved.

As described in Table 2-1 (Comparison of Previously Approved Designs, the Proposed Action), the following are the primary differences between the previously approved Alcoa Dike, the Phase I Action (2018), and Phase II Proposed Action, as relevant to water resources and hydrology: approximately 2,000 additional feet of bank protection; reduction in the size of the ponding area for interior drainage (northwest corner of Rincon Street and Auburndale Street); and a total of four ponding areas for interior drainage (Smith Avenue between Rincon Street and Butterfield Drive, and northeast corner of Rincon Street and Auburndale Street). In addition,

modifications to structures extending through the main Dike embankment and Lincoln tie-in extension of the Dike alignment. For the purposes of this SEA/EIR Addendum, analysis of potential water resources and hydrology impacts associated with project modifications under the Proposed Action is provided below.

Significance Threshold

Impacts would be significant if the Proposed Action would cause one or more of the following conditions to occur:

- Substantially alter drainage patterns or the rate and amount of surface runoff;
- Cause or result in substantial flooding;
- Substantially alter stream flow within the Santa Ana River or Temescal Creek;
- Substantially degrade water quality; and/or
- Interfere substantially with groundwater recharge.

4.3.1 Proposed Action

Proposed modifications to the previously authorized project were reviewed to determine if they would affect water resources or hydrology differently or to an extent not previously addressed. The discussion below addresses whether the proposed modifications to the previously approved Alcoa Dike flood control improvements would significantly impact the nature or magnitude of hydrology and water resources. All environmental commitments identified the 2018 Final SEA/EIR Addendum are applicable to the Proposed Action.

- *Substantially alter drainage patterns or the rate and amount of surface runoff.* As described in the 2018 Final SEA/EIR Addendum Section 2.2, the Proposed Action would include flood control improvements to protect privately owned and public property and development in the project area. During a storm event, the proposed Phase II Alcoa Dike would inhibit flows representing the Probable Maximum Floodwater surface elevation from flooding this area; the Dike would not substantially alter overall drainage patterns of the area. As referenced in Section 3.3.2 of the 2018 Final SEA/EIR Addendum (Temescal Wash and Santa Ana River), the rate of surface water runoff in the Santa Ana Basin is largely affected by urbanization throughout the area, and associated impermeable surfaces that result in higher peak discharges with a shorter peaking time and a greater volume than the same flows in an undeveloped area. Implementation of the Proposed Action would not substantially alter the rate and amount of surface runoff in the area. No significant impact would occur.
- *Cause or result in substantial flooding.* The Alcoa Dike alignment (both the previous design and the proposed Phase II modifications) is designed to Dike interrupt stormwater flows to protect public and private property in the area from flooding-related impacts. Construction of the proposed Alcoa Dike would include the control and diversion of impounded water in the Prado Dam reservoir as well as local runoff from the drainage area south of the Dike. As described in 2018 Final SEA/EIR Addendum ongoing construction activities that occur during the winter months would be subject to runoff from the drainage area south of the Dike; however, culverts under the embankment would be installed prior to winter construction and would provide sufficient protection against adverse flooding effects. This Phase II Proposed Action modifications will include the removal of the 1200-foot long 12 ft

wide concrete v-ditch drainage path to Temescal Creek. Three 48-inch drainage structures would be extending through the main Dike embankment. In addition, as described above, the Proposed Action would include a total of four ponding areas; these features are for the purpose of interior drainage behind the Dike and would not cause or result in substantial flooding. The Proposed Action would not cause or result in substantial flooding, and the proposed Alcoa Dike would not result in significant flooding impacts.

- *Substantially alter stream flow within the Santa Ana River or Temescal Creek.*

  As described in the 2018 Final SEA/EIR Addendum construction of the proposed Phase II Alcoa Dike would also not occur within the flows of the Temescal Creek or Santa Ana River, as shown in the Figure 19. Interior drainage will be ponded in proposed Ponds IA, I, II an d the addition of pond III which will be connected by culverts sized to convey the SPF with minimal flooding to the bordering roadways. There will be minimal excavation of the existing ground within the designated ponding areas. No substantial changes in drainage patterns would result from implementation of the proposed Phase II Alcoa Dike, and no alterations to stream flow within the Temescal Creek or Santa Ana River would occur as also stated in the 2018 Final SEA/EIR Addendum.

- *Substantially degrade water quality.* This Phase II construction, operation, and maintenance of the proposed Alcoa Dike would also include soil-disturbing activities that could result in soil erosion and sedimentation that may subsequently cause and/or contribute to water quality degradation, particularly if a precipitation event occurs while soils are actively disturbed. The potential also exists for impacts to surface and groundwater quality to result from accidental leaks or spills of potentially hazardous materials, including fuels and lubricants required for operation of construction vehicles and equipment. This Storm Water Pollution Prevention Plan (SWPPP) will include BMPs requirements found in the 2018 Final SEA/EIR Addendum.

  The contractor for this Phase II Proposed Action is required to develop and implement a SWPPP that will include BMPs to protect the quality of storm water runoff. An Erosion and Sedimentation Control Plan, included as part of the SWPPP, would identify BMPs to minimize the potential for surface runoff to pick up loose soils and transport them downstream. Such BMPs may include but are not limited to the following:

    - Limit the amount of exposed areas during construction activities;
    - Excavate only when water flow is absent or minimal; and
    - Divert water away from construction activities.

  The SWPPP would also contain a spill prevention plan to identify proper storage locations and provide remediation measures for clean-up of accidental spills and leaks of hazardous materials, as necessary. BMPs set forth in the SWPPP would be applied to all areas disturbed by construction activities, including the site-specific locations of the proposed Alcoa Dike, construction staging area(s), transportation route(s), and borrow area (s). Implementation of the required SWPPP and associated BMPs would minimize and/or avoid potential water quality impacts; the Proposed Action would not substantially degrade water quality. Potential impacts would be less than significant.

Future Maintenance. Section 2.5 (Future Operation, Maintenance, Repair, Replacement and Rehabilitation) describes that future maintenance would include routine inspections and minor repairs, as needed. Future maintenance activities would not alter the overall hydrology or drainage patterns of the area but may introduce potential water quality impacts associated with the use of motorized vehicles and equipment. Modifications included under the Phase II Proposed Action would not introduce new maintenance requirements or associated impacts to hydrology and water resources; all maintenance-related impacts would be less than significant.

4.3.2 Previously Approved Design Alternative

The Previously Approved Design Alternative is defined as constructing the Alcoa Dike flood control improvements for public and privately owned development in the project area according to the 2018 Final SEA/EIR Addendum. Potential impacts to water resources and hydrology under the Previously Approved Design Alternative would be similar to the Proposed Action. The SART and Brine Line replacement and protection would not occur. Potential impacts to water resources and hydrology would be less than significant.

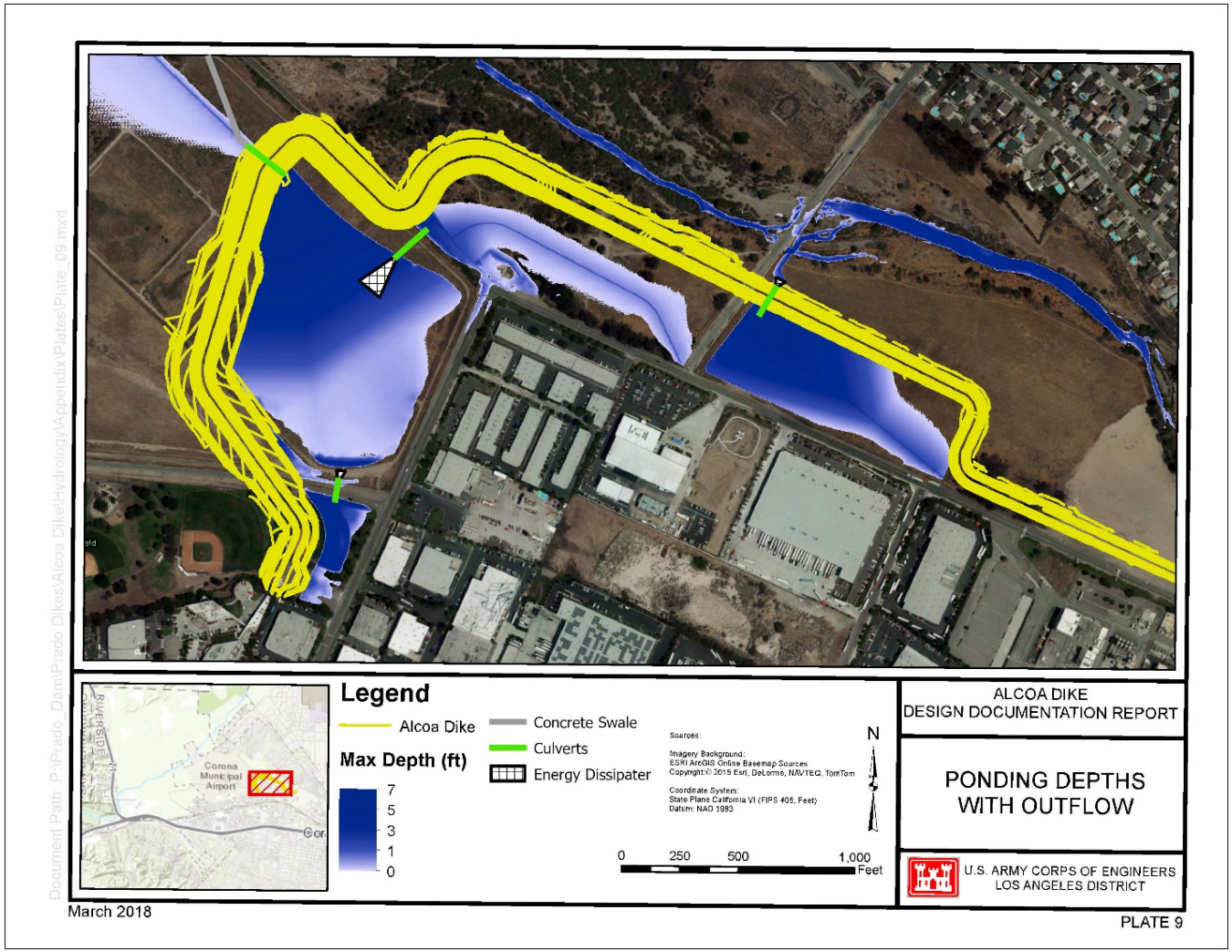

Figure 19 Shows drainage facilities and basins designed to control runoff behind the Dikes as a result of the local SPF (standard project flood)

4.4 Earth Resources

The affected environment for earth resources is presented in Section 3.4 and does not include any substantially different conditions than were present when the 2018 SEA/EIR Addendum previously approved.

The Proposed Action is similar to the previously approved design alternative, except for the changes identified in this Phase II Table 2-1 above. Therefore, a new impact would only occur if it is associated with the project modifications, or as a result of a changed environmental condition.

Significance Threshold

Impacts would be significant if the Phase II Proposed Action would cause one or more of the following conditions to occur:

- Cause substantial flooding, erosion, or siltation;
- Expose people or structures to major geologic hazards; and/or
- Result in unstable earth conditions or changes in geologic substructure.

4.4.1 Proposed Action

Proposed modifications to the previously authorized project were reviewed to determine if they would affect earth resources to an extent not previously addressed. The discussion below addresses whether the proposed modifications to the previously approved Alcoa Dike flood control improvements would alter the nature or magnitude of earth resources impacts 2018 Final SEA/EIR Addendum.

- *Cause substantial flooding, erosion, or siltation.* As described in Section 4.3 (Water Resources and Hydrology), the Proposed Action would not result in significant flooding impacts. Design aspects of the previously-authorized Alcoa Dike that would serve to prevent flooding include additional culverts that would be installed under the embankment prior to winter construction, and would provide sufficient protection against flooding, as well as grading of the bottom of the borrow pit (following completion of construction) to drain to existing water courses and prevent ponding of water. In addition, the borrow pit and other temporary work areas used during construction of the Alcoa Dike would still be re-seeded following completion of construction, thereby minimizing and/or avoiding potential erosion- or siltation-related effects associated with soil disturbance. Additionally, as described in Section 4.3 (Water Resources and Hydrology) of this SEA/EIR Addendum and the 2018 Final SEA/EIR Addendum, a SWPPP including BMPs and Erosion and Sedimentation Control Plan would be developed and implemented prior to and during construction. The Proposed Action would result in no earth resources and geology impacts associated with substantial flooding, erosion, or siltation.
- *Expose people or structures to major geologic hazards*. As described in the 2018 Final SEA/EIR Addendum the proposed Alcoa Dike has been designed in accordance with the requirements of ER 1110-2-1806, “Earthquake Design and Analysis for Corps of Engineers Projects”. There is potential for an earthquake or other geologic hazard to occur during the

lifetime of the Dike potentially causing flood risk. To minimize this risk, the Dike would be designed in accordance with Corps requirements for earthquake design and development. To minimize potential effects to earth resources in the area, the Dike would be designed with highly compacted materials that would maintain strength and stability during seismic activities. The Proposed Action would not cause substantial earth resources and geology impacts associated with the exposure of people or structures to major geologic hazards.

- *Result in unstable earth conditions or changes in geologic substructure*. The foundation of the proposed Alcoa Dike may exhibit a small amount of settling during the construction period. Total estimated post-construction settlement of the embankment and foundation is expected to be less than 24 inches (USACE, 1988 [Appendix B, 2018 Final SEA/EIR Addendum, p.B-XV-3]), and would not be considered significant. The Proposed Action would result in no earth resources and geology impacts associated with landslides. The Proposed Action would not result in significant impacts associated with unstable earth conditions or changes in geologic substructure, including as related to settlement and landslides.

As described above and in the 2018 Final SEA/EIR Addendum, the Proposed Action would not cause substantial earth resources and geology impacts.

Future Maintenance. Section 2.5 (Future Operation, Maintenance, Repair, Replacement and Rehabilitation) of the 2018 Final SEA/EIR Addendum and this SEA/EIR Addendum describes that future maintenance would include routine inspections and minor repairs, as needed. Future maintenance activities would not alter the overall geologic characteristics of the area, and is not expected to cause substantial flooding, erosion, or siltation; expose people or structures to major geologic hazards; or result in unstable earth conditions or changes in geologic substructure. No significant geologic impacts would result from the Proposed Action.

4.4.2 Previously Approved Design Alternative

The Previously Approved Design Alternative is defined as constructing the Alcoa Dike flood control improvements according to the 2018 Final SEA/EIR Addendum. The Proposed Action differs from this alternative primarily in the design alignment to accommodate 3 percolation ponds (total of 4), and additional bank protection. The SART and Brine Line replacement and protection would not occur. Potential impacts to earth resources would be similar to those described above for the Proposed Action and would be less than significant.

4.5 Land Use

The affected environment for land use is presented in Section 3.5 and does not include any substantially different conditions than were present when the Alcoa Dike Project was previously approved. The on-site land uses include vacant land that consists of non-native grasslands, non-native woodlands, and riparian scrub, while the southwest portion of the Proposed Action would traverse Butterfield Park. Butterfield Park and other recreation amenities are discussed further in Section 4.7. Existing land uses surrounding Alcoa Dike project site include the Corona Municipal Airport, light industrial development, and single-family residences.

As described in Table 2-1, the following are the primary differences between the Previously Approved Design and the Proposed Action, as relevant to land use: expansion of the TCE in the

southern portion of the project and relocation of the construction staging area. For the purposes of the SEA/EIR Addendum, analysis of potential land use impacts associated with project modification under the Proposed Action is provided below.

Significance Threshold

Impacts would be significant if the Proposed Action would cause one or more of the following conditions to:

- be incompatible with existing land uses; or
- conflict with applicable plans or policies.

4.5.1 Proposed Action

The Phase II Proposed Action is similar to the previously approved design alternative and associated sponsor real estate actions except for the changes identified in Table 2-1, of this SEA/EIR Addendum. All land use identified in the 2018 Final SEA/EIR Addendum are applicable to the Proposed Action.

Incompatible with existing land uses. As described in the 2018 Final SEA/EIR Addendum construction of these flood control improvements would interfere with recreational activities within Butterfield Park since the temporary work limits of the proposed project included areas within the park. These impacts would be short term. The easternmost baseball field and the adjacent portion of parkland would be removed from future use, however, recreational use would be available within the rest of the park. Additionally, Butterfield Park is located on Corps land intended for flood control purposes and effects from the revised ponding area design of the Proposed Action would be similar to those described in the 2001 Final SEIS/EIR and would not be considered significant. The purpose of the proposed project is to provide flood protection; therefore, the Proposed Action would be beneficial for the other surrounding lands uses including existing recreation, residential development, and other privately owned development in the project area.

Conflict with applicable plans or policies. As described in the 2018 Final SEA/EIR Addendum the City of Corona General Plan has identified goals for development within the City limits. The majority of the proposed project site is within the Open Space General designation, which "…applies to lands permanently committed or protected for open space purpose due to their value as… public safety (e.g., flood control channels), or comparable purpose" (Corona, 2007). In addition, Chapter 4 (Infrastructure and Public Services) of the City's General Plan includes policies requiring infrastructure for flood control. Therefore, this Phase II proposed project would not be inconsistent with the City's General Plan.

The City of Corona's zoning designations that apply to the proposed project site are Agricultural, Light Industrial, and Open Space. The Agricultural and Light Industrial designations do not specifically prohibit or permit flood control facilities; and the Open Space designations allows for "…flood control channels and land devoted to water storage" (Corona, 2012). The proposed project site is also within the FEMA's 100-year flood zone, which requires implementation of federal, State, and City flood control regulations and maintenance practices as appropriate. Therefore, the objective of the Phase I and Phase II Alcoa Dike proposed project to provide flood protection complies with the City's flood control policies.

In order to be consistent with the *Western Riverside County Multi-Species Habitat Conservation Plan (MSHCP),* and to ensure that impacts to invertebrate species covered under the MSHCP are avoided or minimized, a series of mitigation measures from the 2001 SEIS/EIR and environmental commitments developed in the 2018 Final SEA/EIR Addendum and for this document would be implemented. Refer to Section 4.2 (Biological Resources) for details of the proposed mitigation.

Future Maintenance. Future maintenance of the proposed Alcoa Dike Embankment would include routine inspections and minor repairs of the embankment and its associated features after construction is completed (see Section 2.5 for a detailed list of future maintenance activities). Routine inspections and minor repairs would not alter the overall land use characteristics of the area. These activities may temporarily interfere with recreational activities but would not be permanently incompatible with existing on-site or surrounding land uses. Impacts would be less than significant.

4.5.2 Previously Approved Design Alternative

Under the Previously Approved Design Alternative, project modifications included under the Proposed Action would not be implemented, and the project would be constructed as described in the 2001 SEIS/EIR and the 2018 Final SEA/EIR Addendum. Construction of this alternative would also interfere with Butterfield Park; and therefore, would result in the same incompatibilities with existing land uses as the Proposed Action. However, the land that would be occupied by this alternative is designated for flood control, and therefore, would not be inconsistent with local plans and policies.

4.6 Aesthetics

The affected environment for aesthetics is presented in Section 3.6 and does not include any substantially different conditions than were present when the Alcoa Dike Project was previously approved. Approximate size and configuration of the Proposed Action would be consistent with the Previously Approved Design.

As described in Table 2-1, the following are the primary differences between the Previously Approved Design and the Proposed Action, as relevant to aesthetics: alignment modifications of the project and decreased acreage of the construction staging area. For the purposes of the SEA/EIR Addendum, analysis of potential aesthetics impacts associated with project modification under the Proposed Action is provided below.

Significant Threshold

Impacts would be significant if the Proposed Action would cause one or more of the following conditions to occur:

- have a substantial adverse effect on a scenic vista;
- substantially degrade the existing visual character or quality of the site and its surroundings;
- or create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

4.6.1 Proposed Action

Substantial adverse effect on a scenic vista, degradation of the existing visual character or quality of the site and its surroundings. As described in the 2018 Final SEA/EIR Addendum the project area contains a variety of views and perspectives which reflect the diversity of land uses found from the recreation and open space of the Butterfield Park south of the project site, the Corona Municipal Airport west of the site, light industrial development lining the southern boundary of the project site, and single family residential development located north and west of the site. With the exception of the surrounding open space, the existing visual character of the region is low and does not provide for a particularly pleasing viewscape given the pervasive development surrounding the majority of the proposed project site.

Most of the development of the project was completed during Phase I of the project and the construction activities will be minimized during Phase II of the proposed project. Construction activities and facilities include completing the construction of the Dike (approximately 7,553 feet in length) and four ponding areas; staging area located at the corner of Lincoln Avenue and Rincon Street; road improvements along Rincon Street, Auburndale Street, Smith Avenue, and Butterfield Drive; a smaller borrow area and approximate 1.5-mile haul route located west of the proposed project site. The staging area and equipment associated with the construction would be adjacent to Butterfield Park, the open space to the north, and the light industrial development to the south. Therefore, construction activities would still be visible to recreationalists, pedestrians, and employees and patrons of the light industrial facilities. However, given that construction activities are temporary, these impacts would be considered less than significant.

The proposed project would not permanently impinge on a scenic vista or degrade the visual character of the site since the proposed project site consists of the borderland between open space and light industrial development. As such, although development of the Alcoa Dike embankment would permanently change the conditions or views of the proposed project site from the existing conditions, the project would not substantially degrade the existing visual character or quality of the site and its surroundings. Impacts would be considered less than significant.

The closest officially designated State scenic highway is Route 91 from Route 55 to the east end of the City of Anaheim, which is approximately five miles east of the project site. Therefore, the proposed project would not result in impacts on a State scenic highway or other scenic roadway.

Substantial light or glare. Artificial light may be necessary but is anticipated to be rarely used during the construction period since the proposed construction hours would be 7:00 a.m. to 6:00 p.m. Monday through Friday. In addition, the proposed project site is immediately surrounded by open space and light industrial development. Therefore, any impacts associated with light and glare would be temporary and would not affect the surrounding residential areas. Impacts would not be considered significant.

Future Maintenance. Future maintenance of the Proposed Action would include routine inspections, flood risk assessment, and minor repairs of the embankment and its associated features after construction is completed (see Section 2.5 for a detailed list of future maintenance activities). Routine maintenance of the embankment would not alter the visual character of the site, flooding, erosion, or siltation, nor would such activities degrade the visual quality of the site.

4.6.2 Previously Approved Design Alternative

Under the Previously Approved Design Alternative, project modifications included under the Proposed Action would not be implemented, and the project would be constructed as previously approved. Impacts due to this alternative would be the same as described in the 2001 Final SEIS/EIR and the 2018 Final SEA/EIR Addendum. As with the proposed project, construction of this alternative would alter the visual character of the site but would not substantially degrade an area with valuable scenic resources. As a result, impacts were considered less than significant.

4.7 Recreation

The affected environment for recreation is presented in Section 3.7 and does not include any substantially different conditions than were present when the Alcoa Dike Project was previously approved. Approximate size and configuration of the Proposed Action would be consistent with the Previously Approved Design.

As described in Table 2-1, the following are the primary differences between the Previously Approved Design and the Proposed Action, as relevant to recreation: alignment modifications of the project and decreased acreage of the construction staging area and the SART installation within and adjacent to the proposed new alignments of Rincon Road and Butterfield Drive. For the purposes of the SEA/EIR Addendum, analysis of potential recreation impacts associated with project modification under the Proposed Action is provided below.

Significant Threshold

Impacts would be significant if the Proposed Action would cause one or more of the following conditions to occur:

- be incompatible with surrounding or on-site uses;
- be inconsistent with plans and policies;
- substantially affect the long-term provision of, or access to, recreational uses within the area; or
- prevent existing land uses from continuing in substantially the same manner.

4.7.1 Proposed Action

As described in Section 3.7, a variety of parks and recreational facilities are located in the vicinity of the Alcoa Dike Project. Butterfield Park would be located within the temporary work limits of the proposed project and an approximately 400-foot section of Dike and a ponding area would permanently replace a portion of Butterfield Park and the eastern-most baseball field within the park. Impacts to recreation during construction would be temporary and short-term, and recreational uses will be available at Butterfield Park after construction is complete. Maintenance of a 50-foot vegetation free zone adjacent to the Dike would fall within undeveloped areas of the park and would therefore not affect active or planned recreational uses within this area. The project footprint would include a portion of the SART & Parkway, which is being incorporated into and will be consistent with the overall Phase II design. This segment of the trail is being developed to coordinate with the Alcoa Dike Project and will provide long-term recreation opportunities for the area. The modifications to the previously approved project

would not introduce new recreation impacts to the parks and recreation facilities in the vicinity of the Proposed Action.

Additionally, because the parkland affected by the Proposed Action has always been planned for flood control purposes, the Proposed Action would not be incompatible with surrounding or on-site uses or be inconsistent with plans and policies, and its effect on long-term provision of, or access to, recreational uses within the area would be less than significant. As well, since the remaining portion of the park would remain as is without loss of functionality, the Proposed Action would allow existing land uses to continue in substantially the same manner, and its effects would be less than significant.

Future Maintenance. As described in Section 2.5 (Future Operation, Maintenance, Repair, Replacement and Rehabilitation) of this SEA/EIR Addendum, future maintenance of the Dike structures would include routine inspections, minor repairs, and potential flood fighting activities, as needed. Modifications included under the Proposed Action would not introduce new maintenance requirements or associated impacts to recreation. Trail maintenance would be conducted by the trail proponents under a Real Estate agreement from the Corps; it is assumed that trail maintenance will primarily occur within the permanent footprint for that feature. All maintenance-related impacts to recreation would be less than significant, as described in the 2018 Final SEA/EIR Addendum.

4.7.2 Previously Approved Design Alternative

Under the Previously Approved Design Alternative, the Alcoa Dike would be constructed without the project modifications included under the proposed project. Potential impacts of the Previously Approved Design Alternative would be less than significant, as described in the 2018 Final SEA/EIR Addendum.

4.8 Noise

The affected environment for noise is presented in Section 3.8 and does not include any substantially different conditions than were present when the Alcoa Dike Project was previously approved.

As described in Table 2-1, the following are the primary differences between the Previously Approved Design and the Proposed Action, as relevant to noise: alignment modifications of the project and decreased acreage of the construction staging area. For the purposes of the SEA/EIR Addendum, analysis of potential noise impacts associated with project modification under the Proposed Action is provided below.

The 2015 Riverside County General Plan includes the following applicable noise policies (Riverside County 2015):

- Noise Element Policy N.12.1. Minimize the impacts of construction noise on adjacent uses within acceptable practices.
- Noise Element Policy N.12.2. Ensure that construction activities are regulated to establish hours of operation in order to prevent and/or mitigate the generation of excessive or adverse noise impacts on surrounding areas.
- Noise Element Policy N.12.4. Require that all construction equipment utilizes noise reduction features (e.g., mufflers and engine shrouds) that are no less effective than those

originally installed by the manufacturer.

Riverside County Municipal Code

The Riverside County Municipal Code Chapter 9.52 (Noise Ordinance 847 § 2, 2006) specifies sound level standards by land use type. Per Article 9.52.020 (Exemptions), noise from construction within one-quarter of a mile of an occupied residence is exempt from these standards if it occurs between the hours of 6:00 a.m. and 6:00 p.m. (June through September) or between the hours of 7:00 a.m. and 6:00 p.m. (October through May).

City of Corona Municipal Code

The City of Corona Municipal Code provides exterior/interior noise standards and specific noise restrictions, exemptions, and variances for exterior point and stationary noise sources (City of Corona, 2012). Those requirements applicable to the proposed project are identified below.

Section 17.84.040 (c) – Noise Standards. The noise ordinance provides noise standards for two separate types of noise sources: mobile and stationary. The noise standards for stationary noise sources are identified in **Table 4-13** below.

Significance Threshold

As described in 2018 Final SEA/EIR Addendum, impacts would be significant if the Proposed Action would cause one or more of the following conditions to occur:

- Conduct construction outside of allowable hours per the County of Riverside Municipal Code without obtaining a variance or exemption.
- Conduct construction outside of allowable hours per the City of Corona Municipal Code without obtaining a variance or exemption.

4.8.1 Proposed Action

Construction

As discussed in Section 2.0 (Proposed Action and Alternatives), construction of the Proposed Action is scheduled to commence in September 2021 and last approximately 24 months. It is possible that the Proposed Action would be built in stages, with multiple start dates and construction periods for various sections of the project depending on land acquisition schedule, environmental windows and weather delays. Construction phasing may result in an extension of the overall project duration beyond 24 months. Construction of the Proposed Action will require approximately 150 combined maximum daily haul trips for fill material which will be hauled from a borrow area located 2.5 miles west of the Alcoa Dike site (refer to Figure 2) and for rip rap from a local quarry. Construction vehicles would access the site from Butterfield Drive, Rincon Street, Auburndale Street, Smith Avenue, and Lincoln Avenue. These trips would result in only short-term periodic increases in noise levels during normal construction hours and would not travel through any residential neighborhood locations north of the site where sensitive receptors are located. However, as long as construction activities occur during 7:00 a.m. to 6:00

p.m., Monday through Friday, and occasionally Saturday, which are the exempted time periods per County of Riverside Municipal Code and City of Corona Municipal Code, the proposed construction would be in compliance with local (city and county) noise ordinances; any changes to that schedule, including occasional overtime work, would require obtaining a variance from local authorities. Therefore, less than significant impacts would occur from construction equipment noise generated during construction of the Proposed Action.

Noise from construction equipment attenuates over distance because of spreading losses, absorption of the intervening terrain, and reflection off any intervening walls or berms. Spreading losses account for an attenuation factor of 6 dBA per doubling of distance. For "line-of-sight" noise in the absence of any intervening terrain, an estimated average peak 92 dBA level is projected at 15 m (50 ft) would be reduced to 86 dBA at 30 m (100 ft), 80 dBA at 60 m (200 ft), 74 dBA at 120 m (400 ft), etc. is utilized for evaluating stationary construction noise associated with Alcoa Dike construction.

This project is not creating or establishing a new, permanent source of noise. Noise associated with the recreational use of the SART would not increase above ambient noise levels and therefore impacts would be considered less than significant. Any other noise impacts occurring after construction would be related to future maintenance activities. See section below. Long-term impacts will not occur from the operational characteristics of the proposed project. However, short-term noise impacts could occur as a result of construction activity associated with the Alcoa Dike project.

While local ordinances do not limit the decibel level of construction that occurs during authorized time periods, information on anticipated noise levels that could be experienced by nearby residents, recreationists and wildlife in the vicinity is provided as follows. Noise levels for typical pieces of construction equipment (at 50 feet) are listed in Table 4-13.

Table 4-13 Typical Noise Levels for Construction Equipment

Equipment	dBA at 50 Feet
Backhoe	80
Cranes (movable)	85
Dozers	85
Loader	80
Graders, Scrapers	85
Trucks	88
Excavator	85
Roller, Spreader	85
Tractor	84

Equipment	dBA at 50 Feet
Pick-up truck	55

Source: FHWA Construction Noise Handbook, 2006

As described in the 2018 Final SEA/EIR Addendum noise levels from the Proposed Action construction site would be in compliance with both the Riverside County general plan, municipal code and Corona municipal code noise regulations. Construction equipment noise impacts during construction of the Proposed Action are considered less than significant. Any changes to the construction schedule that would conflict with the noise regulations, including occasional overtime work, would require obtaining a variance from Riverside County and the City of Corona.

Future Maintenance

As described in the 2018 Final SEA/EIR Addendum, maintenance of the Proposed Action for Phase II would be required to ensure that the embankment protection remains functional and to inspect the Dike structure after each major storm. Any damage may require immediate repair. Maintenance operations and repairs would require temporary access to and within the Alcoa Dike and may involve on-site activities that generate noise. Routine and special inspection and patrol with pickup trucks and sport utility vehicles weekly to daily during the flood season, and weekly to monthly during the non-flood season would occur. Additionally, mobilizing dump trucks to haul stones and use of hydraulic excavators to place stones to protect and reinforce the constructed embankment as necessary during flood fight activities are part of routine operation and maintenance. Similar to construction of the Proposed Action, these activities could result in temporary short-term periodic noise from construction equipment use. Duration of these activities would be 7:00 a.m. to 6:00 p.m., Monday through Friday, and occasionally Saturday. Due to the short-term nature of maintenance and repair activities, and due to construction activities being exempt if conducted within the indicated time periods, potential noise impacts from future maintenance activities are considered less than significant.

4.8.2 Previously Approved Design Alternative

Construction

Construction of the Previously Approved Design Alternative as described in the 2018 Final SEA/EIR Addendum is assumed to require the same or similar daily haul trips for fill material to that of the Proposed Action for Phase II. Therefore, the analysis of construction noise would be similar or identical to that provided above for the Proposed Action. With construction occurring within the exempted daily hours of 7:00 a.m. to 6:00 p.m. Monday through Friday, and occasionally Saturday, construction equipment noise impacts of the Previously Approved Design Alternative are considered less than significant.

4.9 Socioeconomics

The affected environment for socioeconomics is presented in Section 3.9 and does not include any substantially different conditions than were present when the Alcoa Dike Project was previously approved.

As described in Table 2-1, the following are the primary differences between the Previously Approved Design and the Proposed Action, as relevant to socioeconomics: alignment modifications of the project and decreased acreage of the construction staging area. For the purposes of the SEA/EIR Addendum, analysis of potential socioeconomic impacts associated with project modification under the Proposed Action is provided below.

The significance of population and expenditure impacts are assessed in terms of their direct effect on the local economy and related effect on other socioeconomic resources (e.g., housing).

Significant Threshold

Impacts would be significant if the Phase II Proposed Action would cause one or more of the following conditions to occur:

- result in substantial shifts in population trends or adversely affect regional spending and earning patterns.

4.9.1 Proposed Action

As Described in the 2018 Final SEA/EIR Addendum, construction of the Alcoa Dike under the Proposed Action for Phase II would be short-term and would not attract a long-term worker population to the project area. The majority of the construction-related jobs are expected to be filled by both currently employed and unemployed labor force participants from the surrounding area, and construction of the proposed project would not increase the region's population. Implementation of the Proposed Action would neither place a demand on employment opportunities or housing, nor would it create significant new employment opportunities or housing in the region. In addition, minority or low-income communities would not be disproportionately affected by implementation of the proposed project. In addition, local populations would directly benefit from construction of the Alcoa Dike through the provision of reduced flood risks. The Proposed Action would have no adverse impact to socioeconomics.

Future Maintenance

The routine inspections and minor repairs of the Alcoa Dike and associated features included under future maintenance activities would not have the potential to result in substantial shifts in population trends; adversely affect regional spending and earning patterns; or introduce overwhelming demand for public services or utilities. Therefore, no socioeconomic impacts would occur as a result of future maintenance.

4.9.2 Previously Approved Design Alternative

Under the Previously Approved Design Alternative, project modifications included under the Proposed Action would not be implemented and the Alcoa Dike would be constructed as previously approved. Socioeconomic impacts would be the same as described in the 2001 Final SEIS/EIR and the 2018 Final SEA/EIR Addendum. Much of the information described in this

section is similar to information provided in the analysis. Potential effects to socioeconomics would be similar to those described for the Proposed Action, and construction of this alternative would result in socioeconomic impacts that are considered less than significant.

4.10 Transportation

The affected environment for transportation is presented in Section 3.10 and does not include any substantially different conditions than were present when the Alcoa Dike Project was previously approved.

As described in Table 2-1, the following are the primary differences between the Previously Approved Design and the Proposed Action, as relevant to transportation: modified composition of the embankment to include v-ditches, 4 catch basins, and box culverts to assist drainage; decrease in acreage of construction staging area; and the addition of a temporary access ramp at the southern end of the project. For the purposes of the SEA/EIR Addendum, analysis of potential transportation and traffic impacts associated with project modification under the Proposed Action is provided below.

Applicable Regulation

Caltrans has jurisdiction over State highways and sets maximum load limits for trucks and safety requirements for oversized vehicles that operate on highways. The following Caltrans regulations apply to potential transportation and traffic impacts of the proposed project:

- **California Vehicle Code (CVC), division 15, chapters 1 through 5 (Size, Weight, and Load).** Includes regulations pertaining to licensing, size, weight, and load of vehicles operated on highways.
- **California Street and Highway Code §§660-711, 670-695.** Requires permits from Caltrans for any roadway encroachment during truck transportation and delivery, includes regulations for the care and protection of State and county highways and provisions for the issuance of written permits, and requires permits for any load that exceeds Caltrans weight, length, or width standards for public roadways.

Significant Threshold

Impacts would be significant if the Phase II Proposed Action would cause one or more of the following conditions to occur:

- Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections).
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses.

4.10.1 Proposed Action

Traffic Increase

As described in the 2018 Final SEA/EIR Addendum the following traffic guidelines would apply:

Construction Traffic. The Proposed Action would result in temporary, short-term increases in local traffic as a result of construction-related vehicle trips. Specifically, construction of the Proposed Action will require approximately 150 combined maximum daily haul trips for fill material which will be hauled from a borrow area located 2.5 miles west of the Alcoa Dike site (refer to Figure 2) and for rip rap material from a local quarry. Construction vehicles would access the site from Butterfield Drive, Rincon Street, Auburndale Street, Smith Avenue, and Lincoln Avenue.

Based on the above, it is assumed construction-related traffic would be dispersed amongst SR-91 and I-15 for regional access to the Proposed Action area, and Lincoln Avenue, Butterfield Drive, Rincon Street, Auburndale Street, and Smith Avenue for site access. Therefore, these roadways would likely experience the majority of Proposed Action related traffic. Table 3-3 shows the most recently published annual average daily traffic (AADT) volumes on the segments of these roadways nearest the Proposed Action site. Given the high volume of existing traffic on these roadways (as shown in Table 3-3), the anticipated maximum construction related traffic of approximately 150 daily trips would account for a minimal increase of existing average daily traffic volumes along utilized roadways. This short-term increase in daily traffic volumes is considered unlikely to exceed the capacity of these roadways or exceed any applicable Riverside County General Plan performance standard (refer to Section 3.10). Therefore, temporary construction related traffic impacts to the existing traffic load and capacity of the utilized roadway system would be less than significant.

Maintenance Traffic. As discussed in Section 2.0 (Proposed Action and Alternatives), routine and special inspection and patrol with pickup trucks and sport utility vehicles weekly to daily during the flood season, and weekly to monthly during the non-flood season would occur. Additionally, mobilizing dump trucks to haul stones and use of hydraulic excavators to place stones to protect and reinforce the constructed embankment as necessary during flood fight activities are part of routine operation and maintenance. Based on these likely maintenance activities, it is assumed operation would result in approximately 150 vehicle trips monthly, likely resulting in more trips during the winter months and less in summer. Similar to construction traffic, these trips would be dispersed amongst I-15 and SR-91 for regional access, and utilize Lincoln Avenue, Butterfield Drive, Rincon Street, Auburndale Street, and Smith Avenue to access the Alcoa Dike site. As that total number of maintenance related trips is per month, this permanent increase in traffic would account for a negligible increase to average daily trips along utilized roadways (per traffic volumes shown in Table 3-3). No impacts to roadway capacity would occur from Proposed Action maintenance related traffic.

Roadway Hazards

As described in the 2018 Final SEA/EIR Addendum the following roadway hazard guidelines would apply:

During construction, the primary staging area for the Proposed Action would be located in the northeast portion of the site off Lincoln Avenue immediately to the north of Rincon Street, approximately 600 feet south of the nearest residential receptor (refer to Figure 2). In the event

any oversize loads would occur during construction on public roadways, they must comply with Caltrans regulations regarding oversize load limits and permits (refer to Section 4.10.1). Additionally, all site access points will be clearly designated and would likely have controlled entrance, thus eliminating roadway hazards. Therefore, less than significant safety impacts would occur to local roadways during construction. As discussed above, maintenance related traffic would account for a negligible increase of daily trips along utilized roadways (per traffic volumes shown in Table 3-3). It is also assumed that once the Proposed Action is operational, site access would be gate controlled. No impacts to roadway hazards would occur from Proposed Action maintenance related traffic.

Future Maintenance

The Proposed Action would include routine inspections and minor repairs, of the Alcoa Dike embankment and its associated features after construction is completed (see Section 2.5 for a detailed list of future maintenance activities). These activities would not create impacts to public safety

4.10.2 Previously Approved Design Alternative

Traffic Increase

Construction Traffic. Construction of the Previously Approved Design Alternative is assumed to require the same or similar daily construction related trips to that of the Phase I Proposed Action. Therefore, the analysis of construction related traffic generation would be similar or identical to that provided above for the Proposed Action. Less than significant impacts would occur from construction vehicle trips of the Previously Approved Design Alternative.

Maintenance Traffic. Operational and maintenance of the Previously Approved Design Alternative is assumed to require the same or similar monthly trips to that of the Phase I Proposed Action. Therefore, the analysis of operational related traffic generation would be similar or identical to that provided above for the Proposed Action. No significant impacts would occur from maintenance vehicle trips of the Previously Approved Design Alternative.

Roadway Hazards

Both construction and operation of the Previously Approved Design Alternative is assumed to require the same or similar daily trips and site access control features to that of the Phase I Proposed Action. Therefore, the analysis of construction and operational related traffic hazards would be similar or identical to that provided above for the Proposed Action. No traffic safety hazards impacts would occur from construction and operation of the Previously Approved Design Alternative.

4.11 Safety and hazards

The affected environment for safety and hazardous materials is presented in Section 3.11. As described in Table 2-1, the following are the primary differences between the Previously Approved Design and the Proposed Action, as relevant to hazardous materials: alignment modifications of the project and decreased acreage of the construction staging area. For the

purposes of the SEA/EIR Addendum, analysis of potential public services and utilities impacts associated with project modification under the Proposed Action is provided below.

Significant Threshold

Impacts would be significant if the Proposed Action would cause one or more of the following conditions to occur:

- Create a potential public health hazard involving the use, production, or disposal of materials which pose a hazard to people or animal or plant populations in the area affected; or
- Create a significant hazard to the public or the environment through reasonably foreseeable incident involving the release of hazardous materials into the environment.

4.11.1 Proposed Action

The proposed project activities would not require long-term storage, treatment, disposal, or transport of substantial quantities of hazardous materials.

However, small quantities of hazardous materials would be stored, used, and handled during the proposed project activities, including petroleum hydrocarbons and their derivatives (e.g., diesel, gasoline, oils, lubricants, and solvents) to operate the construction equipment. These materials would be contained within vessels engineered for safe storage. Storage of substantial quantities of these materials along the Dike is not anticipated. Furthermore, construction vehicles may require on-site fueling, or routine or emergency maintenance that could result in the release of oil, diesel fuel, transmission fluid or other materials; however, the materials would not be used in quantities or stored in a manner that would pose a significant hazard to the public or the workers themselves. Therefore, impacts from construction activities would be less than significant.

The potential for an accidental release of toxic materials from construction vehicles (e.g., oil and diesel fuel) would be mitigated by the fueling and servicing of construction vehicles in protected areas so that fluids would be contained within an isolated or impervious area a safe distance from the active flow path. Spills or leaks would be cleaned up immediately, and any contaminated soil would be disposed of properly.

As standard Corps practice to alleviate fire hazards, a water truck would always present during construction activities. In addition, Corps construction projects must comply with the fire prevention and protection practices set forth in the Corps' Safety and Health Requirements Manual (EM 385-1-1). The provisions of EM 385-1-1 are incorporated into all Corps construction specifications, and the contractor is required to prepare a fire prevention and protection plan for the construction project.

The Proposed Action would require use, storage and handling, of small quantities of hazardous materials during construction, however BMPs would be implemented to reduce the risk of safety and health hazards. Hazardous materials would be properly stored, and the potential for an accidental release of toxic materials from construction vehicles would be mitigated by fueling and servicing construction vehicles in protected areas. Spills or leaks would be cleaned up

immediately, and any contaminated soil would be disposed of properly. Therefore, potential effects related to hazardous materials would be considered less than significant.

Future Maintenance

Future maintenance of the proposed project would include routine inspections and minor repairs, of the Alcoa Dike embankment and its associated features after construction is completed (see Section 2.5 for a detailed list of future maintenance activities). These activities would not create impacts to public safety.

4.11.2 Previously Approved Design Alternative

Under the Previously Approved Design Alternative, the design modifications included under the Proposed Action would not be implemented, and the Alcoa Dike embankment would be constructed as previously approved. Impacts on safety and hazards through the implementation of this alternative would be similar to that of the Proposed Action, and no impacts to public safety would occur.

4.12 Cultural Resources

Under NEPA, significance is determined based on 'context' and 'intensity'. For cultural resources, context is often viewed in terms of how important the resource may or may not be, while intensity is viewed in terms of the severity of the impacts to the resource. While cultural resources that are not eligible for the NRHP are still considered as part of the NEPA review, once that resource fails to meet the criteria for eligibility for inclusion on the NRHP its 'context' is found to be lacking. The phrase "adverse effect" (used in the NHPA) and "significant impact" (used in NEPA) are not equivalent terms but are similar in concept. Under the NHPA, impacts to cultural resources are typically examined in terms of how the project would affect the characteristics that make the property eligible for the National Register. Such impacts are referred to as adverse effects in the NHPA's implementing regulations (36 CFR 800.5).

The Proposed Action is similar to the previously approved design alternative and associated sponsor real estate actions except for the changes identified in Table 2-1. Therefore, a new impact would only occur if it is associated with the project modifications, or as a result of a changed environmental condition. Impacts would be significant if the Proposed Action would cause one or more of the following conditions to occur:

- The undertaking would result in a substantial adverse effect to a historic property such that the implementation of the alternative would result in the destruction of a historic property or the loss of a property's eligibility.

4.12.1 Proposed Action

Impacts to cultural resources under the proposed modified Dike design and associated utility protections and relocations would be the same as under the previously approved design alternative except that the proposed action would include impacts to one additional cultural site, CA-RIV-5521. Cultural resources are geospatial resources that are most clearly impacted by ground disturbing activities. The proposed action includes a slightly larger footprint than the previously approved design alternative. The Corps, in consultation with the SHPO, determined that archaeological site CA-RIV-5521 was not eligible for the NRHP in 1995. The construction

of the Alcoa Dike and the associated utility protections and relocations would not result in an adverse effect to a historic property.

The proposed borrow area has changed from the previously approved design alternative. Like the previously approved borrow area, the proposed borrow area was identified in the 1980s as a material source as part of the analysis for the larger SARM project. In anticipation of the borrow area being utilized the feature was extensively investigated for cultural resources. Seven archaeological sites were recorded within or near the borrow site boundary, CA-RIV-4727, CA-RIV-4728, CA-RIV-5253, CA-RIV-7136, CA-RIV-5573, CA-RIV-7676, and CA-RIV-7679. All seven were determined to be not eligible for the NRHP through a consensus determination with the SHPO. The borrow site has been used as a material source area for other embankment/levee construction projects within the basin. The use of the exiting borrow area would not result in an adverse effect to a historic property.

The Proposed Action also includes the authorization for an outgrant for the SART installation within and adjacent to the proposed new alignments of Rincon Road and Butterfield Drive. While the Alcoa Dike and the associated utility and road relocations, protections, and replacements are part of or necessitated by SARMP and therefore included in the undertaking covered by the SARMP Programmatic Agreement executed in 1993 by the Corps, State Historic Preservation Officer (SHPO), and the Advisory Council on Historic Preservation, the SART is a separate undertaking under the NHPA The Corps has separately consulted with the SHPO on the creation of the trail. The Corps has found that the creation of the trail would result in no adverse effect to historic properties and the SHPO has concurred Appendix A.

Future Maintenance

Minor repairs may include, but are not limited to, inspections via access roads, measures necessary to preserve the integrity of the Dike such as small mammal burrow control and removal of potentially detrimental vegetation. Passive methods such as filling in burrows and repairing holes in the grouted stone structure would be used whenever possible. Because there are no historic properties located within the construction footprint for the proposed Dike, these activities would not impact historic properties.

4.12.2 Previously Approved Design Alternative

Under Previously Approved Design Alternative, project modifications included under the Proposed Action would not be implemented and the Alcoa Dike would be constructed as previously approved. Cultural Resources impacts would be significantly adverse as described in the 2001 Final SEIS/EIR. Sites CA-RIV-1039 and CA-RIV-1044 have previously been mitigated and no additional coordination or consultation with the SHPO would be required under this alternative.

4.13 Public Services and Utilities

The Proposed Action is similar to the previously approved design alternative and associated sponsor real estate actions except for the changes identified in Table 2-1 including the addition of the SART, SCE replacement of transmission, distribution, and telecom poles/circuits and SAWPA Brine Line utility replacement and protection. Therefore, a new impact would only

occur if it is associated with the project modifications, or as a result of a changed environmental condition. Impacts would be significant if the Proposed Action would cause one or more of the following conditions to occur:

- Existing utility systems would be adversely affected by the proposed embankment construction activities.
- There is any unplanned disruption of utility service or physical impact to existing utility lines.
- There is an increase to the size of the population and geographic area served, the number and type of calls for service, physical development, or an increase in demand for service that could result in capacity constraints to existing public service and utilities providers.

4.13.1 Proposed Action

Public Services. The Proposed Action would not substantially change any public service impacts compared to the original design described in the 2001 Final SEIS/SEIR and the 2018 Final SEA/EIR Addendum. Construction activities would result in an increase in the potential of fire hazards and could increase the need for police service due to accidents caused by construction personnel or equipment. The presence of construction equipment (vehicles, generators, tools, etc.) may increase the likelihood of a fire. Vegetation present in or near the construction areas could be ignited by a spark or heat-related incident due to the operation of construction equipment or construction activities. In addition, the presence of construction personnel increases the potential for fires through the increase of human influenced ignition (i.e., smoking, use of flammables, etc.). Therefore, construction of the proposed project could have the potential to result in a temporary increase in police and fire service calls. However, this increase would be short term and would not result in a significant permanent demand on fire or police facilities serving the proposed project area. In addition, implementation of the Alcoa Dike Project would not affect the long-term capacities of fire or police services. This potential increase in risk is considered short-term and temporary, only occurring during the limited construction phase of the proposed project.

Because of the large available labor pool in Riverside County and nearby areas, few construction workers are expected to temporarily relocate to the area and no new workers would be required for operation and maintenance of the Dike. Therefore, neither construction nor operation of the proposed project is expected to result in an increase in the local population, leading to long-term demands to local public services. Because no new operational employees would be needed, operation and maintenance of the embankment would not generate any additional population that could exceed the capacity of local public service providers. Therefore, the proposed project would not increase any demands on schools or lower the level of service for fire protection or police protection in the long term. There would be no operational impacts to existing schools, fire, or police department service capabilities. The proposed project is not expected to result in any long-term hazards that would place increased demands on emergency service providers.

Water. Alteration of the design of the Alcoa Dike Project would not substantially change any water supply impacts compared to the original design described in the 2001 Final SEIS/EIR and

the 2018 Final SEA/EIR Addendum. Water would be required during project construction for dust abatement and cleaning of construction equipment. The amount of water required depends on the length of access roads, weather conditions, road surface conditions, and other site-specific conditions. Reclaimed water for construction use will be available at Butterfield Park. Reclaimed water would be used for dust control. Water use would also include water necessary to make the soil cement used during project construction as well as for any revegetation activities. However, water use for the proposed project would not change the ability of the City of Corona in serving the proposed project area demands.

Wastewater. Alteration of the design of the Alcoa Dike Project would not substantially change any wastewater impacts compared to the original design described in the 2001 Final SEIS/EIR and the 2018 Final SEA/EIR Addendum. Wastewater generated during the proposed project construction would be limited to that generated by project personnel and would be accommodated by portable toilets brought to staging areas for construction crews. These portable toilets would be emptied into septic tanks or municipal sewage systems. Because this increase would be short-term and temporary, wastewater generated during project construction is not expected to significantly impact the capacity of the City of Corona in providing wastewater services to the project area.

Solid Waste. Alteration of the design of the Alcoa Dike Project would not substantially change any solid waste impacts compared to the original design described in the 2001 Final SEIS/EIR and the 2018 Final SEA/EIR Addendum. Organic materials, trees, shrubs, and abandoned timber structures would be disposed of by hauling to a commercial site. Topsoil containing organic material would not be disposed of at a commercial site but would be stockpiled and spread on embankment slopes or borrow areas as a part of site restoration. Disposal of these materials by burning or burying at the proposed project site would not be permitted. Inorganic materials would include, but are not limited to, broken concrete, rubble, asphaltic concrete, metal, and other types of construction materials. Where possible, soil from excavation would be screened and separated for use as backfill materials at the site of origin to the maximum extent possible. Spoils unsuitable for backfill use would be disposed of at appropriate disposal sites. As identified in Table 3-5, the project area is served by the El Sobrante Landfill. Because the exact amount of material recycling is unknown, the total amount of waste requiring landfill disposal is unknown. Recycling activities would greatly reduce the quantity of construction-related materials transported to local landfills. It is assumed that the amount of construction waste would be a small percentage of the maximum daily throughput for El Sobrante. Therefore, construction waste generated by the proposed project would not substantially affect the remaining capacities of local landfills to serve local demands.

Temporary Disruption. The utilities currently existing on the proposed project site require some replacement and protection for this Phase II proposed project. The agencies and utilities located in the project area are listed in Table 3-5. Various utilities such as sewer, water, underground telecommunications, and overhead power will be impacted by the project. The utility owners include City of Corona, SAWPA, SCE and AT&T. The design of the protection or replacement of the utilities that cross the prism of the Dike will be based on guidance provided by the Corps in a *Memorandum for Record, Subject: Process for Approval of Utility Relocations at Alcoa Dike,* dated 15 February 2012.

Specific to this SEA/EIR Addendum:

- SAWPA replacement for protection of the Brine Line which crosses at two locations including the CRC Lateral (15"/16") along Auburndale and Reach IVB parallel to Butterfield Drive.
- SCE's replacement of transmission, distribution, and telecom poles/circuits located along W. Rincon Street, N. Smith Avenue, Butterfield Drive, and Auburndale Street, approximately 500 feet east of Corona Municipal Airport.

The Corps will coordinate with the appropriate jurisdictions prior to and during construction to ensure that only temporary disruptions occur to the services provided by the utilities mentioned above. Any affected utilities would be replaced or sufficiently protected to avoid long-term disruption. Therefore, this alternative would have no significant impacts to public services or utilities.

Future Maintenance

Periodic regular maintenance, as well as required maintenance following flood and scour events would require relatively small amounts of material and would typically occur for only short periods of time. Consequently, any increases in fire or police calls would similarly be temporary and not substantially alter the level of service of these providers. Demands on utilities during maintenance would also be temporary and relatively minor. As such, future maintenance is not expected to result in any significant impacts to public services and utilities.

4.13.2 Previously Approved Design Alternative

Under the Previously Approved Design Alternative, construction and OMRRR related impacts or temporary increases in public services or utilities demand would occur, similar to the proposed project. Potential impacts to public services, water, wastewater, and solid waste would be similar to the representative scenario provided above for the proposed project. Therefore, temporary public services and utilities impacts associated with construction and OMRRR of the Previously Approved Design Alternative would not result in any significant impacts.

5 CUMULATIVE IMPACTS

5.1 Introduction

A cumulative impact is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time in the proposed activity area. Those actions could be undertaken by various agencies (federal, State, or local) or private entities. A discussion of cumulative impacts resulting from actions and projects that are proposed, under implementation, or reasonably anticipated to be implemented in the near future is required.

Cumulative environmental impacts are most likely to arise when a relationship exists between a proposed activity and other projects expected to occur in a similar location, time period, and/or involving similar actions. Projects in proximity to the Phase II Proposed Project activities would be expected to have more potential for a relationship that could result in potential cumulative impacts than those more geographically separated.

This cumulative impact discussion analyzes cumulative projects located within approximately five miles of the Alcoa Dike project area that could have the ability to combine with impacts from the Proposed Action.

Table 5-1 Cumulative Projects in the Phase II Proposed Project Activity Area

Project Name	General Location	Description
Norco Bluffs Stabilization Project	Southeast of Proposed Action	The purpose of this project is to stabilize the toe of the bluff within the project area so that the 566-ft elevation line associated with Prado Dam is stabilized, thereby avoiding the need for additional real estate acquisition.
River Road Dike (Santa Ana River Mainstem Project)	The project site is within the City of Norco along River road on the easterly side of the Prado Basin reservoir.	The purpose of this project is to provide flood-risk reduction to nearby residential developments, businesses, and infrastructure from reservoir expansion that results from raising Prado Dam. Construction is scheduled to begin October 2020 and complete in May 2022
Santa Ana River Mainstem Mitigation Areas (Norco site and Target Areas 1-4)	The Norco site is located east of Archibald Ave., northwest of Norco Dr., and south of Riverwalk Park in Norco, CA. Target Areas 1-4 are located within the Santa Ana River Floodplain downstream of the Norco site and along Temescal Creek.	This project includes several mitigation parcels that have been restored, through arundo removal, to offset construction impacts related to SARMP. Monitoring, management, and maintenance of the restoration sites will continue in perpetuity.
Hamner Ave Bridge	The bridge site is near the border between Norco and Eastvale, approximately 1,300 feet to the west of the I-15 Bridges over the Santa Ana River in the City of Norco, California.	The purpose of the project is to replace the existing 2-lane bridge with a 6-lane bridge to provide enhance public safety and traffic circulation in the area. Construction is scheduled to start January 2021 and complete January 2023
I-15 Bridge	Along the I-15 between State Route 60 and Cajalco Road	The Riverside county Transportation Commission in partnership with Caltrans and the Federal Highway Administration, is adding two express lanes to I-15 in both directions, widening 11 bridges, and adding six soundwalls. The project will be built within the existing median and offer multiple entrance and exit points to the express lane. Construction is on-going and scheduled to complete in the second half of 2020.
SART	The proposed SART would be located approximately 2500 ft.	The 22-mile SART is divided into three sections: Lower, Middle, and Upper, and includes bicycle trails and hiking/equestrian trails. The Upper trail consists of

	northwest of the project area. This system is currently continuous in the immediate project vicinity, but not continuous through the City of Norco.	proposed trail alignments that would cross adjacent the Lower Norco Bluffs Project area. Construction of some segments is on-going and anticipated to be completed in 2025 or later, pending further reviews and approvals by the Corps and other regulatory agencies. Construction within Prado Basin, if approved, would also depend on timing for completion of SARMP features.
RCRCD Conservation Easement	The conservation lands are located adjacent to the north side of the proposed project.	RCRCD purchased 111 acres on the main stem of the Santa Ana River near Norco and Eastvale. Arundo donax has invaded the riparian habitat and the invasive weeds are being removed to help restored the area to a plant community with native species. Active restoration is on-going.
Abandoned Wastewater Treatment Plant Phase III Environmental Site Assessment	The abandoned wastewater treatment plant is located adjacent to the proposed project and staging area.	There is currently an HTRW Phase III Environmental Site Assessment being conducted by the GSA at the abandoned wastewater treatment plant off Corydon Avenue, adjacent to the project footprint. Results from the assessment are anticipated during Summer 2020.

The assessment below focuses on addressing the following: (1) the area(s) in which the effects of the Proposed Action would be felt; (2) the effects that are expected in the area(s) from the Proposed Action; (3) past, present, and reasonably foreseeable future actions that have or that are expected to have impacts in the same area; (4) the impacts or expected impacts from these other actions; (5) and the overall impact(s) that can be expected if the individual impacts are allowed to accumulate.

5.2 Analysis of Cumulative Impacts

5.2.1 Air Quality

Construction activities for this Phase II Proposed Action would not have impacts above and beyond those determined in the 2018 Final SEA/EIR Addendum, where cumulative impacts were determined to be significant in large part to the significant impacts of the overall Prado Basin Dike projects. Mitigation measures identified in the 2018 Final SEA/EIR Addendum, as presented in Chapter 6, would reduce impacts to the extent feasible. Therefore, the cumulative impact findings for the Phase II Proposed Action are the same as those determined in the 2018 Final SEA/EIR Addendum.

Air Pollutants

The Phase II Proposed Action impacts have been determined to be less than significant, as discussed in Section 4.1. The cumulative projects would also be assumed to have less than significant air pollutants impacts due to minimal emissions and short project duration. Therefore, the cumulative air pollutants impacts are also considered to be less than significant.

Greenhouse Gases

Impacts related to GHG emissions and global climate change are inherently cumulative. As discussed in Section 4.1, the Phase II Proposed Action would have less than significant impact GHG emissions, either directly or indirectly on the environment, under CEQA. Based on the above, impacts would be less than significant under CEQA.

5.2.2 Biological Resources

Implementation of the Phase II Proposed Action would not result in significant impacts to biological resources (See Section 4.2). The Phase II Proposed Action combined with other projects would not contribute to cumulative biological resource impacts within the region. The effects of the Phase II Proposed Action are site specific and localized and would not result in incremental cumulative impacts to biological resources through increased human encroachment (e.g., removal of habitat, degradation of habitat through trampling, increased noise, or decreased water quality). At the conclusion of construction, the Corps would restore or enhance habitat in the project area. Impacts of the Phase II Proposed Action would be reduced to less than significant levels and effects of this Phase II Proposed Action would not be considered cumulatively significant with mitigation.

5.2.3 Water Resources and Hydrology

The cumulative scenario relevant to the Proposed Action is largely characterized by other flood control projects in and downstream of the Prado Basin. As described in Section 4.3 (Water Resources and Hydrology) of this SEA/EIR Addendum, implementation of the Phase II Proposed Action would include full compliance with applicable laws and regulations, as well as Environmental Commitments identified in the 2001 SEIS/EIR and the 2018 Final SEA/EIR Addendum. As such, potential impacts to water resources and hydrology would be site-specific and not substantial. Water resources and hydrology impacts of the Phase II Proposed Action would not combine with similar impacts of other projects in the cumulative scenario. Furthermore, as described in Section 2.1 of this SEA/EIR, the Proposed Action would contribute to the national economic development (NED) objective of providing flood protection for the surrounding area. Other flood control projects in the cumulative scenario would also contribute to this NED objective, resulting in an overall benefit.

5.2.4 Earth Resources

No significant impacts to earth resources and geology would occur from implementation of the Phase II Proposed Action. As potential effects to soils and geology would be site-specific and less than significant, no contribution to cumulative impacts in the region would occur.

5.2.5 Land Use

Land use impacts tend to be localized, affecting properties in the immediate vicinity of the project. Potential land use impacts from the Phase II Proposed Action would affect existing recreational and light industrial land uses surrounding the project site. Similarly, the area potentially affected by cumulative land use impacts is the local vicinity of the proposed flood control features where construction and operation activities could affect nearby land uses.

As described in Section 4.5 and 4.7 (Land Use and Recreation, respectively), implementation of the Phase II Proposed Action would result in a ponding area replacing a baseball field and a portion of parkland within Butterfield Park. However, the Phase II Proposed Action's contribution to cumulative land use and recreation impacts would be minimized with implementation of EC-LU-1. Although potential adverse land use impacts from construction and operation are localized, the land use benefits of the project, in terms of flood protection for populated areas, are regional in scope, benefiting developed areas in Orange, Riverside, and San Bernardino Counties. Therefore, cumulative impacts on land use from the Proposed Action would be less than significant.

5.2.6 Aesthetics

The activities associated with the Phase II Proposed Action would be short term, localized, and would not significantly impact or conflict with visual resources (see Section 4.6.2). Therefore, the Phase II Proposed Action would not contribute to a degradation or alteration of the scenic viewscape. As such, no cumulative aesthetics impacts would occur.

5.2.7 Recreation

As described in Section 4.7 (Recreation) of this SEA/EIR Addendum, implementation of the Proposed Action would result in a ponding area replacing a baseball diamond and a portion of parkland within Butterfield Park, although as this area was planned for flood control purposes under the 2001 SEIS/EIR, this would not be considered a significant impact. The cumulative projects listed in Table 5-1 would not result in the elimination or replacement of recreation uses or facilities. The City of Corona SART is not included as part of the Proposed Action, although it is anticipated that the trail would be aligned along the toe of the Alcoa Dike. The trail is listed in Table 5-1, would improve and increase recreational opportunities in the Alcoa Dike Project area. With the implementation of environmental commitments for recreation described in Section 2.4.2 (Proposed Action) and Section 4.7 (Recreation), no contribution to cumulative impacts in the region would occur.

5.2.8 Noise

With regards to a cumulative increase in temporary noise levels of the Phase II Proposed Action construction in conjunction with construction of cumulative projects identified in Table 5-1, Phase II Proposed Action construction would temporarily increase ambient noise levels in the vicinity of the Proposed Action area. As discussed in Section 3.0 (Affected Environment), the nearest sensitive receptors are located approximately 600 feet north of the site. Construction activities associated with other projects in close proximity to the Proposed Action (as identified in Table 5-1) could potentially occur at the same time as the Phase II Proposed Action and further increase noise levels at these sensitive receptor locations. However, due to the distances and construction timing of projects identified in Table 5-1, it is unlikely that construction noise from the proposed Alcoa Dike would combine with construction noise from those projects to increase potential cumulative construction noise impacts to sensitive receptors. In the event this occurred, these impacts would be temporary and of short duration. While mobile construction vehicles bringing construction supplies to cumulative project sites could share travel routes with the Proposed Action, it is assumed these shared routes would be limited to regional access roadways (I-15 and

SR-91). Due to the traffic volumes on these roadways, no significant cumulative noise from mobile construction sources would occur to sensitive receptors along shared travel routes.
Each cumulative project identified in Table 5-1 would be required to comply with local noise ordinances. However, per discussion in Section 4.0 (Environmental Consequences), as long as construction activities occur during 7:00 a.m. to 6:00 p.m., Monday through Friday, and occasionally Saturday, which are the exempted time periods per County of Riverside Municipal Code and City of Corona Municipal Code, the proposed construction projects would be in compliance with local (city and county) noise ordinances; any changes to that schedule, including occasional overtime work, would require obtaining a variance from local authorities. As a result, the Proposed Action would not result in significant construction or operational noise impact. Therefore, while overall development of the Alcoa Dike area could result in cumulative temporary and permanent increases to existing ambient noise levels, the Proposed Action would have a minimal cumulative contribution to these potential noise impacts. Therefore, noise impacts of the Proposed Action would not combine with impacts of present and reasonably foreseeable projects to result in a significant cumulative impact.

5.2.9 Socioeconomics

The Phase II Proposed Action would not create socioeconomic impacts to any adjacent communities in the region (see Section 4.9). As such, implementation of the Phase II Proposed Action would not contribute to an incremental socioeconomic effect that would be cumulatively considerable.

5.2.10 Transportation

Cumulative projects within the area (as identified in Table 5-1) will generate trips to and from the respective project sites using local roadways. The combined contribution of these vehicle trips could result in an increase to existing roadway network levels of service. However, each project identified in Table 5-1 would be required to comply with the performance standards identified in the Riverside County General Plan (Refer to Section 3.10-1). While development of cumulative projects identified in Table 5-1 will result in a cumulative addition to traffic volumes on study area roadways, the Proposed Action's contribution to this impact would be minimal during both construction and operation (refer to Section 4.10). Therefore, the contribution of the Proposed Action to cumulative impacts would be less than significant.

5.2.11 Safety and Hazards

As discussed in Section 4.11, the Proposed Action would not result in increased risks to public safety. The construction of the Phase II Proposed Action would be a beneficial impact. Therefore, safety risks associated with the Phase II Proposed Action would not result in a significant cumulative impact.

5.2.12 Cultural Resources

The Proposed Action would not result in the destruction of any historic properties. It is expected that the Proposed Action in conjunction with ongoing and future actions would not contribute significantly to the loss of cultural values or data within the basin especially if the resources are effectively mitigated.

5.2.13 Public Services and Utilities

The Proposed Action would have no significant impacts on public services and utilities (See Section 4.13), including the Brine Line protection. As such, the proposed project would not contribute to an incremental impact on public services and utilities that would be cumulatively considerable.

Based on the analysis provided by SCE in the TD1287836 Mira Loma-Cleargen-Delgen 66 kV General Order 131-D Evaluation (SCE, 2020) and the description of the proposed power line relocation provided in Chapter 2, the upcoming power line relocation that will be constructed by SCE occur within and adjacent to the Alcoa Phase II footprint would not have any significant unavoidable impacts. SCE's replacement footprint is relatively minor and impacts from construction and operations and maintenance are expected to be less than significant. In addition, SCE's scope, through design, will comply with all federal and state laws and regulations, and local ordinances. This includes compliance with the Federal Aviation Administration (FAA) regulations relating to transmission pole height. The SCE replacement will be located within Compatibility Zones B1 and C (Riverside County Airport Land Use Compatibility Plan Policy Document, 2004) which have height restrictions and requirements for structures within these Compatibility Zones (maximum 35 feet for Zone B1 and maximum 70 feet for Zone C). Moreover, no significant, unavoidable cumulative effects are anticipated from implementation of Alcoa Phase II, SCE power line replacement, and other reasonably foreseeable projects. SCE will obtain approval from the FAA for all pole locations/heights in these Compatibility Zones prior to construction, minimize vegetation disturbance to the extent practicable, and any impacts from the proposed relocation projects would be fully mitigated, therefore, the replacement will result in a less than significant impact (SCE, 2020). As such, the Phase II Proposed Action would not contribute to an incremental impact on public services and utilities that would be cumulatively considerable.

6 ENVIRONMENTAL COMMITIMENTS

6.1 Environmental Commitments

The following environmental commitments have been incorporated into the proposed project for the purpose of minimizing environmental effects. Many of these commitments were included in the 2001 SEIS/EIR and other related documents. Updates and additional information are provided in brackets, and new commitments or measures that were developed subsequent to the 2001 SEIS/EIR are prefaced with "EC- ".

6.1.1 Air Quality

AQ-1 The project construction contractor shall retard diesel engine injection timing by two degrees before top center on all construction equipment that was manufactured before 1996, and which does not have an existing IC engine warranty with the manufacturer. The contractor shall provide a certification from a third-party certified mechanic prior to start of construction, stating the timing of all diesel-powered construction equipment engines have been retarded two degrees before top center.

AQ-2 The project construction contractor shall use high-pressure injectors on all diesel engines that were manufactured before 1996, and which do not have existing IC engine warranties with the manufacturer. The contractor shall provide documentation of warranty and manufacture date or a certification from a third-party certified mechanic stating that all diesel construction equipment engines are utilizing high-pressure fuel injectors.

AQ-3 The project construction contractor shall use Caterpillar pre-chamber diesel engines or equivalent, and perform proper maintenance and operation.

AQ-4 The project construction contractor shall electrify equipment, where feasible.

AQ-5 The project construction contractor shall restrict the idling of construction equipment to 10 minutes.

AQ-6 The project construction contractor shall ensure that equipment will be maintained in proper tune to prevent visible soot from reducing light transmission through the exhaust stack exit by more than 20 percent for more than 3 minutes per hour and use low-sulfur fuel as required by SCAQMD regulation.

AQ-7 The project construction contractor shall use catalytic converters on all gasoline equipment (except for small [2-cylinder] generator engines). If this measure is not implemented, emissions from gasoline equipment shall be offset by other means (*e.g.*,

Emission Reduction Credits).

AQ-8 The project construction contractor shall cease construction during periods of high ambient ozone concentrations (*i.e.*, Stage 2 smog alerts) near the construction area (SCAQMD, 1993).

AQ-9 The project construction contractor shall schedule all material deliveries to the construction spread outside of peak traffic hours, and minimize other truck trips during peak traffic hours, or as approved by local jurisdictions.

AQ-10 The project construction contractor shall use only solar powered traffic signs (no gasoline-powered generators shall be used).

The following measures will be implemented to reduce construction emissions of PM10:

AQ-11 The project construction contractor shall apply non-toxic soil stabilizers according to manufacturers' specification to all inactive construction areas (previously graded areas inactive for 10 days or more; soil stockpiled for 2 days or more).

AQ-12 The project construction contractor shall enclose, cover, water twice daily, or apply non-toxic soil binders according to manufacturers' specifications to exposed stockpiles (i.e., gravel, sand, dirt) with 5 percent or greater silt content.

AQ-13 In areas where dewatering is not required, the project construction contractor shall water active grading/excavation sites at least twice daily.

AQ-14 The project construction contractor shall increase dust control watering when wind speeds exceed 15 miles per hour for a sustained period of greater than 10 minutes, as measured by an anemometer. The amount of additional watering would depend upon soil moisture content at the time; but no airborne dust should be visible.

AQ-15 The project construction contractor shall suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 mph (40 kph).

AQ-16 The project construction contractor shall ensure that trucks hauling dirt on public roads to and from the site are covered and maintain a 50 mm (2 in) differential between the maximum height of any hauled material and the top of the haul trailer. Haul truck drivers shall water the load prior to leaving the site to prevent soil loss during transport.

AQ-17 The project construction contractor shall ensure that graded surfaces used for off-road parking, materials lay-down, or awaiting future construction are stabilized for dust control, as needed.

AQ-18 The project construction contractor shall sweep streets in the project vicinity once a day if visible soil material is carried to adjacent streets.

AQ-19 The project construction contractor shall install wheel washers where vehicles enter and exit unpaved roads onto paved roads or wash off trucks and any equipment leaving the site each trip.

AQ-20 The project construction contractor shall apply water three times daily or apply non-toxic soil stabilizers according to manufacturers' specifications to all unpaved parking, staging areas, or unpaved road surfaces.

AQ-21 The project construction contractor shall ensure that traffic speeds on all unpaved roads to be reduced to 15 mph (25 kph) or less.

AQ-22 Prior to the approval of plans and specifications, the USACE shall ensure that plans and specifications specify that all heavy equipment shall be maintained in a proper state of tune as per the manufacturer's specifications.

6.1.2 Biological Resources

The 1988 GDM/SEIS included numerous environmental commitments and mitigation measures (Table 4-8 of the 2001 SEIS/EIR) that have already been implemented to compensate for impacts related to construction (or re-construction) of Prado Dam and associated features, including the Alcoa Dike. Several of these measures are summarized in the table 6-1below.

Table 6-1 Original Mitigation Commitment from 1988 Supplemental Environmental Impact Statement and 2018 Final SEA/EIR Addendum

Resource	Impact	Mitigation
Least Bell's Vireo (LBV) habitat	30 acres of LBV habitat potentially converted to willow woodland without understory due to changes in operation schedule (increased inundation) and operation of haul roads	Restore 133 acres of degraded habitat above the 510-ft elevation line to willow woodland with understory. **This measure was superseded by the 1995 Cooperative Agreement between OCWD, USFWS, and USACE wherein $1 million was contributed to the SAR Conservation Trust Fund.** Set aside $450,000 for a monitoring program for the vireo and a management program for its pests.
Willow woodland	Loss of 23 acres of willow woodland without understory (non-vireo habitat) due to construction	
Proposed least Bell's vireo critical habitat	USFWS proposed that increased durations of inundation could potentially destroy all proposed LBV critical	

Resource	Impact	Mitigation
	habitat below 500-ft elevation.	
Shrub land	Loss of 12 acres due to construction of Highway 71 Dike	Reseed Borrow Site No.1 (up to 160 ac) with native shrub land species.
Oak woodland	Loss of 5 acres (84 trees) during construction of Highway 71 Dike	Plant 336 trees on 5.17 acres south of Prado Regional Park (mitigation ratio of 4:1). This measure is no longer warranted due to Highway redesign which eliminated all impacts to existing oak woodlands.
Grassland	Loss of Canada Goose foraging habitat at Borrow Site No. 2	Excavation of Borrow Site No. 2 will take place in 3 phases. Completed phases will be recontoured and restored with suitable goose forage material, which will be planted during the season geese are present so that young shoots will always be available. Restoration will include recontouring, respreading salvaged topsoil, fertilization, and seeding with appropriate seed mixes). Additionally, 60 acres will be enhanced for geese through mowing during years the borrow site is active.
Aquatic habitat	Minor impacts from Borrow Site No. 2 haul road adjacent to Chino Creek	None (impact not significant)
All biological resources	Noise impacts from construction	None (impact not significant)
Least Bell's Vireo (LBV) habitat Willow Woodland and Coastal sage Scrub (CSS) habitat for California gnatcatcher foraging	Impacts to Alcoa Dike Phase 1 and 2 Project (s)	Corps has contracted out a mitigation contract to restore 308-acres riparian habitat and 19 acres of coastal sage scrub habitat by removing non-native invasive (primarily arundo) vegetation in these parcels as detailed below. There are two riparian habitat restoration parcels and three CSS habitat restoration parcels (collectively, the Habitat Restoration Areas). Riparian Parcel 1 is located between Auburndale and Lincoln Avenue within Temescal Creek. This 23-acre parcel is estimated to contain 19-acres of non-native, invasive vegetation. Riparian Parcel 2 is located in Prado Basin, downstream of existing, previously establish mitigation parcels. This 285-acre parcel is estimated to contain 65% or 185-acres of non-native invasive vegetation (primarily arundo). Removing this vegetation and continuing to spray and remove new growth of non-natives

Resource	Impact	Mitigation
		throughout the contract period would allow native riparian habitat to establish in its place, with both parcels. The CSS Parcels 1-3 total 19.24 acres and are located in close proximity to the Alcoa Dike project borrow site. These 3 parcels are currently dominated by non-native vegetation and will require supplemental planting and irrigation and continued herbicide treatment for conversion to CSS habitat, and to achieve success criteria. Restoration of a minimum of 13 acres to CSS habitat within these areas is required.

In addition to the environmental commitments and mitigation measures included in the 1988 GDM/SEIS, the Corps proposes to implement the following measures to further minimize and mitigate effects of the Proposed Action on biological resources. The measures from the 2001 SEIS/EIR that apply to the Proposed Action are listed below with minor changes indicated in italics:

BR-11 The construction contractor shall clear riparian (cottonwood-willow, willow, mulefat scrub) vegetation associated with Project construction only during periods when the least Bell's vireo and California gnatcatcher are not nesting (vegetation would be removed 16 August through 14 February). *(Note: This environmental window will be used for all vegetation clearing to avoid direct effects to other nesting birds.)*

BR-12 Construction activities shall be monitored by the USACE to assure that vegetation is removed only in the designated areas. Riparian areas *(all areas)* not to be disturbed shall be flagged *(staked, or otherwise demarcated)*.

BR-13 The construction contractor shall install a noise barrier prior to 15-February along the access road east and southeast of the dam along the southwestern border of the Basin *(along the haul road/borrow areas)* to shield nesting vireos and California gnatcatcher *(and other birds)* from excessive noise generated by construction vehicles and equipment.

BR-14 Prior to utilizing the borrow sites, the construction contractor shall place dirt berms between the borrow sites and the willow riparian forest *(or otherwise ensure that existing sound walls between the borrow site and adjacent habitat are in good condition and positioned correctly)* to shield nesting vireos and California gnatcatcher *and other sensitive species* from excessive noise generated by heavy equipment.

BR-14A When construction is completed in a given area, the construction contractor shall hydroseed the completed Dikes and all temporarily disturbed upland areas, including borrow sites, with local native shrubs and groundcover. The mix of native species in the hydroseed shall be approved in advance by the Environmental Resources Branch of the USACE, Los Angeles District. (*Hydroseeding of Dikes shall be limited to native grasses in compliance with Corps Dam and Levee Safety Regulations; other areas greater than 50' from the structures will be seeded/planted with a more diverse mix of native species.)*

BR-14C The USACE has agreed to mow all areas that will be excavated during spring/summer months, prior to 15-February, (between 16-August and 14-Februray) to preclude nesting of and impacts to vireo, gnatcatcher, and grasshopper sparrows and other species of concern.

The Corps agrees to implement the following environmental commitments, in addition to those described in the 1988 GDM/SEIS and 2001 SEIS/EIR:

EC-BR-1 Upon development of final construction plans and prior to site disturbance, the Corps shall clearly delineate the limits of construction on project plans. All construction, site disturbance, and vegetation removal shall be located within the delineated construction boundaries. The storage of equipment and materials, and temporary stockpiling of soil shall be located within designated areas only, and outside of natural habitat areas/channel. The limits of construction shall be delineated in the field with temporary construction fencing, staking, or flagging.

EC-BR-2 Prior to construction activities and throughout the construction period, a Corps qualified biologist (or the environmental monitor) shall continue to inspect the construction site and adjacent areas to determine if any raptors are nesting within 200 feet of the construction site. If active nests are found, the Corps biologist will coordinate with CDFW to determine appropriate avoidance or minimization measures.

EC-BR-3 Prior to any ground-disturbing activities (e.g. mechanized clearing or rough grading) for all project related construction activities, a Corps qualified biologist (or environmental monitor) shall conduct a pre-construction surveys of the project site for terrestrial special-status, including MSHCP covered, wildlife species. During these surveys, the biologist will inspect the project area for any sensitive wildlife species, ensure that potential habitats within the construction zone are not occupied by sensitive species (e.g., potential burrows/nests are inspected), and in the event of the discovery of a non-listed, special-status ground-dwelling animal, recover and relocate the animal to adjacent suitable habitat within the project site at least 200 feet from the limits of construction activities.

EC-BR-4 Prior to construction activities, a Corps qualified biologist (or the environmental monitor) shall conduct pre-construction environmental training for all construction crew members. The training shall focus on required mitigation measures and conditions of regulatory agency permits and approvals (if required). The training

shall also include a summary of sensitive species and habitats potentially present within and adjacent to the project site.

EC-BR-5 The Corps' construction contractor will prepare a Spill Prevention and Contingency Plan. The Plan shall be implemented prior to and during site disturbance and construction activities. The plan will include measures to prevent or avoid an incidental leak or spill, including identification of materials necessary for containment and clean-up and contact information for management and agency staff. The plan and necessary containment and clean-up materials shall be kept within the construction area during all construction activities. Workers shall be educated on measures included in the plan at the pre-construction meeting or prior to beginning work on the project.

EC-BR-6 The Corps biologist (or the environmental monitor) will monitor construction activities to ensure compliance with environmental commitments.

EC-BR-7 In compliance with the 2012 BO Amendment, the Corps will restore (through arundo and other non-native removal) one acre of riverine habitat for each acre of wetland/riparian habitat temporarily disturbed by the Alcoa Dike Project, and restore five acres for each acre of permanent impact to these vegetation communities. This will equate to 20.11 acres of off-site restoration, to compensate for an increase in permanent impacts of 4.53 acres and a decrease in temporary impacts of 2.54 acres. *(The 1:1 mitigation requirement for temporary impacts assumes that the restored area will be actively maintained for the life of the project. The Corps also has the option of compensating for temporary impacts to riparian/wetland habitat by restoring three acres in an off-site location for each acre affected (3:1), and maintaining the restored area for a period of five years only. If the Corps selects this option, then 11.05 acres of habitat will be restored.)*

EC-BR-8 Noise barriers should be constructed prior to February 14 of each year to minimize impacts to listed species. The construction contractor will be required to monitor noise when activities approach within 500 feet of riparian habitat during the nesting season. Ambient noise levels will be recorded prior to the nesting season, or prior to construction during that period. If construction noise levels exceed authorized limits (per the 2001 and 2012 BO, 2018 BO or as otherwise agreed to by the Service), the Contractor will construct or modify sound barriers, equipment, or procedures (including construction schedules) as necessary to meet these conditions to ensure that: 1) noise does not exceed 60 dBA, or otherwise agreed upon limit with the Service, within occupied vireo habitat; or, (2) noise does not exceed 5 dBA above ambient conditions if said levels are above 60 dBA, or another agreed upon limit. If construction noise levels within riparian habitat areas outside of the project footprint cannot be reduced below 60 dBA or another agreed upon and documented limit, during the period of February 15 through August 15 of any year, the Corps will offset impacts at a 1:1 ratio per breeding season affected by such noise levels. This 1:1 ratio will be based on the acreage of riparian habitat outside the project footprint subject to noise levels over 60 dBA, or 5 dBA above

ambient, or other agreed upon limit, during the noted period, per the number of breeding seasons affected (e.g., 1 acre of riparian, habitat affected by noise in two breeding seasons will result in 2 acres of restoration). The area affected will be determined by the periodic project noise monitoring, and the effort will be doubled at the Dike construction site itself, as compared to the other project footprint areas. The offsetting measure will consist of riparian habitat restoration (non-native invasive vegetation control) for 5 years, from the upper Santa Ana River watershed and/or action area.

EC-BR-9 The construction contractor must not allow water containing mud, silt or other pollutants from grading, aggregate washing, or other activities to enter channel stream or be placed in locations that may be subjected to high storm flows.

EC-BR-10 To the maximum extent practicable, equipment, haul routes and staging areas will be located outside of the active channel/wash.

EC-BR-11 The construction contractor must avoid all impacts to the low-flow channel of Temescal Creek and restrict all construction-related access to outside of the channel whenever water is present.

SART Mitigation requirements:

EC-BR-12 The SART project proponent will restore all temporary and permanent impacts due to SART construction by removing non-native vegetation and planting native habitat within and immediately adjacent to their work site. The proponent shall develop and provide a restoration plan including a planting palette, location, methodologies, irrigation and maintenance plans and success criteria for Corps review and approval, prior to construction of trail features. The proponent shall monitor and maintain the site (including weeding, irrigation and re-planting if necessary for plant establishment) for a minimum of 5 years, or until success criteria are met.

6.1.3 Water Resources and Hydrology

EC-WR-1 **Construction Stormwater Pollution Prevention Plan.** A Construction Stormwater Pollution Prevention Plan (SWPPP) shall be developed for the project by the construction contractor and filed with the Santa Ana Regional Water Quality Control Board (RWQCB) prior to construction. The SWPPP shall be stored at the construction site for reference or inspection review. Implementation of the SWPPP would help stabilize graded areas and waterways and reduce erosion and sedimentation. The plan would designate BMPs that would be adhered to during construction activities. Erosion minimizing efforts such as straw wattles, water bars, covers, silt fences, and sensitive area access restrictions (for example, flagging) would be installed before clearing and grading begins. Mulching,

seeding, or other suitable stabilization measures would be used to protect exposed areas during construction activities. During construction activities, measures would be in place to ensure that contaminates are not discharged from the construction sites. The SWPPP would define areas where hazardous materials would be stored, where trash would be placed, where rolling equipment would be parked, fueled and serviced, and where construction materials such as reinforcing bars and structural steel members would be stored. Erosion control during grading of the construction sites and during subsequent construction would be in place and monitored as specified by the SWPPP. A silting basin(s) would be established, as necessary, to capture silt and other materials, which might otherwise be carried from the site by rainwater surface runoff.

EC-WR-2 **Hazardous Materials Management Plan and Emergency Response Plan.** A project-specific hazardous materials management and hazardous waste management plan would be developed prior to initiation of construction. The plan would identify types of hazardous materials to be used during construction and the types of wastes that would be generated. All project personnel would be provided with project-specific training to ensure that all hazardous materials and wastes are handled in a safe and environmentally sound manner. This plan shall include an emergency response program to ensure quick and safe cleanup of accidental spills.

EC-WR-3 **Water quality permits.** Prior to engaging in any soil-disturbing activities, the construction contractor shall document compliance with the Clean Water Act (CWA) WQC Section 401 and Section 402 NPDES General Permit for Storm Water Discharges Associated with Construction Activities, and shall also receive any necessary permits for dewatering activities.

6.1.4 Land Use

EC-LU-1 **Butterfield Park Construction and Maintenance Plan.** Prior to commencement of construction within Butterfield Park, a Butterfield Park Construction and Maintenance Plan shall be prepared and submitted to the City of Corona's Parks and Community Services Department for review and approval. At a minimum, the plan shall include the following: the expected start date and duration of construction; a detailed description of the activities associated with construction; a detailed description of expected maintenance activities that will occur in the future, which shall include the frequency and duration of such activities, and the procedures for notifying the City prior to maintenance activities in order to avoid disruptions to the remaining recreation resources; and any additional information that would help minimize disruptions to the remaining recreation resources.

6.1.5 Noise

As long as construction activities occur during 7:00 a.m. to 6:00 p.m., Monday through Friday and occasionally Saturday, which are the exempted time periods per County of Riverside Municipal Code and City of Corona Municipal Code, no additional environmental commitments

would be required. However, any changes to that schedule, including occasional overtime work, would require obtaining a variance from local authorities per the following additional environmental commitments, which would be incorporated into contract specifications for the proposed project to reduce potential impacts to noise.

EC-N-1 Prior to construction, the construction contractor shall obtain Riverside County approval (exemption or variance) per Riverside County Municipal Code Section 847, Section 7.(a).1 – Construction Related Exceptions, for all noise sources not exempt by Riverside County Municipal Code Section 847, Section 2.i. and exceeding Riverside County Municipal Code Section 847, Section 4 – General Sound Level Standards. Additionally, prior to any such activities occurring, the construction contractor shall obtain Riverside County approval (exemption or variance) for all operational and maintenance activities not compliant with Riverside County Municipal Code Section 847.

EC-N-2 Prior to construction, the construction contractor shall obtain a variance from the City of Corona for all construction activities not compliant with the performance standards identified within the City of Corona Municipal Code Section 17.84.040 (c) – Noise Standards. Additionally, prior to any such activities occurring, the project proponent shall obtain a variance from the City of Corona for all operational and maintenance activities not compliant with City of Corona Municipal Code Section 17.84.040 (c) – Noise Standards.

6.1.6 Cultural Resources

CR-1 The Corps shall ensure that ground disturbing activities that have the potential to impact historic properties is monitored by archaeologists meeting the Secretary of the Interior's Standards. Any finds shall be documented in accordance with the Programmatic Agreement.

CR-2 If previously unknown cultural resources are found during construction of any feature of the Santa Ana River Project, construction in the area of the find shall cease until the requirements in 36 CFR 800.13, are met. This would include coordination with the California State Historic Preservation Officer, the Advisory Council on Historic Preservation, and appropriate Native American groups and/or other interested parties. It may require additional measures such as test and data recovery excavations, archival research, avoidance measures, etc.

CR-3 Cultural resource monitoring will occur during SART construction in areas where excavation into native soils will be required.

7 COMPLIANCE WITH ENVIRONMENTAL REQUIREMENTS

7.1 7.1 Relevant Federal, State, and Local Statutes, Laws, and Guidelines

The following section provides a brief summary of the laws, regulations, Executive Orders, and other guidelines that are relevant to the proposed project activities and alternatives. Included in this summary is a discussion of the consistency of the proposed project activities with each of the plans, policies, and regulations listed below.

7.1.1 Federal Laws and Regulations

The National Environmental Policy Act and California Environmental Quality Act. This Supplemental Environmental Assessment (SEA) and Environmental Impact Report (EIR) Addendum has been prepared in accordance with both the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA).

A change was made to the Proposed Action between the Draft and Final SEA/EIR Addendum to modify the VFZ width from 15 ft to 50 ft to comply with levee safety certification requirements. The Draft SEA/EIR Addendum assumed that a 15-foot VFZ would be maintained and did not identify or describe the requirement for a 50-ft VFZ. The impact acreages presented in Draft ESA/EIR Addendum reflected the worst-case scenario of a full 50-ft VFZ as shown in this Final SEA/EIR Addendum. This change does not present significant new information, a substantial increase in the severity of an environmental impact or provide new information of substantial importance relative to the Draft SEA/EIR Addendum. As a result, this revision did not require recirculation of the Draft SEA/EIR Addendum.

Pursuant to Section 15164 of CEQA guidelines, an addendum to an approved EIR shall be prepared if "none of the conditions described in Section 15162 of the guidelines calling for preparation of a subsequent EIR have occurred," "only if minor technical changes or additions are necessary to make the EIR under consideration adequate under CEQA," and "the changes to the EIR made by the addendum do not raise important new issues about significant effects on the environment." Based on the analyses in Chapters 4 and 5, the Proposed Action will not have a significant effect on the human environment. OCFCD has determined the changes to the project design, construction, operation and maintenance of Alcoa Dike embankment under the Proposed Action does not raise important new issues of significant effects on the environment, and therefore preparation of a Supplemental EIR is not required.

National Historic Preservation Act of 1966, as Amended (NHPA). The Corps is in compliance with Section 106 of the NHPA. A programmatic agreement (PA) was executed for the SARMP in 1992 by the Corps, State Historic Preservation Officer (SHPO), and the Advisory Council on Historic Preservation. The PA details the procedures to be followed for each feature of the project. Under the Proposed Action, no additional consultation is required. Eight cultural resources have been identified within the Dike construction footprint and the borrow site, CA-RIV-5521, CA-RIV-4727, CA-RIV-4728, CA-RIV-5253, CA-RIV-7136, CA-RIV-5573, CA-RIV-7676, and CA-RIV-7679. All eight have been determined to be not eligible for the NRHP through a consensus determination with the SHPO.

In June of 2017, the Corps consulted with the SHPO regarding the SART, a portion of which is also addressed in this document. The Corps determined that the project would result in no adverse effect to historic properties and the SHPO concurred (Appendix A).

Fish and Wildlife Coordination Act. The proposed project is in compliance. The SARMP has been fully coordinated with the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW) and other agencies. Two Coordination Act Reports have been prepared for the SARMP (1988 and 1999). These documents are included in the 1988 SEIS and the 2001 SEIS/EIR, and the recommendations continue to be carried forward during implementation of each SARMP feature. In recent years, numerous meetings have occurred between the USFWS, CDFW, other resource agencies, local sponsors and the Corps to discuss the various proposed projects in Prado Basin and the Lower Santa Ana River. Discussions included potential impacts to, mitigation for, and minimization and avoidance measures for nesting birds covered under the Migratory Bird Treaty Act (MBTA), species covered under the Federal Endangered Species Act (ESA) and the California Endangered Species Act (CESA) (such as the least Bell's vireo and Santa Ana sucker), and wildlife movement issues. In addition, consultation with the USFWS under the ESA has been completed as noted below.

Section 7 of the Endangered Species Act, as Amended. Section 7 of the ESA requires federal agencies, in consultation with, and with the assistance of the Secretary of the Interior or the Secretary of Commerce, as appropriate, to insure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of critical habitat for these species. Potential impacts from the overall Alcoa Dike project to the federally endangered least Bell's vireo (*Vireo bellii pusillus*; vireo) and its designated critical habitat, and the federally threatened coastal California gnatcatcher (*Polioptila californica californica*; gnatcatcher) and potential impacts to proposed critical habitat for the federally threatened (western distinct population segment of the) yellow-billed cuckoo (*Coccyzus americanus*; cuckoo) are addressed in an amended BO (FWS-WRIV-08B0408-18F1350) and conference opinion rendered by the USFWS dated August 23, 2018. No effects beyond those addressed in the 2018 amended BO and conference opinion would occur from implementation of the proposed Phase II project and associated SART in proposed action requiring reinitiation of consultation, as FWS concurred in correspondence via phone April 15, 2020 and then in email on March 4, 2021.

The Corps has determined the Proposed Action (including Phase II) would not affect the federally endangered southwestern willow flycatcher (*Empidonax traillii extimus*) or its designated critical habitat or the Santa Ana sucker, (*Catostomus santaanae*). Therefore, consultation is not required. The Proposed Action is in compliance with the Act.

Migratory Bird Treaty Act. The Migratory Bird Treaty Act of 1918 (16 U.S.C. 703-711) makes it unlawful to possess, buy, sell, purchase, barter or "take" any migratory bird listed in Title 50 of the Code of Federal Regulations Part 10. "Take" is defined as possession or destruction of migratory birds, their nests or eggs. The clearing or mowing of vegetation associated with proposed project construction is only allowed during periods when migratory birds are not nesting (August 16 through February 14). Construction may be done anytime of the year provided that the clearing or mowing of vegetation is done between August 16 and February 14 when migratory

birds are not nesting. The current list of species protected by the MBTA includes several hundred species and essentially includes all native birds. Mitigation measures developed in the 2001 Final SEIS/EIR have been formulated to reduce impacts on migratory birds and will be implemented as part of the Proposed Action. Therefore the project is in compliance with the MBTA.

Bald and Golden Eagle Protection Act, as Amended. The proposed project is in compliance. The Bald and Golden Eagle Protection Act of 1940, as amended, protects bald and golden eagles by prohibiting the taking, possession, and commerce of such birds and nests without a permit and establishes civil penalties for violation of this Act. Take of bald and golden eagles is defined as follows: "disturb means to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior'' (72 FR 31132; 50 CFR 22.3).

On November 10, 2009, the USFWS implemented new rules (74 FR 46835) governing the "take" of golden and bald eagles. The new rules were released under the existing Bald and Golden Eagle Protection Act which has been the primary regulation protecting unlisted eagle populations since 1940. All activities that may disturb or incidentally take an eagle or its nest as a result of an otherwise legal activity must be permitted by the USFWS under this Act. The definition of disturb (72 FR 31132) includes interfering with normal breeding, feeding, or sheltering behavior to the degree that it causes or is likely to cause decreased productivity or nest abandonment.

The proposed project would not affect birds protected under this Act beyond those effects that were addressed in the 2001 SEIS/EIR and CESA permit (2081-2001-023-06). Golden eagles may occasionally forage within the borrow site and other upland habitats within Prado Basin, as do other raptors. However, no nesting habitat would be affected and no nests are known to occur in the vicinity. Mitigation and compensation measures that were outlined in the 2001 SEIS/EIR and CESA permit would be implemented as required for impacts related to the proposed project. For instance, temporarily impacted areas will be reseeded following construction.

Clean Air Act, as Amended. Under Section 176(c) of the Clean Air Act, as amended, (CAA), the Corps is required to make a determination of whether the Alcoa Dike proposed project "conforms" with the State Implementation Plan (SIP). Conformity is defined in Section 176(c) of the CAA as compliance with the SIP's purpose of eliminating or reducing the severity and number of violations of the National Ambient Air Quality Standards (NAAQS) and achieving expeditious attainment of such standards. If the total direct and indirect emissions of the criteria pollutant or precursor in a nonattainment or maintenance area caused by a Federal action would not equal or exceed the applicability rates at 40 CFR 93.153(b), a conformity determination is not required.

The proposed project is located approximately in the central part of the South Coast Air Basin (SCAB) of California. Criteria pollutants that are in non-attainment or maintenance are Ozone, Carbon Monoxide (CO), Nitrogen Dioxide (NO2), and Particulate Matter (PM)10 and PM2.5. The proposed project emissions considered heavy duty construction equipment and commuter vehicles for all phases of construction during the project duration. Yearly (tons per year) emissions for the proposed project were calculated for the conformity determination applicability analysis. Emissions generated by the Proposed Action are expected to be

temporary, and would be below the applicability rates. A conformity determination is not required. Thus, emissions from the Proposed Action would conform to the SIP. The Corps has determined that the proposed project is in compliance with the CAA. Emissions would be further reduced with implementation of environmental commitments AQ-1 to AQ-22..

Clean Water Act, as Amended. The proposed project complies with 40 CFR Part 230, regulations promulgated by the U.S. Environmental Protection Agency (EPA) pursuant to Section 404(b)(1), and complies with section 401, of the Clean Water Act (CWA). The 2001 SEIS/EIR identified that the proposed project and other Prado Basin and Vicinity features would affect jurisdictional waters (Waters of the U.S.). The 2018 Final SEA/EIR Addendum identified 0.49 acres of permanent impacts and 2.94 acres of temporary impacts to Waters of the U.S. The current Alcoa Dike Phase II design coupled with Phase I impacts, will result in a total of 2.03 acres of permanent impacts and 1.55 acres of temporary impacts to Waters of the U.S. This is an addition of 1.54 acres of permanent and decrease of 1.39 acres of temporary impacts to Waters of the U.S. compared to the 2018 Final SEA/EIR alternative.

The Corps obtained a Section 401 water quality certification (SARWQCB WDID # 332019-08) from the Santa Ana Regional Water Quality Control Board in April 2019 that accounts for the impacts of the Proposed Action. Although the Draft SEA/EIR Addendum assumed that a 15-foot VFZ would be maintained and did not identify or describe the requirement for a 50-foot VFZ, the impact acreages presented in that document reflected a worst-case scenario of a full 50-foot VFZ. Those impact acreages were also included in the 401 water quality certification and the combined effects from the Alcoa Phase I and Phase II project were coordinated with the SARWQCB and the . Both agencies confirmed that amendments to the BO and 401 water quality certification would not be required for implementation of a 50-foot VFZ. The 401water quality certification accounts for permanent loss of 7.25 acres of riparian vegetation, 3.0 acres of stream channel, and 0.01 acres of wetland. It also accounted for the temporary loss of 19.38 acres of riparian vegetation, 0.50 acres of stream channel, and 0.02 acres of wetlands. The impacts of the project will not exceed the impacts authorized in the 401 water quality certification.

The Corps' contractor will submit a Notice of Intent and obtain a National Pollution Discharge Elimination System (NPDES) construction general stormwater permit (Section 402 of the CWA) prior to construction of Phase II. A Stormwater Pollution Prevention Plan, including Best Management Practices (BMPs) and an Erosion and Sedimentation Control Plan, will be developed and implemented by the Corps' Phase II contractor prior to and during construction to minimize site erosion. Additional information on the Waters of the U.S. can be found in Section 4.2.

Executive Order 11988, Floodplain Management. Under this Executive Order, the Corps must take action to avoid development in the base floodplain (100-year) unless it is the only practicable alternative to reduce hazards and risks associated with floods; to minimize the impact of floods on human safety, health and welfare; and to restore and preserve the natural and beneficial value of the base floodplain. The Proposed Action would avoid development in the flood basin to the extent practicable to reduce hazards and risks. The Proposed Action is in compliance.

Executive Order 11900. Protection of Wetlands. The Corps considered the effects of the proposed project on the survival and quality of wetlands. Projects are to "…avoid to the extent possible the long- and short-term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative…" See Section 4.2, Biological Resources, for an accounting and description of impacts to wetlands related to Alcoa Dike Phase II construction. Mitigation measures developed in the 2001 Final SEIS/EIR, 2018 Final SEA/EIR Addendum and subsequently for this project feature have been formulated to reduce impacts on wetlands.

Executive Order 12898. Environmental Justice. Executive Order 12898 requires the U.S. EPA and all other Federal agencies (as well as state agencies receiving Federal funds) to develop strategies to address this issue as part of the NEPA process. The agencies are required to identify and address, as appropriate, any disproportionately high and adverse human health or environmental impacts of their programs, policies, and activities on minority and low-income populations. The order makes clear that its provisions apply fully to programs involving Native Americans. The CEQ has oversight responsibility for the Federal government's compliance with E.O. 12898 and NEPA. The CEQ, in consultation with the USEPA and other agencies, has developed guidance to assist Federal agencies with their NEPA procedures so that environmental justice concerns are effectively identified and addressed. According to the CEQ's Environmental Justice Guidance Under the National Environmental Policy Act (published December 10, 1997), agencies should consider the composition of the affected area to determine whether minority populations or low-income populations are present in the area affected by the Proposed Action, and if so whether there may be disproportionately high and adverse human health or environmental impacts (Council on Environmental Quality 1997).

The proposed project is in compliance. There will be no impacts resulting from the proposed project that would result in disproportionately high and adverse impacts to minority and low-income communities.

7.2 State Regulations

The State Regulations discussed below apply to the sponsor.

7.2.1 Air Quality

California Air Resources Board. CARB has issued a number of CAAQS. These standards include pollutants not covered under the NAAQS and also require more stringent standards than those under the NAAQS. There is no change in compliance from the 2001 Final SEIS/EIR.

Greenhouse Gases. In 2006, in response to concerns related to global warming and climate change, the California State Legislature adopted ***Assembly Bill 32 (AB 32)***, the "California Global Warming Solutions Act of 2006." AB 32 focuses on reducing GHGs in California and requires the California Air Resources Board (CARB), the State agency charged with regulating statewide air quality, to adopt rules and regulations that would achieve GHG emissions equivalent to State-wide levels in 1990 by 2020 (Hendrix, Wilson, et. al., 2007). The Proposed Action would not conflict with any applicable plan, policy, or regulation for the purpose of reducing GHG emissions.

7.2.2 Biological Resources

California Endangered Species Act (CESA). The Proposed Action is or will be in compliance. Effects of the Proposed Action on state-listed species would be addressed in consultations by OCFCD with CDFW, if necessary. However, previous coordination with CDFW on other SARM features indicated that neither CESA nor a Streambed Alteration Agreement would be required, considering that construction will be overseen by the federal government, and routine OMMR&R conducted by the non-federal sponsors would not result in additional effects to state-listed species. The same situation exists for the Alcoa Dike Phase II project.

California Department of Fish and Wildlife Code, Section 1600

The Proposed Action is, or will be, in compliance. A 1601 Streambed Alteration Agreement (SAA No. 6-2001-263) was issued for the SARMP in 2002. This SAA had expired, and a new SAA (1600-2009-0031-R6) was signed by OCFCD in October 2009. OCFCD is responsible for coordinating with CDFW if necessary, for any additional updates. However, previous coordination with CDFW on other SARM features indicated that neither CESA nor a SAA would be required, considering that construction will be overseen by the federal government, and routine OMMR&R conducted by the non-federal sponsors would not result in additional effects to listed species. The same situation exists for the Alcoa Dike Phase II project. Nevertheless, minimization and avoidance measures included in the 2009 amended SAA would be followed during construction of the Alcoa Dike Phase II project.

Native Plant Protection Act. The proposed project is in compliance. California's Native Plant Protection Act (NPPA) requires all State agencies to utilize their authority to carry out programs to conserve endangered and rare native plants. Provisions of NPPA prohibit the taking of listed plants from the wild and require notification to the CDFW at least 10 days in advance of any change in land use. This allows CDFW to salvage listed plant species that would otherwise be destroyed. The Corps is required to conduct botanical inventories and consult with CDFW during and planning to comply with the provisions of this act and sections of CEQA that apply to rare or endangered plants.

Impacts to native plants listed as threatened or endangered would not differ from those addressed in the 2001 Final SEIS/EIR and CESA permit (2081-2001-023-06). Mitigation and compensation measures that were outlined in those documents will be implemented as required for impacts related to the Alcoa Dike Phase II project.

7.3 Local Regulations

The Local Regulations discussed below apply to the sponsor and owners.

7.3.1 Air Quality

The proposed project is within SCAQMD jurisdiction. The SCAQMD is responsible for planning, implementing, and enforcing federal and State ambient standards within this portion of the South Coast Air Basin. The regulations of this agency are primarily focused on stationary sources; therefore, most of the local agency regulations are not relevant to the proposed project.

The SCAQMD has visible emissions, nuisance, and fugitive dust emissions regulations with which the Project's construction will need to comply. The specific regulations are as follows:

- SCAQMD Rule 401 – Visible Emissions

- SCAQMD Rule 402 – Nuisance
- SCQMD Rule 403 – Fugitive Dust

These rules limit the visible dust emissions from the project construction sites, prohibit emissions that can cause a public nuisance and require the prevention and reduction of fugitive dust emissions to the extent possible. There is no change in compliance from the 2001 Final SEIS/EIR.

7.3.2 Biological Resources

Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). The MSHCP is a comprehensive, multi-jurisdictional Habitat Conservation Plan (HCP) focusing on conservation of species and their associated habitats in Western Riverside County. This HCP is one of several large, multi-jurisdictional habitat-planning efforts in Southern California with the overall goal of maintaining biological and ecological diversity within a rapidly urbanizing region. The MSHCP is intended to allow Riverside County and its cities to better control local land-use decisions and maintain a strong economic climate in the region while addressing the requirements of the state and federal ESAs.

Federal actions comply with the ESA through Section 7 rather than Section 10. The Biological Resources section of this SEA and EIR Addendum document the proposed project's mitigation, which is consistent with MSHCP requirements for a "Determination of Biologically Equivalent or Superior Preservation."

Riverside County Integrated Project General Plan. The proposed project is consistent with the General Plan. This plan directs policy towards the conservation of native vegetation in Riverside County. These policies are based on maintaining the ecological diversity in Riverside County through the management of native vegetation. Policies that are intended to protect superior examples of native vegetation resources in conjunction with permitted uses include: (1) update the vegetation map for western Riverside County in consultation with the CDFW, the Natural Diversity Data Base, the United States Forest Service, and other knowledgeable agencies and the County shall also provide these agencies with data as needed; (2) expand vegetation mapping to include the eastern portion of the County of Riverside; (3) maintain and conserve superior examples of native trees, natural vegetation, stands of established trees, and other features for ecosystem, aesthetic, and water conservation purposes; (4) conserve the oak tree resources in the County; and (5) encourage research and education on the effects of smog and other forms of pollution on human health and on natural vegetation.

City of Corona General Plan. The proposed project is in consistent with this Plan. The Proposed Project falls within the jurisdictional boundaries of the City of Corona. Pursuant to California state law (Government Code § 65301), the City of Corona has adopted a General Plan to guide long-term development within its boundaries and sphere of influence.

The following are selected goals from the City of Corona General Plan that are specific to biological and sensitive biological resources occurring and/or potentially occurring in the Project area:

- Protect, enhance, and sustain significant plant and wildlife species and habitat, which exist in Corona and its Planning Area for the long-term benefit of the natural environment, and Corona visitors and residents.
- Ensure that biological resources are not impacted during or as a result of construction and development activity.
- Protect natural and biological resources within riparian corridors and wetlands.
- Protect forest and vegetation resources in the City of Corona and the Planning Area.

The proposed action would not degrade or significantly impact plant or wildlife species and habitat in adjacent floodplain or open space areas. Wildlife corridors will not be impeded. Construction impacts will be minimized, avoided or mitigated. Therefore, the proposed project is consistent with the City of Corona General Plan.

7.3.3 Noise

As long as construction activities occur during 7:00 a.m. to 6:00 p.m., Monday through Friday, and occasionally Saturday, which are the exempted time periods per County of Riverside Municipal Code and City of Corona Municipal Code, the proposed construction would be in compliance with local (city and county) noise ordinances; any changes to that schedule, including occasional overtime work, would require obtaining a variance from local authorities.

8 AGENCY COORDINATION

The proposed project was coordinated formally and informally with numerous agencies, organizations, and individuals, including the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), State Office of Historic Preservation, Regional Water Quality Control Board (RWQCB), and local cities and counties. A Draft of this SEA/EIR Addendum was distributed to public agencies and interested parties for review as identified in Distribution Mailing List (Appendix B). Comments received and responses to comments are included in this Final SEA/EIR Addendum (Appendix C).

9 LIST OF PREPARERS AND REVIEWERS

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10 CONCLUSION

The changes to project features of the proposed Alcoa Dike project would not have any significant impacts on the environmental quality of the area beyond those addressed in previous Environmental Impact Statements (EIS) related to the overall Prado Basin and Vicinity construction. The other actions included in this SEA within the Proposed Action, including SART construction/operation and Brine Line replacement for protection, would have a less than significant impact on the environmental quality of the area. Therefore, another EIS is not required for these features.

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Appendix A
Cultural Resource Documentation

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Adl7isory Council On Historic Preservation

The Old Post Office Building
[redacted]

Reply to: [redacted]

April 23, 1993

Roberts. Joe
Chief, Planning Division
Department of the Army
Los Angeles District
Corps of Engineers
[redacted]

REF: Programmatic Agreement regarding the Santa Ana River Flood Control Project, California.

Dear Mr. Joe:

The enclosed Programmatic Agreement regarding the Santa Ana River Flood Control Project has been executed by the Council. This action constitutes the comments of the Council required by Section 106 of the National Historic Preservation Act and the Council's regulations. Please send copies of the signed Agreement to the California State Historic Preservation Officer and your Federal Preservation Officer.

The Council appreciates your cooperation in reaching a satisfactory resolution of this matter.

Sincerely,

Clau ia Nissley
Director, Western Office
of Review

Enclosure

PROGRAMMATIC AGREEMENT
AMONG
THE LOS ANGELES DISTRICT, CORPS OF ENGINEERS,
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION,
AND THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER
REGARDING IMPLEMENTATION OF THE SANTA ANA RIVER FLOOD CONTROL PROJECT

WHEREAS, the Los Angeles District, Corps of Engineers (COE) proposes to administer the Santa Ana River Flood Control Project, authorized by the Water Resources Development Act of 1986 (Public Law 99-662); and

WHEREAS, the Santa Ana River Project (the Project) will involve flood control improvements as described in *Supplemental Environmental Impact Statement, Santa Ana River Mainstem Including Santiago Creek, Phase II General Design Memorandum* (1988); and

WHEREAS, the COE, has determined that the Project may have an effect on properties included in or eligible for inclusion in the National Register of Historic Places and has consulted with the Advisory Council on Historic Preservation (Council) and the California State J-iistoric Preservation Officer (SHPO) pursuant to Section 800.13 of the regulations (36 CFR Part 800) implementing Section 106 of the National Historic Preservation Act (16 U.S.C. 470f) and Section 11 0(fl of the same Act (16 U.S.C. 470h-2(f)); and

WHEREAS, the Flood Control Districts of the Counties of Orange, Riverside, and San Bernardino, and the local Native American community participated in the consultation and have been invited to concur in this Programmatic Agreement; and

WHEREAS, the definitions given in 36 CFR 800.2 are applicable throughout this agreement;

NOW, THEREFORE, the COE, the Council, and the SHPO agree that the project shall be administered in accordance with the following provisions in order to satisfy the COE's responsibility under Section 106 for all individual aspects of the project.

STIPULATIONS

The COE will ensure that the following measures are carried out:

1. Archeological Survey.

Almost all of the project's area of potential effects has been surveyed. If there are additional lands that need to be surveyed for reasons such as, for example, project redesign or previously denied access, then the COE shall ensure that an archaeological survey of these lands is conducted. The survey shall be conducted in a manner consistent with the *Secretary of the Interior's Standards and Guidelines for Identification* (48 FR 44720-23) and taking into account NPS publication, *The Archeological Survey: Methods and Uses* (1978:GPO stock #024-016-00091). The survey shall be conducted in consultation with the SHPO, and a report of the survey, meeting the standards of the SHPO, shall be submitted to the SHPO for review and approval.

2. Recording.

Archeological site record forms shall be completed for all locations where cultural materials are identified. The site record forms will be completed in accordance with the California *Archeological Inventory Handbook for Completing An Archeological Site Record* (DPR 422-A-I, Rev. 5/86).

3. Evaluation.

Regional context summaries have been developed Goldberg and Arnold (1988), and Greenwood and Foster (1990) for local prehistoric districts, historic archeological districts, and a number of individual historic archeological properties and historic structures. The COE shall use the Goldberg and Arnold, and Greenwood and Foster summaries to develop an evaluation plan to evaluate properties identified within the Project's Area of Potential Effects (APE) for eligibility for inclusion in the National Register of Historic Places (NRHP). This evaluation plan shall detail site- or area-specific studies for the archival, architectural or subsurface testing which may be necessary to resolve questions of eligibility and to identify the values that qualify a property as eligible. The COE shall submit the evaluation plan to the SHPO for review and comment. Unless the SHPO objects within thirty days after receipt of the plan, the COE shall ensure that it is implemented.

Once an evaluation plan is accepted by the SHPO, the COE shall, in consultation with the SHPO, apply the National Register Criteria (36 CFR 60.4) to determine whether ♦.he properties are eligible. Should the COE and the SHPO determine that any of the properties are eligible for listing in the NRHP, the properties shall be considered eligible for purposes of this agreement. Should the COE and SHPO disagree that some or any of the properties are eligible, the COE shall submit documentation to the Keeper of the National Register for a formal determination of eligibility. Should COE and SHPO agree that a property is not eligible, such concurrence shall be, for the purposes of this Agreement, deemed conclusive that the property is not eligible and need not be the subject of further consideration.

4. Treatment Plan.

The COE shall assess the effects of the project on all National Register eligible properties in accordance with 36 CFR 800.5. A Treatment Plan (TP) shall be developed to take into account the effects of the project on historic properties that are determined to be eligible for listing in the NRHP.

The TP shall be consistent with the Secretary of the Interior's *Standards and Guidelines for Archeological Documentation* (48 FR 44734-37) and take into account the Council's publication, *Treatment of Archeological Properties - A Handbook* (Advisory Council on Historic Preservation, draft 1980), subject to any pertinent revisions the Council may **take** in the publication prior to completion of the TP. It shall also take into account the Secretary of Interior's *Guidelines for Historical and Architectural Engineering Documentation* (48 FR 44729-34).

The TP shall include, but not be limited to:

A. Measures to be taken to ensure avoidance and protection of historic properties, including floodproofing where feasible;

B. Data recovery plans founded on research designs to guide data recovery at historic properties significant for their information potential and which cannot be avoided by the effects of the project, or otherwise preserved in place. The research designs shall be developed in accordance with the standards and guidelines attached as Appendix 1.

C. A plan for historical documentation for historic archeological properties;

D. A plan for the relocation and interpretation of suitable historic structures that cannot be preserved in place;

F. A curation agreement that ensures that all materials and data from archeological sites are curated in accordance with 36 CFR 79. Materials recovered from privately owned lands that are to be returned to their owners will be maintained in accordance with 36 CFR 79 until their analysis is complete;

G. A plan for the treatment and disposition of items of cultural patrimony and human remains developed in consultation with the SHPO and representatives of relevant local Native American groups;

H. A plan for the treatment of historic properties that may be discovered during the implementation of the undertaking;

I. A schedule for the submission and review by the SHPO of progress r,ports, and the methods by which the consulting parties, and interested persons, including relevant Native American groups will be kept informed of the work and afforded the opportunity to participate;

5. Review of Treatment Plan.

The COE shall submit the TP to the SHPO, Council, and concurring parties to this Agreement for review and comment. The reviewers shall have thirty (30) days from receipt of the Treatment Plan to respond to the COE with comments. Failure to respond by any consulting party within the 30-day comment period shall not prohibit the COE from implementing the Treatment Plan.

6. Historic Properties Management Plan.

Within one year of the implementation of the TP, the COE will develop a Historic Properties Management Plan (HPMP) for Prado Basin in accordance with the standards and guidelines attached as appendix 2. The COE will provide copies of the draft HPMP to the SHPO and the Council for review and acceptance. Upon acceptance of the HPMP by the SHPO and the Council, the COE will finalize and implement it in lieu of compliance with 36 CFR 800.4 through 800.6 and 36 CFR 800.11. The COE will prepare an annual report on its implementation, and provide the report to the SHPO and Council for review, comment and consultation as needed.

7. Archeological Report Dissemination.

The COE shall ensure that all final archeological and historic reports resulting from actions

pursuant to this agreement will be provided to the SHPO and to the National Park Service for possible peer review and submission to the National Technical Information Service (NTIS). The agency official shall ensure that all reports are responsive to contemporary professional standards and to the Department of Interior's *Format Standards for Final Reports of Data Recovery Programs* (42 FR 5377-79). Precise locational data may be provided only in a separate appendix, if it appears that their release could jeopardize archeological sites.

8. Provision of Information to Data Base.

The COE will ensure that information resulting from the archeological data recovery project provided for in Stipulation 4.A is provided to the Orange, San Bernardino, and Riverside Counties Information Centers of the California Archeological Inventory.

9. Disputes.

Should the Council, SHPO, or consulting parties object within 30 days to any plans provided for review pursuant to the Programmatic Agreement, the COE shall consult with the objecting party to resolve the objection. If the COE determines that the objection cannot be resolved, the COE shall forward all documentation relevant to the dispute to the Council. Within 30 days after receipt of all documentation, the Council will either:

A. provide the COE with recommendations, which the COE will take into account in reaching a final decision regarding the dispute; or

B. notify the COE that it will comment pursuant to 36 CFR 800.6(b), and proceed to comment. Any comment provided in response to such a request will be taken into account by the COE in accordance with 36 CFR 800.6(c)(2) with reference to the subject of the dispute.

10. Amendment of this Agreement.

Any party to this agreement may request that it be amended, whereupon the parties will consult in accordance with 36 CFR 800.13 to consider such amendment.

11. Termination of this agreement.

Any party to this agreement may terminate it by providing thirty (30) days notice to the other parties, provided that the other interested parties will consult during the period prior to termination to seek agre ment on amendments or other actions that would avoid termination. In the event of termination, the COE will comply with 36 CFR 800.4 through 36 CFR 800.6 with regard to individual activities covered by this agreement.

12. Expiration of Agreement.

This agreement shall expire upon completion of the project. COE shall provide the parties to this agreement within thirty (30) days notice of a final project date.

Execution and implementation of this agreement evidences that the COE has satisfied its Section 106 responsibilities and taken into account the effects of the undertaking on historic properties.

ADVISORY STORIC PRESERVATI.ON

BY: ,&44,L 0.,.1/2,/fJ

U.S. ARMY CORPS OF ENGINEERS LOS ANGELES DISTRICT

BY: !A =!...L! ------Date /J7LCJ:2.

R. L. VanAntwerp,
Colonel, Corps of Engineers
District Engineer

CALIFORNIA STATE HISTORIC PRESERVATION OFFICER

BY: /4-,uh .. i'(. & <&<

Date August 19, 1992

Concur:

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BY: ULt.L/44< g', Date: 2-- "1;, -

APPROVED AS TO FORM

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By -..4d - t

Deputy

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

BY:____ Date:________

SAN BERNARDINO FLOOD CONTROL DISTRICT

BY:____ Date:________

Concur:

ORANGE COUNTY FLOOD CONTROL DISTRICT

BY:_____Date:___ _

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT .

BY:_____ 172C'. Date;Wb-f'.3

7

FORM APPROVED.
COUNTY COUNSEL

FEB 2 3 19 3

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SAN BERNARDINO FLOOD CONTROL DISTRICT

BY:_____Date:___ _

Concur:

ORANGE COUNTY FLOOD CONTROL DISTRICT

BY:_____Date:____ _

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

BY:_____Date:____ _

SAN BERNARDINO FLOOD CONTROL DISTRICT

BY: Larry Walker Date: NOV 30 1992

LARRY WALKER
Chairman, Board of Supervisors

92-1155

SIGNED AND CERTIFIED THAT A COPY OF THIS DOCUMENT liAS BEEtJ !:iELIVE'tED TO THE CHAIR-MhN OF THE RCABO.

rnP.LENE SPROAT
Clzrk of the Board of Supervisors
of the County of S Ber ardino

By Mary Louise Lovato
Deputy

BOARD OF SUPERVISORS SAN BERNARDINO COUNTY, CA

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NATIVE AMERICAN REPRESENTATIVE

BY: _____ Date: d-7-9:

NATIVE AMERICAN REPRESENTATIVE

BY _____ Date: 4/7/93

APPENDIX 1
STANDARDS AND GUIDELINES FOR RESEARCH DESIGNS

The research designs shall be consistent with the Secretary of the Interior's *Standards and Guidelines for Archeological Documentation* (48 FR 44734-37) and take into account the Council's publication, *Treatment of Archeological Properties* (Advisory Council on Historic Preservation (draft) 1980), subject to any pertinent revisions the Council may make in the publication prior to completion of the research design, and the SHPO Preservation Planning Bulletin No. 5, *Guidelines for Archaeological Research Designs* (1991) . They shall specify, at a minimum:

- the property, properties, or portions of properties where data recovery is to be carried out;
- any property, properties, or portions of properties that will be destroyed without data recovery;
- the research questions to be addressed through the data recovery, with an explanation of their relevance and importance;
- the methods to be used, with an explanation of their relevan e to the research questions;
- the methods to be used in analysis, data management, and dissemination of data, including a schedule;
- the proposed disposition of recovered materials and records;
- proposed methods for involving the interested public in the data recovery;
- proposed methods for disseminating results of the work to the interested public;
- proposed methods by which the participants to the Programmatic Agreement, including the Gabrielino Indian representatives, will be kept informed of the work and afforded the opportunity to participate; and
- a proposed schedule for the submission of progress reports to the SHPO.

APPENDIX 2
STANDARDS AND GUIDELINES FOR THE HISTORIC PROPERTIES MANAGEMENT PLAN

The Historic Properties Management Plan (HPMP) for Prado Dam Basin shall be prepared in accordance with the following guidelines.

1. The HPMP will be prepared by or under the supervision of an individual who meets, or individuals who meet, at a minimum, the "professional qualifications standards" for archeologist, historian, and architect in the Secretary of the Interior's Professional Qualifications Standards **(48 FR** 44738-9).

2. The HPMP will be prepared with reference to: (a) the Secretary of Interior's *Standards and Guidelines for Preservation Planning* (48 FR 44716-20); (b) the *Section 110 Guidelines* (53 FR 4727-46); and (c) U.S. Army Corps of Engineers regulations, *Project Construction and Operation Historic Preservation Program,* ERl 130-2-438.

3. The HPMP will be prepared in consultation with the San Bernardino County Museum and Native Americans representing the Gabrielino people.

4. The essential purpose of the HPMP will be to establish processes for integrating the preservation and use of historic properties with the mission and programs of the Los Angeles District, Corps of Engineers (COE) in a manner appropriate to the nature of the historic properties involved, the nature of Prado Dam Basin, and the nature of the COE's mission, programs, and planning processes.

5. In order to facilitate such integration, the **HPMP,** including all maps and graphics, will be made consistent with the data base management system used by the COE.

6. The HPMP will include the following:

a. Foreword. The foreword shall explain the basis upon which the HPMP is being prepared.

b. Introduction. The introduction shall explain the organization and use of the various sections of the HPMP.

c. Overview. This element of the HPMP will synthesize available data on the history, prehistory, architecture, architectural history, landscape architecture, past and present environment, and ethnography of Prado Dam Basin and its surrounding area, to provide a context in which to evaluate and consider alternative treatment strategies for different classes of historic properties. It will also include a brief description of previous archeological, historic, and ethnographic investigations conducted within the basin.

d. Inventory. This element of the HPMP will include descriptions of all properties within the basin that are known or thought to meet the National Register criteria (36 CPR 60.4), including but not limited to the following information on each property: (1) the class of historic property; (2) the location and areal extent of the property; (3) the current status and integrity of the property; and (4) the National Register

criteria that the property is known or thought to meet and the documentation supporting this determination.

e. Predictions. Based on the overview, this element of the HPMP will predict the distribution and nature of buried properties that have been identified through old maps and other historic archives, and, if applicable, structures that are not of sufficient age, but should be evaluated for National Register eligibility in the future. This element will also offer an estimate of the accuracy of the predictions, and outline ways and the conditions under which the predictions will be tested, refined, and verified to the extent needed through test excavations, remote sensing, architectural, historic, and other further research.

f. Identification system. Based on the overview and predictions, this element of the HPMP will establish procedures for the identification and evaluation of historic properties that may be affected by operations, maintenance and land use activities within the basin. This element of the HPMP will take into account the *Section 110 Guidelines,* Section 110(a)(2), Discussion (b)(2) through (b)(10) as applicable, and will provide for identification and evaluation to take place in a timely manner during the planning of any actions that might affect historic pn.,perties.

g. Management system. This element of the HPMP will establish procedures for the management of historic properties within the basin, including but not limited to:

i. procedures for the use of historic properties for agency purposes or the purposes of others, in a manner that does not cause significant damage to or deterioration of such properties, with reference to the *Section 110 Guidelines,* Section l lO(a)(l), Discussion (b), and specifically providing for interpretation;

ii. procedures for affirmatively preserving historic properties, with reference to the *Section 110 Guidelines,* Section ll0(a)(l), Discussion (c);

m. procedures for the maintenance of historic properties, with reference to the *Section 110 Guidelines,* Section 110(a)(2), Discussion (d)(l)(i);

iv. procedures for the avoidance or mitigation of adverse effects on historic properties, with reference to the *Section 110 Guidelines,* Section 110(a)(2), Discussion (d)(l)(iii);

v. procedures for the treatment of properties discovered during any future undertaking; and

vi. procedures for consultation with relevant parties during implementation of the HPMP, with reference to the *Section 110 Guidelines, Pan III.*

DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT. CORPS OF ENGINEERS
P.O. BOX 2711
LOS ANGELES, CALIFORNI"- 900SJ,2J25

July 26, 1996

REPLY TO
ATTENTION OF

Office of the Chief
Environmental Resources Branch

Ms. Cherilyn Widell
State Historic Preservation Officer
Office of Historic Preservation
Department of Parks and Recreation
[redacted]

Dear Ms. Widell:

This letter is in regard to the proposed Norco Bluffs project in Riverside County, California. The U. S. Army Corps of Engineers, Los Angeles District (Corps) proposes to construct bank stabiliz ation along the Santa Ana River. We are enclosing a project description with locational maps derived from the current draft EIR/EIS for the project (enclosure 1).

The Corps performed a records search of the area of potential effects (APE) through the Eastern Archaeological Information Center at the University of California Riverside and in-house records pertaining to the Prado Dam Flood Control Basin. It was determined that a majority of the APE had been surveyed previously. Specifically, both borrow areas (1 and 2), the staging area and a portion of the Santa Ana River bank to stabilized at Norco bluffs had been surveyed by L angenwalter and Brock in 1985 . A copy of the resulting report entitled *Phase II Archaeological Studies of Prado Basin and the Lower Santa Ana River* has been sent to you previously.

There were no archeological sites recorded in the Norco Bluffs portion of the APE (including the staging area). A survey of the previously unsu rveyed portions of the APE located at Norco Bluffs was performed by a Staff Archeologist from the Corps in May 1995. The required documentation is enclo sed with this letter (enclosure 2). No cultural resources of any significance were observed during the survey. Ground disturbing activities associa ted with project construction at the bluffs will be monitored by qualified archeolog ists. The project property has been subjected to frequent erosion given its proximity to the Santa Ana River. Construction access to the APE will be via existing roads and a new road in the Santa Ana River bed.

Borrow Areas 1 and 2, on the other hand, have numerous sites in association. Borrow Area 1 has several sites on its periphery, and all of them were recently evaluated as part of Prado Dam Flood Control Basin improvements (OHP#COE911223A). A draft plan of testing for ten sites (including those associated with Borrow Area 1) was sent to your office for review in a letter dated January 6, 1995 (enclosure 3). Evaluation of these sites has been completed, and a letter from our office with determinations of eligibility was sent on November 24, 1995 (enclosure 4). Based on testing, two sites associated with the Borrow Area 1, CA-RIV-1039H and -1044H, were determined eligible for the National Register. CA-RIV-1039H and -1044H will be avoided by excavations at Borrow Area 1. Site boundaries will be reestablished and a 200 feet buffer zone created. Ground disturbing activities will be monitored by qualified archeologists.

Borrow Area 2 contains seven archeological sites (OHP#COE911223A). Based on the results of test excavations, the Corps determined five of the seven sites not eligible and determined one site as being eligible for the National Register in a letter dated August 3, 1994 (enclosure 5). Your office concurred with our determinations for the five ineligible sites in Borrow Area 2, but disagreed with our eligibility determination for a sixth site in a letter dated August 25, 1994 (enclosure 6). The Corps later agreed that this sixth site (CA-SBR-7676H) is not eligible in a letter dated October 18, 1994 (enclosure 7). A seventh site, CA-SBR-7679H, was inadvertently not included in the August 3, 1994 letter. The Corps has determined site CA-SBR-7679H not eligible for the National Register based on test excavations. The site lacks integrity and data potential. A second copy of the test report entitled *Archaeological and Historical Investigations of Seven Sites in the Prado Basin* is enclosed for your reference (enclosure 8). In summary, the seven sites within Borrow Area 2 are not eligible for the National Register. We are in agreement regarding six of the sites. Ground disturbing activities within Borrow Area 2 will also be monitored, along with the placement of protective fencing for archeological site CA-RIV-653 which is outside but near the south side of the borrow area.

Based on this information, and in reference to 36 CFR 800.5(b), the Corps has determined that the proposed Norco Bluffs project will have no effect on historic properties (National Register listed or eligible properties). We would appreciate a response at your earliest convenience. If we do not hear from you within 30 days after your receipt of this letter, we will assume you do not object to our determination, and we will proceed with our project plans subject to the provisions for treating historic properties discovered during implementation of an undertaking contained in 36 CFR 800.11.

If you have any questions please contact Mr . Roderic McLean, Staff Archeologist, at [redacted]

Sincerely,

J

Robert S. Joe
Chief, Planning Division

Enclosures

DEPARTMENT OF THE ARMY
LOS ANG HES DIS TRI CT, CORPS Of ENG INH RS
P.O BOX 1711
LOS ANGELES. CALIFORNIA 900SJ,2JiS

January 6, 1995

REPL\'I' TO
ATTENTION OF

Office of the Chief
Environmental Resources Branch

Ms. Cherylin Widell
State Historic Preservation Officer
Office of Historic Preservation
[redacted]

Dear Ms. Widell:

The Los Angeles District, Corps of Engineers (COE), is submitting a draft archeological testing plan for review. The testing plan is for historic archeological sites in the Prado Flood Control Basin in Riverside County (enclosure). The plan, prepared by Greenwood and Asso ciates, is for testing of CA RIV-1039, RIV-1044, SAR-H2B, PB-5, PB-8, PB-9, PB-11, and PB-69, PB-89, and PB-119. The archeological sites may be impacted by actions resulting from excavation of Borrow area No. 1, two dikes that will be constructed to protect the Corona Sewage Treatme nt Plant and the Alcoa Aluminum Plant. This plan is being prepared pursuant to the Programmatic Agreement which was executed on April 16, 1994. Your project file Number is Coe 911223A.

We request that you review and comment on the enc losed draft archeological treatment plan. If you have any questions or comments concerning this project or plan, please contact Mr. Richard Perry, Project Archeologist, at [redacted]

Sincerely,

Roberts. Jo
Chief, Pla ing Dj vis ic t

snclosure

ENCLOSURE 3

COPY

November 24, 1995

Office of the Chief
Environmental Resources Branch

Ms. Cherilyn Widell
State Historic Preservation Officer
Office of Historic Preservation
[redacted]

Dear Ms. Widell:

This letter is in regard to the Prado Dam feature of the Santa Ana River Project. A Programmatic Agreement was executed for the project on April 16, 1993. Your project number is COE911223A .

The purpose of this consultation is to transmit our determination of eligibility for nine historic archeological sites in Prado Basin. Their designations are PB-5, PB-8, PB-9, CA-RIV-5521H, -5522H, -5523H, -5524H, -1044H, and -1039H. These sites would be potentially impacted by Borrow Area #1.

A test excavation and National Register evaluation was conducted in 1995 by Greenwood and Associates (enclosure). Based on this study the Corps has determined that sites PB-5, PB-8, and PB-119 are not eligible for the National Register of Historic Places (NRHP). There was no evidence of physical remains at PB-5 and PB-8 as they have been destroyed by development. At PB-119 only one artifact was found. Also, because of the lack of physical remains, the information center would not assign permanent trinomials to them.

Sites CA-RIV-5521H, -5522H, -5523H, and -5524H were determined to not be eligible for the NRHP. These four sites lacked research potential, and/or their research potential was exhausted by the testing program.

Sites CA-RIV-1039H and -1044H have been determined to be

ENCLOSURE (1

NRHP eligible. Both of these sites retain sufficient integrity, and contain materials which could address several important research domains.

Site CA-RIV-8091H was not subjected to subsurface excavations as we were not able to obtain a right-of-entry. As it turns out, this site will not be impacted by activities associated with the project. At this time we do not intend to evaluate this property.

Site PB-89 was given a superficial field examination for management purposes. It falls within the boundaries of the Rincon Townsite (CA-RIV-3698H) which has already been determined to be NRHP eligible.

Please review the enclosed information. If you agree with our determinations we would appreciate a response at your earliest convenience. If you have any questions on this project please call **Mr**. Stephen Dibble, Senior Archeologist, at [redacted]

Sincerely,

Robert S. Joe
Chief, Planning Division

Enclosure

DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, CORPS OF ENGINCERS
P.O. BOX 2711
LOS ANGELES. CALIFORNIA 9005,) 2125

August 3, 1994

REPLY TO
ATTENTION OF

Office of the Chief
Environmental Resources Branch

Ms. Cherilyn Widell
State Historic Preservation Officer
Office of Historic Preservation
P.O. Box 942896
Sacramento, California 94296-0001

Dear Ms. Widell:

This letter is in regard to the Santa Ana River Project in Orange, Riverside and San Bernardino Counties. A Programmatic Agreement was executed on April 16, 1994 (OHP #CoE911223A).

The purpose of this submission is to submit our National Register of Historic Places (NRHP) determinations for historical archeological sites which would be potentially affected by Borrow Area #2 in Prado Basin. Our determinations are based on archival research, and subsurface investigations. The r esu lts of this investigation are presented in a report prepared for the Corps by Greenwood and Associates (enclosure) This report provided the basis for our determinations.

The Corps has determined that sites CA-RIV-4727H, CA-RIV-4728H, CA-RIV-5253H, CA-SBR-7136H, and CA-SBR 5573H are not eligible for the NRHP as they lack integrity, and/or do not contain the necessary materials to address the research domains which were developed in the report.

The Corps has determined that Site CA-SBR-7676H, also known as the Ross Ranch, is eligible for the NRHP under criteria D. The historic archeological deposits at this site retain sufficien t integrity, and contain materials which could address several important research domains. Those domains include cultural chronology, technology, and economic , settlement and subsistence patterns (see pages 127-156 of the report).

ENCLOSURE ($"

Please review the enclosed materials , and eligibilit y determinations. We would appreciate a response at your earliest convenience. If you have any questions on this project please call Mr. Stephen Dibble, Senior Archeologist at, [redacted]

Sincerely,

Robert S. Joe
Chief, Planning Division

Enclosure

STATE QF CALIFORNIA - THE RESOURCES AGENCY PETE WILSON, *Governor*

OFFICE OF HISTORIC PRESERVATION

DEPARTMENT OF PARKS AND RECREATION

P.O. BOX 942896
SACRAMENTO 94296-0001
(916) 653-6624
FAX: (916) 653-9824

25 August 1994

Reply to: COE911223A

Col. R.L. Van Antwerp, District Engineer
US Army Corps of Engineers
Attn: Robert Joe, Planning
[redacted]

Subject: SANTA ANA RIVER PROJECT - DETERMINATIONS OF ELIGIBILITY FOR SIX ARCHAEOLOGICAL SITES: PRADO BASIN, BORROW AREA #2

Dear Col. Van Antwerp:

Thank you for sending me a copy of Archaeological and Historical Investigations of Seven Sites in the Prado Basin along with your determination of eligibility for six of them. The Corps of Engineers has applied the National Register criteria and has determined that five archaeological deposits within the Prado basin Borrow Area #2 A.P.E. lack the integrity and materials to qualify them for inclusion in the National Register of Historic Places. I agree. These five archaeological sites are: CA-RIV-4727H, CA-RIV-4728H, CA-RIV-5253H, CA-SBR-5573H and CA-SBR-7136H.

The Corps has also determined that CA-SBR-7676H, the Ross Ranch site, is eligible for inclusion in the National Register under Criterion D. I disagree. I have reviewed the documentation used in making that determination. The author did a good job of documenting the ranch's history, including the chain of ownership, but the case for significance under Criterion D is tenuous and unconvincing.

The Ross Ranch Site, CA-SBR-7676H consists of a scatter of glass, metal, ceramic, and concrete debris. It's houses, barns, and sheds were demolished sometime between 1931 and 1941.

During two weeks in early October, 1993, archaeologists searching for intact subsurface deposits excavated 21 shovel test pits, 17 backhoe trenches, 9 hand dug exposures, and 3 controlled hand-dug test units into the site. 4,259 artifacts were recovered. These consisted mostly of shards of glass and ceramic, some of which was manufactured between 1900 and 1931. Based on an analysis of this material and some brick and concrete foundations, it was decided that CA-SBR-7676H is of scientific importance and eligible for

ENCLOSURE 6

inclusion in the National Register of Historic Places because it can "address several important research domains" concerning "cultural chronology, technology, and economic, settlem ent, and subsistence patterns ." While these categories are too broad to provide a meaningful and useful research context, pages 156 to 158 of the report are more specific.

The eligibility of CA-SBR -7676H appears to predicated on an analysis domestic kitchen refuse in the form of fragments of glass and ceramic food containers and butchered bone. According to the report, these remains indicate that food was processed , stored , and consumed at the ranch. The report concluded that additional research may reveal that some consumables were produced at the ranch and some were brought in. Further study might also reveal that there were economic changes at the ranch over time. None of these lines of inquiry seems especially compelling or likely to yield new information of scientific or social importance.

The artifact assemblage and the historical study reveal nothing remarkable about the Ross Ranch . The ranch does not seem to be a significant or especially good example of early to mid 20th century California rural industry , nor does it seem to be associated with significant historic events, patterns, or persons. The materials excavated so far are relatively recent and quite mundane . There is no indication that additional excavation would recover anything other than more of the same.

Stipulation 3 of our Programmatic Agreement directs the Corps of Engineers, in the event of a disagreement over eligibility , to submit documentation to the Keeper of the National Register for a formal determination of eligibility .

If you have any ques contact Nicholas Del Cioppa of my staff by calling .

State Historic Preservation Officer

DEPARTMENT OF THE ARMY
lOS ANCH ES 01STR1CT, CORPS Of ENG INEERS
P0 001 n II
LOS ANGELES, C AL IFORNIA 900 SJ-2i1 S

October 18, 1994

REPLY TO
ATTENTION Of .

Office of the Chief
Environmental Resources Branch

Ms. Cherilyn Widell
State Historic Preservation Officer
Office of Historic Preservation
[redacted]

Dear Ms. Widell:

This letter is in regard to the Santa Ana River Projec t , Orange , Rivers ide, and San Bernardino counties . A Programmat ic Agreement was executed for the project on April 16, 1993 (OHP#COE911223A) .

In a letter dated Aug0st 3 , 1 994 we submitted for your concurrence, eligibility determinations for six historic archeological sites which would potentially be impacted by use of Borrow Area #2. In a letter dated August 25, 1994, you agreed with our determination of non-e ligibility for five of these. For site CA-S BR-7676 H you disagreed with our eligibility determination.

We have since considered your objections to our determination of eligibility for site CA-S BR-7 676H. We have also reviewed the evaluation report prepared by Greenwood and Associa tes . Based on this reconsideration the Corps has determined that this site is not National Register eligible. As we are now in agreement on this issue, the Corps will no longer consider the effects on this site which would result from construction of the Santa Ana River Project.

If you have any questions on this matter please contact Mr. Stephen Dibble, Senior Archeologist, at [redacted]

Sincerely,

Robert S. Joe
Chief, Planning Division

ENCLOSURE(7)

BORROW AREA NO. 2
SAFETY PAYS

STATE Of CALIFORNIA - THE RESOURCES AGENCY

PETE WILSON, *Governor*

OFFICE OF HISTORIC PRESERVATION

DEPARTMENT OF PARKS AND RECREATION

P.O. BOX 942896

SACRAMENTO 94296-000 1

(916) 653-6624

FAX: (916) 653-982 4

25 July 1995

Reply to: COE950703D

Julie Vandermost

John Tettemer & Associates, Ltd.

[redacted]

Subject: RINCON STREET IMPROVEMENTS

Dear Ms. Vandermost:

In accordance with 36 CFR 800, regulations implementing Section 106 of the National Historic Preservation Act, you have asked for my comments on a determination that the undertaking cited above does not involve historic properties. Thank you for consulting with me on behalf of the Army Corps of Engineers. I concur with your determination. Please note that the Corps of Engineers may have additional responsibilities under any of the following circumstances:

1. If any person requests that the Advisory Council on Historic Preservation review your findings . in accordance with 36 CFR 800.6(e);
2. If this undertaking changes in ways that could affect historic properties (36 CFR 800.5(c)];
3. If previously undocumented properties are discovered during the implementation of this undertaking or if a known historic property will be affected in an unanticipated manner (36 CFR 800.11];
4. If a property that was to be avoided has been inadvertently or otherwise affected (36 CFR 800.4(c);800.5];
5. If any condition of the undertaking, such as a delay in implementation or implementation in phases over time, may justify reconsideration of the current National Register status of properties **within** the undertaking's Area of potential Effects (36 CFR 800.4(c)J.

If have any questions, please call Nicholas Del Cipppo at [redacted].

Sincerely,

Ms Chet yn W. 1

State Historic reservation Officer

DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, U.S. ARMY CORPS OF ENGINEERS
915 WILSHIRE BOULEVARD, SUITE 930
LOS ANGELES, CALIFORNIA 90017

June 15, 2017

Planning Division

Ms. Julianne Polanco
State Historic Preservation Officer
Office of Historic Preservation
[redacted]

Dear Ms. Polanco:

The U.S. Army Corps of Engineers, Los Angeles District (Corps) is consulting with your office regarding a request we received from the Riverside County Regional Park & Open-Space District (RivCoParks). RivCoParks has requested the Corps to issue an easement to conduct ground disturbing activities associated with the construction of new segments of trail and improvements to existing trail features along currently unestablished segments of the Santa Ana River Trail located in Riverside County, California. The Santa Ana River Trail is a multi-county project that when completed will extend nearly 110 miles from the Pacific Ocean in the City of Huntington Beach to the Pacific Crest Trail in the San Bernardino Mountains. Much of the trail has already been established. The current right of entry focuses on the establishment of a nine mile stretch that will substantially lessen the gap between the Orange County and Riverside County segments. We are consulting with you in accordance with Title 36 Code of Federal Regulation Part 800 (36 C.F.R. 800), implementing Section 106 of the National Historic Preservation Act. This letter provides a brief project description, documents the area of potential effect (APE), summarizes our efforts to identify historic properties, and requests your concurrence with our finding that there will be *no historic properties adversely affected.*

Through both new construction and improvements to existing trail features, RivCoParks is proposing to fill in the gaps of the Santa Ana River Trail within the Prado Basin. The project aims to result in a dual track trail, consisting of a paved track for bicyclists and walkers (Class I Bikeway), and decomposed granite-surface dirt trail for equestrians, mountain bicyclists, and hikers. Trail widths would range from 20 to 32 feet depending on the location. Approximately 70 percent of the proposed alignment incorporates existing trails, while only 30 percent is projected to impact previously undisturbed native soils. Roughly a quarter of the existing trails are paved, while the remaining segments are composed of either well-defined or washed out dirt trails. Depths of excavation within the alignment are currently projected to be very minimal with only select areas receiving light restoration grading resulting in a 1- to 2-foot cut below the current surface. Most vertical impacts will result from an increase in trail elevation rather than a decrease, with multiple segments slated for a 1- to 4-foot gain above current surface. At the northeastern terminus of the trail, a slope resulting in approximately 15- to 20-foot elevation gain will be constructed to raise the Santa Ana River Trail to current street grade.

The Corps has defined the APE for the undertaking as the approximate 50 foot trail alignment and construction footprint plus an additional 200 feet (60 meters) on either side of the trail alignment. The APE includes direct effects (50 feet) associated with trail construction and associated construction access and staging areas as well as indirect effects such as increased visibility and accessibility of cultural resources from the trail. The Corps has also included a few additional parcels and surface areas, which have been requisitioned by RivCoParks and may be used as future development areas or potential realignment routes. The total APE is approximately 480 acres (See Exhibits 1&2 in the Enclosure)

To facilitate their request for an easement, RivCoParks provided the Corps with a comprehensive Section 106 Phase I Cultural Resources Assessment and Paleontological Review prepared by First Carbon Solutions (FCS) (Enclosure). The report includes a literature review and records search conducted at the Eastern Information Center (EiC), a review of historic aerial photography and maps from the Nationwide Environmental Title Research (NETR) database, a Native American Heritage Commission (NAHC) Sacred Lands File Search, assistance with Section 106 Native American Consultation, a vertebrate paleontology records check and letter report from the Los Angeles Natural History Museum, and an intensive pedestrian survey.

The search EiC records search included a review of all available archaeological resource reports and archaeological site records, within a 0.5-mile radius of all proposed work areas, for prehistoric and historic resources. In addition, the California Points of Historical Interest (PHI), the California Historical Landmarks (CHL), the California Register of Historical Resources (CRHR), the National Register of Historic Places (NRHP), and the California State Historic Resources Inventory (HRI) were reviewed.

The results of the literature review and records search indicate that the majority of the APE has been studied and inventoried through several overview and project-specific surveys and investigations. Five previously recorded resources, all historic, were identified within the APE. However, all of these are within the 200 foot buffer zone accounting for potential indirect effects and none are within the 50 feet of the direct impacts of the trail alignment. The previously recorded resources include remnants of three ranch complexes (P-33-001039, P-33-001044, and P-33-006524), one railroad grade segment with standing bridge abutments (P-33-005782), and the Prado Dam (P-33-004730).

An intensive field investigation for the entire APE was conducted by FCS throughout May and June of 2016. The APE was examined using a linear technique when terrain allowed and utilized a block-transect method with 10- to 15-meter intervals when necessary. Only four of the resources identified during the literature review are still extant. Resource P-33-006524 (Good Samaritan Boys Home) has been demolished and modem residential units are built in its place. No additional cultural resources beyond those identified during the literature review were located during the survey. Updated site forms were not completed for the previously recorded sites due to the large amount of work already completed at those site.

Of the remaining sites, P-33-004730/ CA-SBR-4730 (Prado Dam) and resource P-33-005782/ CA-SBR-5522H (a railroad grade and bridge abutment) will not be affected by project development and are unlikely to be indirectly affected by increased trail utilization as the Santa

Ana River trail is already well-defined in these areas. Site P-33-004730/ CA-SBR-4730 (Prado Dam) has previously been determined to be eligible for the National Register. Site P-33-005782/ CA-SBR-5522H consists of a railroad grade and bridge abutments, although only one bridge abutment is within the APE. The railroad grade and abutments were recommended as eligible for the National Register; however, a letter transmitting a federal agency's determination or SHPO's concurrence could not be found. Regardless, the nature of the sites, lack of associated artifacts, and distance from the proposed trail all support the Corps finding that the resources will not be adversely affected by the proposed undertaking.

The remaining two sites both consist of archaeological remains of early twentieth century ranch complexes. P-33-001039/CA-SBR-1039H (Ashcroft Ranch) was originally recorded in 1975 as a set of 'ruins' and associated historic refuge dating to the early 1900s. The site was rerecorded in 1983 and recommended as not eligible. In 1986, the site was again revisited, slightly more artifacts were observed because of sparser vegetative coverage, and the site was described as having potential for yielding additional data, though no formal evaluation was made. The second site, P-33-001044/CA-SBR-1044H (Carillo Family Ranch) was first noted in 1975 but was not officially recorded until 1985 when it was called the Homer Pate Ranch. At the time of its recordation, there was only one standing structure left at the site, a cobble structure located on the northern portion of the property.

In 1995, Greenwood and Associates conducted an extensive surface collection and subsurface testing at both sites. At Ashcroft Ranch the testing program included excavation of 26 trenches, one unit, and two surface exposures and at Carillo Ranch three hand trenches, 52 shovel test pits, 26 collection units, and two surface exposures were completed. In 2004, Statistical Research Inc. (SRI) conducted data recovery at both sites. Corps records note that both sites were determined to be eligible. Both sites were mitigated as part of the Santa Ana River Mainstem Project. FCPs has recommended that the sites are no longer eligible for the National Register under any criteria due to the large scale data recovery efforts previously conducted at the site.

In summary, the four resources that exist within the APE consist of Prado Dam, a bridge abutment that is part of larger linear resource, and two previously mitigated archaeological sites. All four resources are located at some distance from the trail and all four are located along sections of trail that already exist. While the completion of the trail will likely lead to a small increase in pedestrian and bicycle traffic, the distance of the sites from the trail and the lack of artifacts on the surface indicate that it is unlikely that the sites will be indirectly impacted by the completion of the trail.

The total amount of new ground disturbance that would occur as part of the project is relatively minimal, with most proposed improvements requiring an import of fill materials to elevate the trail rather than excavation into native soils. The small amount of proposed ground disturbance coupled with the fact that roughly 70 percent of the proposed trail alignment is along existing trails, and considering that no prehistoric or historic resources will be directly impacted by project development has led to the Corps' determination that project implementation would result in *no historic properties adversely affected.* Cultural resource monitoring will occur during trail construction in areas where excavation into native soils will be required.

Consultation letters sent to the affected Tribes can be found in Appendix B. No comments have been received to date.

At this time the Corps is requesting your review and agreement with our finding that construction of the missing segments of the Santa Ana River Trail within the APE would result in *no historic properties adversely affected.* We appreciate your consideration of our request. If you have specific questions or if we can provide any clarification about this request or any other concerns, please contact Ms. Danielle Storey, Archaeologist, at [redacted] or at [redacted]

Sincerely,

;;:, Eduardo T. De Mesa
Chief, ing Division

Enclosure

STATE OF CALIFORNIA – THE NATURAL RESOURCES AGENCY EDMUND G. BROWN, JR., *Governor*

OFFICE OF HISTORIC PRESERVATION

DEPARTMENT OF PARKS AND RECREATION

1725 23rd Street, Suite 100
SACRAMENTO, CA 95816-7100
(916) 445-7000 Fax: (916) 445-7053 calshpo@parks.ca.gov

www.ohp.parks.ca.gov

In reply refer to: COE_2017_0626_003

July 26, 2017

Mr. Eduardo T. De Mesa – Chief,
Planning Division
U.S. Army Corps of Engineers
Los Angeles District
[redacted]

RE: Section 106 Consultation for the Santa Ana River Trail Project, Riverside County, California

Dear Mr. De Mesa:

The Office of Historic Preservation received your letter on June 26, 2017 initiating consultation on the above referenced project to comply with Section 106 of the National Historic

Preservation Act of 1966 (as amended) and its implementing regulations at 36 CFR Part 800. The U.S. Army Corps of Engineers (COE) is requesting comments on their finding of effect for the Santa Ana River Trail Project located in Riverside County, California, and has provided the following document for review:

- *Section 106 Phase I Cultural Resources Assessment and Paleontological Review Santa Ana River Trail Norco, Corona, and Unincorporated Riverside County, California*(FirstCarbon Solutions 2017)

The COE is proposing to issue an easement to Riverside County Regional Park & OpenSpace District (RivCoParks) to construct new trail segments and improve existing trail features along currently unestablished segments of the Santa Ana River Trail. Much of the trail has already been established, and the current right of entry will allow the establishment of a ninemile stretch of the trail within the Prado Basin. The COE has defined the Area of Potential Effects (APE) as approximately 480 acres, including the 50-foot trail alignment, a construction footprint

of 200 feet on either side of the trail alignment, and additional parcels and surface areas that may be used by RivCoParks as future development areas or potential realignment routes. The vertical APE will be 1-2 feet below the current ground surface for light restoration grading, and 1-20 feet above the current ground surface for raising the elevation of segments of the trail.

Historic property identification efforts included a records search, pedestrian archaeological survey, and Native American consultation. FirstCarbon Solutions (FCS) conducted a records search of the APE and a 0.5-mile radius at the Eastern Information Center, which indicated that five previously recorded historic resources are located within the APE. All five resources

are located within the 200-foot buffer zone, and will only be subject to indirect impacts from the project. These resources include the remnants of three ranch complexes (P-33-001039, P-33001044, P-33-006524), one railroad grade segment with standing bridge abutments (P-33005782), and the Prado Dam (P-33-004730). FCS conducted a pedestrian survey of the APE in June 2016, during which no new resources were identified. It was determined that P-33006524 (Good Samaritan Boys Home) has been demolished and is no longer extant. Although both sites are in OHP's files as having been previously determined eligible for listing on the National Register of Historic Places (NRHP), data recovery was previously conducted at the

Ashcroft Ranch (P-33-001039/CA-SBR-1039H) and the Carillo Family Ranch/Pate Ranch (P33-001044/CA-SBR-1044H), and features and artifacts associated with these sites were not identified in the APE. The Prado Dam (P-33-004730/CA-SBR-4730) was previously determined eligible for listing on the NRHP, and the railroad grade and bridge abutments (P33-005782/CA-SBR-5522H) were previously recommended eligible for listing on the NRHP but there is no record of a consensus determination with this office. The provided report (FCS 2017) includes eligibility recommendations, but the COE has not provided determinations for concurrence. However, I would not object to treating the above resources as eligible for listing on the NRHP for the purposes of Section 106 for this undertaking.

FCS contacted the Native American Heritage Commission (NAHC) received a response stating that a search of the Sacred Lands File was negative for Native American cultural resources in the APE. The COE sent request for comment letters to the Native American contacts provided by the NAHC on May 06, 2016. No responses to the letters have been received to date.

The COE has determined that granting an easement for the Santa Ana River Project will result in *no historic properties adversely affected*, as the identified resources are not located in

direct construct areas and effects from use of the recreational trail will be minimal. In addition, the COE has stated that cultural resource monitoring will occur during trail construction in areas where excavation in native soil will be required. Pursuant to 36 CFR 800.5(b), I concur with the COE's finding of *no adverse effect*.

Be advised that under certain circumstances, such as unanticipated discovery or a change in project description, the COE may have additional future responsibilities for this undertaking under 36 CFR Part 800. For more information or if you have any questions, please contact Koren Tippett at [redacted].

Sincerely,

Julianne Polanco

State Historic Preservation Officer

Appendix B
Distribution Mailing List

This page is intentionally left blank.

Federal Agencies

U.S. Environmental Protection Agency
Environmental Review Branch
Region 9, Mail Code TIP-2
75 Hawthorne Street
San Francisco, CA 94105

Scott Sobiech, Field Supervisor
U.S. Fish & Wildlife Service
[redacted]

Rebecca Christensen
U.S. Fish and Wildlife Service
[redacted]

Robert Fisher, Supervisory Ecologist
U.S. Geological Survey
Western Ecological Research Center
[redacted]

State Agencies

State Clearinghouse
Office of Planning and Research
P.O. Box 3044
Sacramento, CA 95812-3044

Kathleen Andrews
CA. Dept. of Conservation District 1,
Division of Oil, Gas, and Geothermal Resources
[redacted]

Kim Freeburn
California Department of Fish and Wildlife
[redacted]

Julianne Polanco
State Historic Preservation Officer
Office of Historic Preservation
[redacted]

Hope A Smythe
Regional Water Quality Control Board Region 8
Attn: Marc Brown
[redacted]

Native American Heritage Commission
1515 Harbor Boulevard, Suite 100
West Sacramento, CA 95691

State Water Resources Control Board
Environmental Services Unit
1001 I Street
Sacramento, CA 95814

Enrique Arroyo, District Planner
Department of Parks and Recreation
Inland Empire District
[redacted]

Ryan Chamberlain, Director
Caltrans District 12
[redacted]

John Bulinski, Director
Caltrans, District 8
[redacted]

Jacob Mathew
Caltrans Office of Encroachment Permits 464
[redacted]

CA Dept. of Toxic Substances Control
Attn: Greg Holmes, Unit Chief
[redacted]

CA Dept. of Public Health
[redacted]

Local Agencies

Shawn Nevill
Orange County Water District
[redacted]

Dick Zembal
Orange County Water District
[redacted]

Greg Woodside
Orange County Water District
[redacted]

Joe Grindstaff, General Manager
Inland Empire Utilities Agency
[redacted]

Ms. Juliana Adams
Riverside Co. Flood Control
[redacted]

Ms. Nardy Khan
Orange County Public Works Flood Control Div./
Santa Ana River Section
[redacted]

Mr. James Tyler
Orange County Public Works Flood Control Div./
Santa Ana River Section
[redacted]

Mr. Ariel Corpuz
Orange County Public Works Flood Control Div./
Santa Ana River Section
[redacted]

Mr. Joe Nguyen
Orange County Public Works Flood Control Div./
Santa Ana River Section
[redacted]

Joanna Chang
OC Public Works/OC Development Services
[redacted]

South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

General Manager Metropolitan Water District
P.O. Box 54153
Los Angeles, CA 90054-0153

Orange County Transportation Authority
Attn: Dan Phu
550 S. Main Street
Orange, CA 92863

Riverside County, County Recorder
P.O. Box 751
2724 Gateway Drive
Riverside, CA 92502

Riverside County Planning Department
Director of Planning
4080 Lemon Street
Riverside, CA 92501

Scott Bangle, Parks Director
Riverside County Regional Parks and Open Space
[redacted]

Marc Brewer
Riverside County Regional Parks and Open Space
[redacted]

Hugh Nguyen
Orange County Clerk - Recorder
[redacted]

Honey Bernas, Interim Executive Director
Western Riverside County Regional Conservation Authority
[redacted]

Gustavo Gonzalez, Planning Manager
Eastvale City Hall
[redacted]

Jimmy Chung, City Engineer
Eastvale City Hall
[redacted]

Andy Okoro
City of Norco
[redacted]

Brian Petree
City of Norco
[redacted]

Sam Nelson
City of Norco
[redacted]

Chad Blais, Public Works Director
City of Norco
[redacted]

Steve King, Planning Director
City of Norco
[redacted]

Organizations/Groups

Brian J. Brady Executive Director
Santa Ana Watershed Association
[redacted]

Riverside-Corona Resource Conservation District
Attn: Kerwin Russell
[redacted]

Riverside Audubon Society
5370 Riverview Drive
Rubidoux, CA 92509

Audubon Society
San Bernardino Valley Chapter
P.O. Box 10973
San Bernardino, CA 92423-0973

Brad Richards
Chair: Prado Basin Group Sierra Club San Gorgoni Chapter
[redacted]

Glenn Parker Wildlife Corridor Conservation Authority
[redacted]

Megan Brousseau
Associate Director Inland Empire Waterkeeper
[redacted]

Dan Silver, Executive Director
Endangered Habitats League
[redacted]

Private Entity

Jason Sanchez, Manager
Public Projects BNSF Railway
[redacted]

Greg Rousseau, Project Engineer
BNSF Railway
[redacted]

Libraries

Corona Public Library
Attn: Nora Jacob
[redacted]

Norco Public Library
3954 Old Hamner Avenue
Norco, CA 91760

Riverside Public Library
Attn: Government Documents
3581 Mission Inn Avenue
Riverside, CA 92501

Chino Branch Library
13180 Central Avenue
Chino, CA 91710

Native American Contacts

Gabrieleno Band of Mission Indians - Kizh Nation
Andrew Salas, Chairperson
[redacted]

Gabrieleno/Tongva San Gabriel Band of Mission Indians
Anthony Morales, Chairperson
[redacted]

Gabrielino /Tongva Nation
Sandonne Goad, Chairperson
[redacted]

Gabrielino Tongva Indians of California Tribal Coun
Robert Dorame, Chairperson
[redacted]

Juaneno Band of Mission Indians
Sonia Johnston, Chairperson
[redacted]

Juaneno Band of Mission Indians Acjachemen Natio - Belardes
Matias Belardes, Chairperson
[redacted]

Juaneno Band of Mission Indians Acjachemen Natio - Romero
Teresa Romero, Chairperson
[redacted]

Pauma Band of Luiseno Indians – Pauma & Yuima Reservation
Temet Aguilar, Chairperson
[redacted]

Pechanga Band of Mission Indians
Mark Macarro, Chairperson
[redacted]

Rincon Band of Mission Indians
Bo Mazzetti, Chairperson
[redacted]

Soboba Band of Luiseno Indians
Scott Cozart, Chairperson
[redacted]

Appendix C
Response to Comments

This page is intentionally left blank.

The following table provides a summary of the comment and the response.
Copies of all correspondence are included in full in this appendix.

Agency	Letter Dated	Nature of Comments	Response to Comments/ Changes to SEA/EIR Addendum
US Fish and Wildlife Service	Email received on 12/22/2020	Page 2 of the document states that a fourth pond or detention basin will be constructed behind the dike for a total storage volume of 82 acre-feet for interior drainage. Similarly, Table 2-1 on page 11 states there will be an additional one pond or detention basin for a total storage volume of 82 acre-feet for interior drainage behind the dike. However, if you follow this project feature across Table 2-1, I cannot tell if this will be a fourth or a fifth basin, as the 2018 project design stated there would be an additional three, for a total of four detention basins. Please clarify. I also cannot determine from the figures provided where this additional detention basin will be located, nor the previous three (four?). **Please show the location of detention basins on a figure and be sure they are accounted for in the project/impact footprint.**	As shown in Figure 18-2 of the main report, there are a total of 4 interior basins, as also described in the 2018 Final SEA/EIR Addendum. The project description in this SEA/EIR Addendum has been revised to distinguish between new or revised elements more clearly, vs. continuing construction of features that were already analyzed in the 2018 Final SEA/EIR Addendum. Three of the four basins have already been constructed; the remaining basin (1a) will be constructed in Phase II. The Corps is not proposing any modification to the design or number of these detention ponds.

Agency	Letter Dated	Nature of Comments	Response to Comments/ Changes to SEA/EIR Addendum
US Fish and Wildlife Service	12/22/2020	Page 24 states that the "proposed Phase II project footprint increased from the Phase I footprint in three small areas: downstream along Temescal Wash, northeast of Rincon Street; upstream along Temescal Wash immediately west of Lincoln Avenue, south of the bridge; and at the corner of the roadway at Rincon Street and Smith Avenue. (Figure 3.2.1-1)." (Note: I think this is referring to Figure 6-3 or Table 4-7-the figure numbers appear to be changed from the text.) Based on Figures 6-3 and 7-3, it appears that some acreage of native riparian that was going to be temporarily impacted in the 2018 design will now be permanently impacted. **Please quantify the new acreage of temporary and permanent impacts to native riparian vegetation, and provide the anticipated updated acreage of native riparian habitat that will be restored on- and offsite due to impacts to native riparian vegetation** (see CM9 through CM 12 of the Reinitiation of Formal Section 7 Consultation on the Santa Ana River Mainstem Flood Control Project at the Alcoa Dike Biological Opinion [FWS-WRIV-08B0408-18F1350].	Figures, tables and text in this SEA/EIR Addendum have been revised to more clearly describe and quantify the net changes to impact area. As shown on Tables 4-5 through 4-7 in Section 4.2.1 (Incremental Impacted Cover Types Phase II Expanded Footprint), and in Figure 14-4, approximately 4.53 acres of additional permanent impact to riparian habitat would occur within the footprint that was previously analyzed in the 2018 Final SEA/EIR Addendum (Table 4.2.2.1-1, Figure 4.2.1-1). Previously, it was assumed that these areas would only be temporarily impacted. With implementation of Phase II modifications, a 2.54-acre reduction in temporary impacts would occur, as well as a net increase of 4.53 acres of permanent impacts (in an area that had previously been identified as a temporary impact zone). To offset the additional, permanent loss of riparian habitat from construction of the Alcoa Dike and associated road relocations, the Corps will restore (through giant reed (*Arundo donax)* and other non-native removal) an additional 20.11 acres (5:1 ratio for permanent impacts) at an offsite location, as shown in Table 4-8. The revised, total offsite mitigation acreage required for the Alcoa Dike and associated road relocations (for Phases I and II temporary and permanent impacts, not including SART impacts) is 76.52 acres (see Table 4-8). SART impacts (1.50 temporary impacts and 0.02-acre permanent impact) will be offset through habitat

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			enhancements within and immediately adjacent to that work area. The revised total of temporary impacts to riparian and wetland habitat associated with Phase I and II (not including SART) is 27.12 acres. In addition to the offsite restoration described above, onsite restoration of temporarily impacted areas will occur following construction.
US Fish and Wildlife Service	12/22/2020	Some portion of the native riparian habitat to be temporarily and permanently impacted has been previously been used as a Corps mitigation site, which have achieved the success criteria through a contract with Ultrasystems (see September 9, 2019 letter from E. DeMesa to S. Sobiech). **Please report the number of mitigation acres that will be temporarily and permanently impacted by the new Alcoa Dike design, and how these acres will be compensated for elsewhere.**	The realignment of Butterfield Road during implementation of Phase II will permanently impact 2.2 acres and temporarily impact 2.34 acres of an existing Corps mitigation area. This portion of the mitigation area consists of sparse native riparian mulefat habitat and grassland. The native cover is approximately 25% of the total cover and non-native grasses are much more abundant. Temporary impacts will be restored on-site following the completion of the project. Additionally, all temporary and permanent impacts to riparian habitat associated with Phase I and Phase II Alcoa Dike/Roadway construction (SARM features) will be offset at the Alcoa/ Norco mitigation site that was identified in the 2018 Final SEA/EIR Addendum and BO, following commitments and protocols established in those documents. Construction of the SART immediately adjacent to the realigned roadway would temporarily affect an additional 1.50 acre of sparse riparian mulefat scrub/grassland and permanently affect 0.02 acre of this

Agency	Letter Dated	Nature of Comments	Response to Comments/ Changes to SEA/EIR Addendum
			same habitat (in addition to road realignment impacts. This portion of the mitigation site where the road and trail would be constructed is characterized by scattered mulefat (*Baccharis salisifolia*) shrubs surrounded by non-native grasses. Previous restoration efforts within this area had focused on invasive species such as giant reed, saltcedar (*Tamarix ramosissima*), and perennial pepperweed (*Lepidium latifolium*) rather than on annual grasses. As this area is currently a slope leading from the roadway to the basin, it was not enhanced through seeding or planting of native species. After Phase II and SART grading and construction, this area will be flatter and more suitable for restoration of a higher density and diversity of native riparian habitat. The post-project riparian habitat is expected to be much higher quality habitat than was present pre-project and is more likely to support riparian birds. For these reasons, off-site mitigation of impacts associated with SART construction is not proposed. The SART proponent will be required to successfully restore onsite all native vegetation that is permanently and temporarily disturbed during construction-related activities and will keep all disturbed areas free of exotic plants for at least 5 years, or until riparian vegetation is reestablished. A restoration plan would be developed to ensure an increase in percent cover and diversity of native vegetation in order to compensate for temporal impacts and minor permanent loss of sparse riparian habitat. If the site has not begun to recover within 3

Agency	Letter Dated	Nature of Comments	Response to Comments/ Changes to SEA/EIR Addendum
			years (i.e., 50 percent of the disturbed areas are not vegetated with young riparian vegetation), then the site may be replanted with cuttings from native riparian species. Once success criteria have been met, the SARM non-Federal sponsors would continue managing the entire mitigation site for the life of the SARM project.
US Fish and Wildlife Service	12/22/2020	The Service is concerned that the new dike design may alter the natural stream flow from Temescal Creek into Prado Basin at Rincon Street, based on the figures provided. **Please provide more details on how the natural stream flow from Temescal Creek will be maintained.**	The project is designed to avoid alterations to flows in Temescal Creek at the crossing of W Rincon St. The existing Temescal Creek bridge crossing would not be affected by the Proposed Action. Rincon Street was realigned to the south to reduce the footprint and keep it from extending too far north towards the direction of Temescal Creek. It is also intended to avoid alterations to flows at the Auburndale St. crossing. A new drainage ditch will tie into Temescal Creek just east of Auburndale St. but this feature will not alter the creek crossing or flows at Auburndale St. None of the planned features or proposed modifications will interfere with Temescal Creek flows as shown in Figure 17-4 in Section 4.3.2.

Agency	Letter Dated	Nature of Comments	Response to Comments/ Changes to SEA/EIR Addendum
US Fish and Wildlife Service	12/22/2020	Additionally, the Service is concerned that the raising of Rincon Street and its tie-in to the Alcoa Dike may inhibit wildlife movement between Temescal Wash and Prado Basin. **Please provide more details on how wildlife movement through this corridor was considered and what measures will be taken to minimize potential impacts, taking into consideration the proposed Santa Ana River Trail crossing at this location.**	The proposed Alcoa Dike will be a linear feature constructed roughly parallel to Temescal Wash and will not be a physical impediment to or block any known movement pathways along this corridor. Prior to the start of Alcoa Dike Phase I, a series of chain-link fences around the percolation ponds/basins at the intersection of N Smith Ave. and W Rincon St. impeded wildlife movement through the area. These fences along with several frequently travelled paved roads restricted wildlife movement through the area prior to the start of Phase I. Portions of these fences were removed during Phase I (and will not be replaced) but others are still present and continue to restrict wildlife movement in those areas. In addition, it should be noted that upstream of the project site, along Temescal Creek, wildlife would need to travel for more than four miles through developed flood control channels before reaching natural open space south of Magnolia St. This was part of the pre-project condition. For these reasons it is unlikely that the project site was used as a significant wildlife movement corridor prior to the start of the project. Most wildlife movement in the area is localized along Temescal Creek and is expected to remain largely unchanged with implementation of the project (see Figure 15-4). The project does not propose to change the existing bridge at Temescal Creek and Rincon St. and therefore no impacts to wildlife movement at this location are anticipated. Active use of the SART may deter wildlife movement along that pathway during the

Agency	Letter Dated	Nature of Comments	Response to Comments/ Changes to SEA/EIR Addendum
			daytime when the SART is in use by recreationalists, but is aligned parallel with the road and would not physically block or impede wildlife movement into or along Temescal Creek or Prado Basin. At night, when most wildlife movement occurs, the bike and equestrian trail would be available for use by wildlife. Proposed structural modifications to the dike, roadways and culverts would not impede movement corridors. For these reasons the proposed project modifications are not expected to affect wildlife movement.
US Fish and Wildlife Service	Emailed received 02/04/2021	As we discussed in our phone call, it appears from Figures 6-3 and 7-3 that the detention basins were not included in the area of permanent impacts but were included with the temporary impact footprint. I did not know where these basins were located until I received the above attachment, so this was not commented on within our initial comment response. This is an area of 36.33 acres. It doesn't cause additional concern for the Service's trust resources as the habitat is all identified as non-native upland, however, it should be corrected within the Final SEA/EIR Addendum.	The largest cause for a reduction of permanent impacts within the Phase II footprint, is the change from permanent impacts to temporary impacts associated with the construction of basin (1a). Three (3) of the four (4) ponding areas (detention basins) described in the 2018 Final SEA/EIR Addendum were built during Phase I construction. Construction of the remaining basin (1a), as shown in Figure 17-4, would be built during Phase II construction. These basins are considered to be temporary impacts not permanent because they will be seeded with native grasses and herbaceous annuals and perennials. These native species will be allowed to persist in and around the basins and are expected to create forging habitat for many species of wildlife and nesting habitat for many grassland bird species.

Agency	Letter Dated	Nature of Comments	Response to Comments/ Changes to SEA/EIR Addendum
			Therefore, the Corps does not concur with the requested change to identify a permanent impact to 36.33 acres of non-native upland habitat. As described in Section 4.2, the non-native habitat will be replaced with native species following construction (re-grading) of the basins.
US Fish and Wildlife Service	02/04/2021	I'm a little confused at the statement the 2.22 acres of permanent impacts to the existing adjacent mitigation area "will be restored at the original Phase 1 Alcoa/ Norco mitigation site in Prado Basin and along Temescal Creek". **As this area has already reached its success criteria and been signed off on, I expected the new impacts would be added on to a future proposed mitigation area.** Are you proposing that an additional 11 acres of arundo removal will be added on to the existing mitigation site? Also, **please clarify where the 20.04 acres of mitigation for new permanent riparian impacts will occur** (i.e. in a future mitigation site?) The temporary impacts should be restored in-place, as you state, with also the **removal of one**	Some of the Alcoa Phase II and SART impacts are occurring at a previously established mitigation site that was restored to offset impacts from other SARM features. Alcoa Phase II Dike and road realignment impacts will be offset at a different, more recently designated mitigation site. The recently designated “Alcoa and Norco” mitigation site in Prado Basin and along Temescal Creek, where Alcoa Dike and roadway realignment offsets will occur, has not been completed or signed off on. This mitigation site was only recently established, and no active restoration has been accomplished to date. However, the Corps calculates that it has sufficient restoration potential to fully mitigate Alcoa Phase I, Alcoa Phase II and Norco. Phase II and SART impacts will be occurring

Agency	Letter Dated	Nature of Comments	Response to Comments/ Changes to SEA/EIR Addendum
		acre of arundo off-site for each acre of riparian vegetation that is temporarily disturbed (CM11 from the 2018 [FWS-WRIV-08B0408-18F1350] BO). **Please confirm this will occur as well**.	within the previously established mitigation site, which is one of four target (restoration) areas that were part of a mitigation contract awarded in 2013, and for which success criteria have been achieved. One of those four target areas will be slightly impacted by Alcoa Phase II and SART construction. As stated in the response to the second comment in the 12/22/20 email, offsite mitigation requirements for Phase II SARM impacts (currently estimated at 20.11 acres) will be fulfilled through restoration of 20.11 acres at the recently established Alcoa/Norco mitigation site. As addressed in response to the third comment in the 12/22/20 email, mitigation for SART trail impacts would occur within and immediately adjacent to the impact area through habitat restoration and enhancements that would result in an increase in the quantity and quality of native habitat compared to existing conditions.
US Fish and Wildlife Service	02/04/2021	I also need further clarification on your response regarding wildlife movement (Item 5). You state:"...it is unlikely that the project site was used as a significant wildlife movement corridor prior to the start of the project. Most wildlife movement in the area is localized along Temescal Creek and is expected to remain largely unchanged or better with implementation of the project..." My concern is with the movement of wildlife along Temescal Creek, not the overall project footprint, or across the highly developed area of Corona leading to	See response to the 5th comment from the 12/22/20 email, which provides additional detail beyond a preliminary response that had been emailed previously. The proposed Alcoa Dike will be a linear feature constructed roughly parallel to Temescal Wash and will not be a physical impediment to or block any known movement pathways along this corridor. The Proposed Action does not impact the existing bridge crossing of Temescal Creek. Additional emails and discussions between Corps and USFWS biologists in March 2021 using Google Earth imagery further clarified the

Agency	Letter Dated	Nature of Comments	Response to Comments/ Changes to SEA/EIR Addendum
		south of Magnolia Avenue. As previously stated, my specific concern is with the raising of Rincon Street and its tie-in to the Alcoa Dike which may inhibit wildlife movement between Temescal Wash and Prado Basin, and was not proposed in the original Project design. Please provide more details on how wildlife movement through this corridor was considered and what measures will be taken to minimize potential impacts, taking into consideration the proposed Santa Ana River Trail crossing at this location. There is currently a bridge where Rincon Street crosses Temescal Creek, which is to be converted into one culvert with four concrete boxes. To phrase my original questions a different way, **please explain how this culvert and the increased human activity along this section of the Santa Ana River Trail will still provide for wildlife movement.** In fact, the Draft SEA/EIR states "The SAR, Temescal Wash, and associated uplands are recognized as vital pathways for wildlife movement" (pg. 32) and "Linkages and corridors facilitate regional wildlife movement and are generally centered around waterways, riparian corridors, flood control channels, and contiguous upland habitat. Drainage ways generally serve as movement corridors because they are natural elements in the landscape that guide animal movement..." (pg. 31) The Western Riverside MSHCP is working hard to maintain wildlife access corridors and such	proposed impact areas and assisted with resolving this concern.

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		efforts should not be impeded where Temescal Wash meets Prado Basin.	
Inland Empire Utilities Agency	01/14/2020	The comment related to the Brine Line protection in place: It is anticipated that during this replacement and protection effort to handle the additional load from the Dike, the Brine Line may need temporary shutdown. For this reason, Inland Empire Utilities Agency (IEUA) would like to be notified in advance on the timing of any Brine Line shutdown in support of the Alcoa Dike project to ensure that any IEUA discharges to the Brine Line can be properly managed.	SAWPA will notify all upstream dischargers in advance of a shutdown. IEUA's dischargers do not discharge to this part of the Brine Line and will not be impacted.

Siddiqui, Naeem A CIV CESPL CESPD (USA)

To: Siddiqui, Naeem A CIV CESPL CESPD (USA)
Subject: RE: [Non-DoD Source] Re: [EXTERNAL] RE: Draft SEA/EIR Addendum for the Alcoa Dike Phase II Project - Available for Review and Comment

From: Christensen, Rebecca A [redacted]>
Date: Thursday, Mar 04, 2021, 5:45 PM
To: Lovan, Hayley J CIV (USA) [redacted]>, Siddiqui, Naeem A CIV CESPL CESPD (USA) [redacted]>
Cc: Snibbe, Jenni J CIV USARMY CESPL (USA) [redacted], Cleary-Rose, Karin [redacted]>, May, Jenna C CIV USARMY CESPL (USA) [redacted]>
Subject: Re: [Non-DoD Source] Re: [EXTERNAL] RE: Draft SEA/EIR Addendum for the Alcoa Dike Phase II Project - Available for
Review and Comment

OK, thanks Naeem and Hayley. I think my questions about the Alcoa Dike project have been sufficiently answered.

Rebecca Christensen
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
Palm Springs Fish and Wildlife Office
777 E. Tahquitz Canyon Way, Suite 208
Palm Springs, California 92262
[redacted]

From: Lovan, Hayley J CIV (USA) [redacted]> **Sent:** Thursday, March 4, 2021 1:50 PM

To: Siddiqui, Naeem A CIV CESPL CESPD (USA) <[redacted]>; Christensen, Rebecca A [redacted]>

Cc: Snibbe, Jenni J CIV USARMY CESPL (USA) [redacted]>; Cleary-Rose, Karin <[redacted]

[redacted]>; May, Jenna C CIV USARMY CESPL (USA) [redacted]

Subject: RE: [Non-DoD Source] Re: [EXTERNAL] RE: Draft SEA/EIR Addendum for the Alcoa Dike Phase II Project - Available for Review and Comment

We'll be initiating a Supplemental EA soon for all remaining bike and equestrian trail segments including this one that will use the River Road bridge to cross Temescal. This SEA will be in support of an Outgrant from our Asset Management Division for Riverside County's construction, operation and maintenance of the entire trail through Prado Basin. I think the County is planning to just re-stripe the bridge lanes and use the shoulder, rather than expanding the length/width of the bridge, but I don't know all details at his point.

The EA would be a Supplement to a previous Trails EA (and Section 7 consultation) from a few years ago, and will have little overlap with SARM. Riverside County would be responsible for all costs, including any mitigation costs that are directly associated with the trail.

One of the proposed trail segments would be traveling along the toe of the Auxiliary Dike and also crossing that dike around the spillway. With or without the trail, the Corps has a need to expand the Vegetation Free Zone along the interior of the Auxiliary Dike from 15 feet to 50 feet to conform with Corps Dam and Levee Safety policy. The Auxiliary Dike is technically an extension of the dam embankment, so requires the same veg free zone. My thought is that we would use this SEA to evaluate the impacts of that Veg Free Zone expansion, and the Corps/SARM project would cover any mitigation required by that action. The SEA would also include Riverside County's construction and O&M of a trail within that same 50' wide corridor. Again, if there are impacts associated with the trail that are "over and above" the effects to vegetation communities (for instance, any fill of Waters of the U.S.), then Riverside County would be responsible for that mitigation.

Our schedule is to complete the Draft SEA and initiate Section 7 consultation (if required) in about 6 months, looking to sign the FONSI in about a year.

I know this is more than you asked for and has little to do with Alcoa, but I thought it would be a good idea to bring you up to date on the larger trail project.

From: Siddiqui, Naeem A CIV CESPL CESPD (USA) [redacted] > **Sent:** Thursday, March 4, 2021 12:43 PM

To: Christensen, Rebecca A [redacted]; Lovan, Hayley J CIV (USA) [redacted] >

Cc: Snibbe, Jenni J CIV USARMY CESPL (USA) [redacted] >; Cleary-Rose, Karin < [redacted] >; May, Jenna C CIV USARMY CESPL (USA) [redacted] >

Subject: RE: [Non-DoD Source] Re: [EXTERNAL] RE: Draft SEA/EIR Addendum for the Alcoa Dike Phase II Project - Available for Review and Comment

Yes, both are correct.

V/r,

Naeem

From: Christensen, Rebecca A [redacted]>
Date: Thursday, Mar 04, 2021, 11:38 AM
To: Siddiqui, Naeem A CIV CESPL CESPD (USA) <[redacted]>, Lovan, Hayley J CIV (USA) [redacted]>
Cc: Snibbe, Jenni J CIV USARMY CESPL (USA) [redacted]>, Cleary-Rose, Karin <[redacted]>, May, Jenna C CIV USARMY CESPL (USA) <[redacted]>
Subject: [Non-DoD Source] Re: [EXTERNAL] RE: Draft SEA/EIR Addendum for the Alcoa Dike Phase II Project - Available for Review and Comment

Hi Naeem,

OK, so there will be no change to the existing bridge that crosses Temescal Creek on Rincon Street; the raising of Rincon Street will begin just southeast of this location, correct? Shown below:


Rincon Street Bridge
Google


1554 W Rincon St
Exit Street View
Google Earth

The Santa Ana River Trail will cross this location, but this is not part of the Corps' Alcoa Dike project, also correct?

Thank you,

Rebecca Christensen
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
Palm Springs Fish and Wildlife Office
777 E. Tahquitz Canyon Way, Suite 208
Palm Springs, California 92262
[redacted]

From: Siddiqui, Naeem A CIV CESPL CESPD (USA) <[redacted] **Sent:** Thursday, March 4, 2021 10:25 AM

To: Christensen, Rebecca A <[redacted]>; Lovan, Hayley J CIV (USA) <[redacted]>

Cc: Snibbe, Jenni J CIV USARMY CESPL (USA) <[redacted]; Cleary-Rose, Karin [redacted] May, Jenna C CIV USARMY CESPL (USA) <[redacted]>

Subject: RE: [EXTERNAL] RE: Draft SEA/EIR Addendum for the Alcoa Dike Phase II Project - Available for Review and Comment

Hi Rebecca, thank you for your email reply. Also the project does not propose to alter the Temescal creek undercrossing at Rincon Street. The creek will continue to flow west into Prado Basin and wildlife will still be able to move upstream and downstream through the undercrossing. The new culverts that are being installed as part of the project will convey flows under Rincon Street, between the proposed basins on the south side of the dike. Additional culverts will connect the proposed basins to Temescal Wash, to the east of Auburndale Street and south of Rincon.

Therefore, Rincon street does not cross temescal creek and ties into the existing bridge to the north, see attached graphic.

I hope this clarify your confusion. Please let me know if you have any question.

Thanks.

Naeem.

From: Christensen, Rebecca A <[redacted]> **Sent:** Thursday, March 4, 2021 9:34 AM

To: Lovan, Hayley J CIV (USA) [redacted]; Siddiqui, Naeem A CIV CESPL CESPD (USA) [redacted]

Cc: Snibbe, Jenni J CIV USARMY CESPL (USA) [redacted]>; Cleary-Rose, Karin [redacted]>; May, Jenna C CIV USARMY CESPL (USA) [redacted]>

Subject: [Non-DoD Source] Re: [EXTERNAL] RE: Draft SEA/EIR Addendum for the Alcoa Dike Phase II Project - Available for Review and Comment

Hi Naeem,

I received your other email. As we discussed, based on the information provided, it does not appear there will impacts to vireo through Phase 2 of Alcoa Dike. That determination is, of course, up to the Corps.

However, there is one outstanding question from this previous email thread: **How will the raising of Rincon Street, to match the elevation of the proposed dike, affect streamflow from Temescal Creek into Prado Basin, and wildlife movement?** I took another look at the figures provided and I may have misunderstood where the culverts are going but I do not see how Rincon will not have to cross Temescal Creek at some point. Maybe we should have a brief web call with graphics so you can show me where the road ties into the dike and the feature(s) that allows water and wildlife movement under/across it.

Thanks,

Rebecca Christensen
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
Palm Springs Fish and Wildlife Office
[redacted]

[redacted]

From: Christensen, Rebecca A <[redacted]
Sent: Tuesday, December 22, 2020 2:42 PM
To: Lovan, Hayley J CIV (USA)< [redacted]; Snibbe, Jenni J CIV USARMY CESPL (USA) 1[redacted]
Cc: Cleary-Rose, Karin< >; Siddiqui, Naeem A CIV CESPL CESPD (USA) <]
Subject: [Non-DoD Source] Re: [EXTERNAL] RE: Draft SEA/EIR Addendum for the Alcoa Dike Phase II Project - Available for Review and Comment

Thanks Hayley and Jenni,

The Service has the following questions and comments on the Draft Supplemental Environmental Assessment/Environmental Impact Report (SEA/EIR) Addendum for the Alcoa Dike Project (Phase II).

1. Page 2 of the document states that a fourth pond or detention basin will be constructed behind the dike for a total storage volume of 82 acre-feet for interior drainage. Similarly, Table 2-1 on page 11 states there will be an additional one pond or detention basin for a total storage volume of 82 acre-feet for interior drainage behind the dike. However, if you follow this project feature across Table 2-1, I cannot tell if this will be a fourth or a fifth basin, as the 2018 project design stated there would be an additional three, for a total of four detention basins. Please clarify. I also cannot determine from the figures provided where this additional detention basin will be located, nor the previous three (four?). **Please show the location of detention basins on a figure and be sure they are accounted for in the project/impact footprint.**
2. Page 24 states that the "proposed Phase II project footprint increased from the Phase I footprint in three small areas: downstream along Temescal Wash, northeast of Rincon Street; upstream along Temescal Wash immediately west of Lincoln Avenue, south of the bridge; and at the corner of the roadway at Rincon Street and Smith Avenue. (Figure 3.2.1-1)." (Note: I think this is referring to Figure 6-3 or 7-3; the figure numbers appear to be changed from the text.) Based on Figures 6-3 and 7-3, it appears that some acreage of native riparian that was going to be temporarily impacted in the 2018 design will now be permanently impacted. **Please quantify the new acreage of temporary and permanent impacts to native riparian vegetation, and provide the anticipated updated acreage of native riparian habitat that will be restored on- and offsite due to impacts to native riparian vegetation** (see CM9 through CM 12 of the Reinitiation of Formal Section 7 Consultation on the Santa Ana River Mainstem Flood Control Project at the Alcoa Dike Biological Opinion [FWS-WRIV-08B0408-18F1350].
3. Some portion of the native riparian habitat to be temporarily and permanently impacted has been previously been used as a Corps mitigation site, which have achieved the success criteria through a contract with U ltrasystems (see September 9, 2019 letter from E. DeMesa to 5. Sobiech). **Please report the number of mitigation acres that will be temporarily and permanently impacted by the new Alcoa Dike design, and how**

these acres will be compensated for elsewhere.

4. The Service is concerned that the new dike design may alter the natural stream flow from Temescal Creek into Prado Basin at Rincon Street, based on the figures provided. **Please provide more details on how the natural stream flow from Temescal Creek will be maintained.**
5. Additionally, the Service is concerned that the raising of Rincon Street and its tie-in to the Alcoa Dike may inhibit wildlife movement between Temescal Wash and Prado Basin. **Please provide more details on how wildlife movement through this corridor was considered and what measures will be taken to minimize potential impacts, taking into consideration the proposed Santa Ana River Trail crossing at this location.**

Thank you for the opportunity to comment on the SEA/EIR Addendum for the Alcoa Dike Project (Phase II).

Rebecca Christensen
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
Palm Springs Fish and Wildlife Office
[redacted]
[redacted]

From: Christensen, Rebecca A <[redacted]>
Sent: Thursday, February 4, 2021 11:50 AM
To: Siddiqui, Naeem A CIV CESPL CESPD (USA) [redacted]>
Cc: Lovan, Hayley J CIV (USA) [redacted]; Snibbe, Jenni J CIV USARMY CESPL (USA) [redacted]>; Cleary-Rose, Karin [redacted]>
Subject: [Non-DoD Source] Re: [EXTERNAL] RE: Draft SEA/EIR Addendum for the Alcoa Dike Phase II Project - Available for Review and Comment

Hi Naeem,

Thank you for providing these responses, and for our phone call discussion on Monday.

As we discussed in our phone call, it appears from Figures 6-3 and 7-3 that the detention basins were not included in the area of permanent impacts, but were included with the temporary impact footprint. I did not know where these basins were located until I received the above attachment, so this was not commented on within our initial comment response. This is an area of 36.33 acres. It doesn't cause additional concern for the Service's trust resources as the habitat is all identified as non-native upland, however, it should be corrected within the Final SEA/EIR Addendum.

I'm a little confused at the statement the 2.22 acres of permanent impacts to the existing adjacent mitigation area "will be restored at the original Phase 1 Alcoa/ Norco mitigation site in Prado Basin and along Temescal Creek". **As this area has already reached its success criteria and been signed off on, I expected the new impacts would be added on to a future proposed mitigation area.** Are you proposing that an additional 11 acres of arundo removal will be added on to the existing mitigation site? Also, **please clarify where the 20.04 acres of mitigation for new permanent riparian impacts will occur** (i.e. in a future mitigation site?)

The temporary impacts should be restored in-place, as you state, with also the **removal of one acre of arundo off-site for each acre of riparian vegetation that is temporarily disturbed** (CM11 from the 2018 [FWS-WRIV-08B0408-18F1350] BO). **Please confirm this will occur as well**.

I also need further clarification on your response regarding wildlife movement (Item 5). You state:

"...it is unlikely that the project site was used as a significant wildlife movement corridor prior to the start of the project. Most wildlife movement in the area is localized along Temescal Creek and is expected to remain largely unchanged or better with implementation of the project..."

My concern is with the movement of wildlife along Temescal Creek, not the overall project footprint, or across the highly developed area of Corona leading to south of Magnolia Avenue. As previously stated, my specific concern is with the raising of Rincon Street and its tie-in to the Alcoa Dike which may inhibit wildlife movement between Temescal Wash and Prado Basin, and was not proposed in the original Project design. Please provide more details on how wildlife movement through this corridor was considered and what measures will be taken to minimize potential impacts, taking into consideration the proposed SART crossing at this location. There is currently a bridge where Rincon Street crosses Temescal Creek, which is to be converted into one culvert with four concrete boxes. To phrase my original questions a different way, **please explain how this culvert and the increased human activity along this section of the Santa Ana River Trail will still provide for wildlife movement.**

In fact, the Draft SEA/EIR states "The SAR, Temescal Wash, and associated uplands are recognized as vital pathways for wildlife movement" (pg. 32) and "Linkages and corridors facilitate regional wildlife movement and are generally centered around waterways, riparian corridors, flood control channels, and contiguous upland habitat. Drainage ways generally serve as movement corridors because they are natural elements in the landscape that guide animal movement..." (pg. 31) The Western Riverside MSHCP is working hard to maintain wildlife access corridors and such efforts should not be impeded where Temescal Wash meets Prado Basin.

Thank you for your further coordination on the SEA/EIR Addendum for the Alcoa Dike Project (Phase II).

Rebecca Christensen
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
Palm Springs Fish and Wildlife Office
[redacted]

From: Pietro Cambiaso
To: Snibbe, Jenni J CIV USARMY CESPL (USA)
Subject: [Non-DoD Source] Phase II Alcoa Dike Draft SEA/EIR Addendum Review Comments
Date: Sunday, January 17, 2021 9:50:24 AM
Attachments: ieualogo_blue_16456a_e608be46-8d11-4c13-af88-f446139fe507.png
Twitter_b4b2e095-3238-475c-a92d-814dc6dcdf15.png
Facebook_95d75ac3-9f4b-4a29-8d70-db397fdb0375.png
SocialLink_Instagram_32x32_21f75f0c-c071-4f85-bf14-33efdceaa846.png
SocialLink_Linkedin_32x32_861740bc-9792-4750-a8ab-5b9b537053d0.png
SocialLink_Youtube_32x32_b7d1d85d-52ab-40c2-a39b-c730aca3c30f.png

Thank you for the opportunity to review and comment on the Corps Draft Supplemental Environmental Assessment/Environmental Impact Report (SEA/EIR) Addendum for the Santa Ana River Mainstem Project (SARMP), Prado Dam Separable Element: Phase II Alcoa Dike.
As indicated on Page3 “The temporary replacement and protection of a segment of the Inland Empire Brine Line by the Santa Ana Watershed Project Authority, to enable the Brine Line to withstand the additional load where it crosses under project features. The Corps. Authorization for right-of-way would be required”, it is anticipated that during this replacement and protection effort to handle the additional load from the Dike, the Brine Line may need temporary shutdown.
For this reason, Inland Empire Utilities Agency (IEUA) would like to be notified in advance on the timing of any Brine Line shutdown in support of the Alcoa Dike project to ensure that any IEUA discharges to the Brine Line can be properly managed.
If you have any questions, you can contact me at [redacted].

Sincerely,
Pietro Cambiaso

Pietro Cambiaso P.E.
Deputy Manager of Strategic Planning & Resources
"Water Smart - Thinking in Terms of Tomorrow"
[redacted]
Connect with us

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Appendix C
Response to Comments

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The following table provides a summary of the comment and the response.
Copies of all correspondence are included in full in this appendix.

Agency	Letter Dated	Nature of Comments	Response to Comments/ Changes to SEA/EIR Addendum
US Fish and Wildlife Service	Email received on 12/22/2020	Page 2 of the document states that a fourth pond or detention basin will be constructed behind the dike for a total storage volume of 82 acre-feet for interior drainage. Similarly, Table 2-1 on page 11 states there will be an additional one pond or detention basin for a total storage volume of 82 acre-feet for interior drainage behind the dike. However, if you follow this project feature across Table 2-1, I cannot tell if this will be a fourth or a fifth basin, as the 2018 project design stated there would be an additional three, for a total of four detention basins. Please clarify. I also cannot determine from the figures provided where this additional detention basin will be located, nor the previous three (four?). **Please show the location of detention basins on a figure and be sure they are accounted for in the project/impact footprint.**	As shown in Figure 18-2 of the main report, there are a total of 4 interior basins, as also described in the 2018 Final SEA/EIR Addendum. The project description in this SEA/EIR Addendum has been revised to distinguish between new or revised elements more clearly, vs. continuing construction of features that were already analyzed in the 2018 Final SEA/EIR Addendum. Three of the four basins have already been constructed; the remaining basin (1a) will be constructed in Phase II. The Corps is not proposing any modification to the design or number of these detention ponds.

Agency	Letter Dated	Nature of Comments	Response to Comments/ Changes to SEA/EIR Addendum
US Fish and Wildlife Service	12/22/2020	Page 24 states that the "proposed Phase II project footprint increased from the Phase I footprint in three small areas: downstream along Temescal Wash, northeast of Rincon Street; upstream along Temescal Wash immediately west of Lincoln Avenue, south of the bridge; and at the corner of the roadway at Rincon Street and Smith Avenue. (Figure 3.2.1-1)." (Note: I think this is referring to Figure 6-3 or Table 4-7-the figure numbers appear to be changed from the text.) Based on Figures 6-3 and 7-3, it appears that some acreage of native riparian that was going to be temporarily impacted in the 2018 design will now be permanently impacted. **Please quantify the new acreage of temporary and permanent impacts to native riparian vegetation, and provide the anticipated updated acreage of native riparian habitat that will be restored on- and offsite due to impacts to native riparian vegetation** (see CM9 through CM 12 of the Reinitiation of Formal Section 7 Consultation on the Santa Ana River Mainstem Flood Control Project at the Alcoa Dike Biological Opinion [FWS-WRIV-08B0408-18F1350].	Figures, tables and text in this SEA/EIR Addendum have been revised to more clearly describe and quantify the net changes to impact area. As shown on Tables 4-5 through 4-7 in Section 4.2.1 (Incremental Impacted Cover Types Phase II Expanded Footprint), and in Figure 14-4, approximately 4.53 acres of additional permanent impact to riparian habitat would occur within the footprint that was previously analyzed in the 2018 Final SEA/EIR Addendum (Table 4.2.2.1-1, Figure 4.2.1-1). Previously, it was assumed that these areas would only be temporarily impacted. With implementation of Phase II modifications, a 2.54-acre reduction in temporary impacts would occur, as well as a net increase of 4.53 acres of permanent impacts (in an area that had previously been identified as a temporary impact zone). To offset the additional, permanent loss of riparian habitat from construction of the Alcoa Dike and associated road relocations, the Corps will restore (through giant reed (*Arundo donax)* and other non-native removal) an additional 20.11 acres (5:1 ratio for permanent impacts) at an offsite location, as shown in Table 4-8. The revised, total offsite mitigation acreage required for the Alcoa Dike and associated road relocations (for Phases I and II temporary and permanent impacts, not including SART impacts) is 76.52 acres (see Table 4-8). SART impacts (1.50 temporary impacts and 0.02-acre permanent impact) will be offset through habitat

Agency	Letter Dated	Nature of Comments	Response to Comments/ Changes to SEA/EIR Addendum
			enhancements within and immediately adjacent to that work area. The revised total of temporary impacts to riparian and wetland habitat associated with Phase I and II (not including SART) is 27.12 acres. In addition to the offsite restoration described above, onsite restoration of temporarily impacted areas will occur following construction.
US Fish and Wildlife Service	12/22/2020	Some portion of the native riparian habitat to be temporarily and permanently impacted has been previously been used as a Corps mitigation site, which have achieved the success criteria through a contract with Ultrasystems (see September 9, 2019 letter from E. DeMesa to S. Sobiech). **Please report the number of mitigation acres that will be temporarily and permanently impacted by the new Alcoa Dike design, and how these acres will be compensated for elsewhere.**	The realignment of Butterfield Road during implementation of Phase II will permanently impact 2.2 acres and temporarily impact 2.34 acres of an existing Corps mitigation area. This portion of the mitigation area consists of sparse native riparian mulefat habitat and grassland. The native cover is approximately 25% of the total cover and non-native grasses are much more abundant. Temporary impacts will be restored on-site following the completion of the project. Additionally, all temporary and permanent impacts to riparian habitat associated with Phase I and Phase II Alcoa Dike/Roadway construction (SARM features) will be offset at the Alcoa/ Norco mitigation site that was identified in the 2018 Final SEA/EIR Addendum and BO, following commitments and protocols established in those documents. Construction of the SART immediately adjacent to the realigned roadway would temporarily affect an additional 1.50 acre of sparse riparian mulefat scrub/grassland and permanently affect 0.02 acre of this

Agency	Letter Dated	Nature of Comments	Response to Comments/ Changes to SEA/EIR Addendum
			same habitat (in addition to road realignment impacts. This portion of the mitigation site where the road and trail would be constructed is characterized by scattered mulefat (*Baccharis salisifolia*) shrubs surrounded by non-native grasses. Previous restoration efforts within this area had focused on invasive species such as giant reed, saltcedar (*Tamarix ramosissima*), and perennial pepperweed (*Lepidium latifolium*) rather than on annual grasses. As this area is currently a slope leading from the roadway to the basin, it was not enhanced through seeding or planting of native species. After Phase II and SART grading and construction, this area will be flatter and more suitable for restoration of a higher density and diversity of native riparian habitat. The post-project riparian habitat is expected to be much higher quality habitat than was present pre-project and is more likely to support riparian birds. For these reasons, off-site mitigation of impacts associated with SART construction is not proposed. The SART proponent will be required to successfully restore onsite all native vegetation that is permanently and temporarily disturbed during construction-related activities and will keep all disturbed areas free of exotic plants for at least 5 years, or until riparian vegetation is reestablished. A restoration plan would be developed to ensure an increase in percent cover and diversity of native vegetation in order to compensate for temporal impacts and minor permanent loss of sparse riparian habitat. If the site has not begun to recover within 3

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			years (i.e., 50 percent of the disturbed areas are not vegetated with young riparian vegetation), then the site may be replanted with cuttings from native riparian species. Once success criteria have been met, the SARM non-Federal sponsors would continue managing the entire mitigation site for the life of the SARM project.
US Fish and Wildlife Service	12/22/2020	The Service is concerned that the new dike design may alter the natural stream flow from Temescal Creek into Prado Basin at Rincon Street, based on the figures provided. **Please provide more details on how the natural stream flow from Temescal Creek will be maintained.**	The project is designed to avoid alterations to flows in Temescal Creek at the crossing of W Rincon St. The existing Temescal Creek bridge crossing would not be affected by the Proposed Action. Rincon Street was realigned to the south to reduce the footprint and keep it from extending too far north towards the direction of Temescal Creek. It is also intended to avoid alterations to flows at the Auburndale St. crossing. A new drainage ditch will tie into Temescal Creek just east of Auburndale St. but this feature will not alter the creek crossing or flows at Auburndale St. None of the planned features or proposed modifications will interfere with Temescal Creek flows as shown in Figure 17-4 in Section 4.3.2.

Agency	Letter Dated	Nature of Comments	Response to Comments/ Changes to SEA/EIR Addendum
US Fish and Wildlife Service	12/22/2020	Additionally, the Service is concerned that the raising of Rincon Street and its tie-in to the Alcoa Dike may inhibit wildlife movement between Temescal Wash and Prado Basin. **Please provide more details on how wildlife movement through this corridor was considered and what measures will be taken to minimize potential impacts, taking into consideration the proposed Santa Ana River Trail crossing at this location.**	The proposed Alcoa Dike will be a linear feature constructed roughly parallel to Temescal Wash and will not be a physical impediment to or block any known movement pathways along this corridor. Prior to the start of Alcoa Dike Phase I, a series of chain-link fences around the percolation ponds/basins at the intersection of N Smith Ave. and W Rincon St. impeded wildlife movement through the area. These fences along with several frequently travelled paved roads restricted wildlife movement through the area prior to the start of Phase I. Portions of these fences were removed during Phase I (and will not be replaced) but others are still present and continue to restrict wildlife movement in those areas. In addition, it should be noted that upstream of the project site, along Temescal Creek, wildlife would need to travel for more than four miles through developed flood control channels before reaching natural open space south of Magnolia St. This was part of the pre-project condition. For these reasons it is unlikely that the project site was used as a significant wildlife movement corridor prior to the start of the project. Most wildlife movement in the area is localized along Temescal Creek and is expected to remain largely unchanged with implementation of the project (see Figure 15-4). The project does not propose to change the existing bridge at Temescal Creek and Rincon St. and therefore no impacts to wildlife movement at this location are anticipated. Active use of the SART may deter wildlife movement along that pathway during the

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			daytime when the SART is in use by recreationalists, but is aligned parallel with the road and would not physically block or impede wildlife movement into or along Temescal Creek or Prado Basin. At night, when most wildlife movement occurs, the bike and equestrian trail would be available for use by wildlife. Proposed structural modifications to the dike, roadways and culverts would not impede movement corridors. For these reasons the proposed project modifications are not expected to affect wildlife movement.
US Fish and Wildlife Service	Emailed received 02/04/2021	As we discussed in our phone call, it appears from Figures 6-3 and 7-3 that the detention basins were not included in the area of permanent impacts but were included with the temporary impact footprint. I did not know where these basins were located until I received the above attachment, so this was not commented on within our initial comment response. This is an area of 36.33 acres. It doesn't cause additional concern for the Service's trust resources as the habitat is all identified as non-native upland, however, it should be corrected within the Final SEA/EIR Addendum.	The largest cause for a reduction of permanent impacts within the Phase II footprint, is the change from permanent impacts to temporary impacts associated with the construction of basin (1a). Three (3) of the four (4) ponding areas (detention basins) described in the 2018 Final SEA/EIR Addendum were built during Phase I construction. Construction of the remaining basin (1a), as shown in Figure 17-4, would be built during Phase II construction. These basins are considered to be temporary impacts not permanent because they will be seeded with native grasses and herbaceous annuals and perennials. These native species will be allowed to persist in and around the basins and are expected to create forging habitat for many species of wildlife and nesting habitat for many grassland bird species.

Agency	Letter Dated	Nature of Comments	Response to Comments/ Changes to SEA/EIR Addendum
			Therefore, the Corps does not concur with the requested change to identify a permanent impact to 36.33 acres of non-native upland habitat. As described in Section 4.2, the non-native habitat will be replaced with native species following construction (re-grading) of the basins.
US Fish and Wildlife Service	02/04/2021	I'm a little confused at the statement the 2.22 acres of permanent impacts to the existing adjacent mitigation area "will be restored at the original Phase 1 Alcoa/ Norco mitigation site in Prado Basin and along Temescal Creek". **As this area has already reached its success criteria and been signed off on, I expected the new impacts would be added on to a future proposed mitigation area.** Are you proposing that an additional 11 acres of arundo removal will be added on to the existing mitigation site? Also, **please clarify where the 20.04 acres of mitigation for new permanent riparian impacts will occur** (i.e. in a future mitigation site?) The temporary impacts should be restored in-place, as you state, with also the **removal of one**	Some of the Alcoa Phase II and SART impacts are occurring at a previously established mitigation site that was restored to offset impacts from other SARM features. Alcoa Phase II Dike and road realignment impacts will be offset at a different, more recently designated mitigation site. The recently designated “Alcoa and Norco” mitigation site in Prado Basin and along Temescal Creek, where Alcoa Dike and roadway realignment offsets will occur, has not been completed or signed off on. This mitigation site was only recently established, and no active restoration has been accomplished to date. However, the Corps calculates that it has sufficient restoration potential to fully mitigate Alcoa Phase I, Alcoa Phase II and Norco. Phase II and SART impacts will be occurring

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		acre of arundo off-site for each acre of riparian vegetation that is temporarily disturbed (CM11 from the 2018 [FWS-WRIV-08B0408-18F1350] BO). **Please confirm this will occur as well**.	within the previously established mitigation site, which is one of four target (restoration) areas that were part of a mitigation contract awarded in 2013, and for which success criteria have been achieved. One of those four target areas will be slightly impacted by Alcoa Phase II and SART construction. As stated in the response to the second comment in the 12/22/20 email, offsite mitigation requirements for Phase II SARM impacts (currently estimated at 20.11 acres) will be fulfilled through restoration of 20.11 acres at the recently established Alcoa/Norco mitigation site. As addressed in response to the third comment in the 12/22/20 email, mitigation for SART trail impacts would occur within and immediately adjacent to the impact area through habitat restoration and enhancements that would result in an increase in the quantity and quality of native habitat compared to existing conditions.
US Fish and Wildlife Service	02/04/2021	I also need further clarification on your response regarding wildlife movement (Item 5). You state:"...it is unlikely that the project site was used as a significant wildlife movement corridor prior to the start of the project. Most wildlife movement in the area is localized along Temescal Creek and is expected to remain largely unchanged or better with implementation of the project..." My concern is with the movement of wildlife along Temescal Creek, not the overall project footprint, or across the highly developed area of Corona leading to	See response to the 5th comment from the 12/22/20 email, which provides additional detail beyond a preliminary response that had been emailed previously. The proposed Alcoa Dike will be a linear feature constructed roughly parallel to Temescal Wash and will not be a physical impediment to or block any known movement pathways along this corridor. The Proposed Action does not impact the existing bridge crossing of Temescal Creek. Additional emails and discussions between Corps and USFWS biologists in March 2021 using Google Earth imagery further clarified the

Agency	Letter Dated	Nature of Comments	Response to Comments/ Changes to SEA/EIR Addendum
		south of Magnolia Avenue. As previously stated, my specific concern is with the raising of Rincon Street and its tie-in to the Alcoa Dike which may inhibit wildlife movement between Temescal Wash and Prado Basin, and was not proposed in the original Project design. Please provide more details on how wildlife movement through this corridor was considered and what measures will be taken to minimize potential impacts, taking into consideration the proposed Santa Ana River Trail crossing at this location. There is currently a bridge where Rincon Street crosses Temescal Creek, which is to be converted into one culvert with four concrete boxes. To phrase my original questions a different way, **please explain how this culvert and the increased human activity along this section of the Santa Ana River Trail will still provide for wildlife movement.** In fact, the Draft SEA/EIR states "The SAR, Temescal Wash, and associated uplands are recognized as vital pathways for wildlife movement" (pg. 32) and "Linkages and corridors facilitate regional wildlife movement and are generally centered around waterways, riparian corridors, flood control channels, and contiguous upland habitat. Drainage ways generally serve as movement corridors because they are natural elements in the landscape that guide animal movement..." (pg. 31) The Western Riverside MSHCP is working hard to maintain wildlife access corridors and such	proposed impact areas and assisted with resolving this concern.

Agency	Letter Dated	Nature of Comments	Response to Comments/ Changes to SEA/EIR Addendum
		efforts should not be impeded where Temescal Wash meets Prado Basin.	
Inland Empire Utilities Agency	01/14/2020	The comment related to the Brine Line protection in place: It is anticipated that during this replacement and protection effort to handle the additional load from the Dike, the Brine Line may need temporary shutdown. For this reason, Inland Empire Utilities Agency (IEUA) would like to be notified in advance on the timing of any Brine Line shutdown in support of the Alcoa Dike project to ensure that any IEUA discharges to the Brine Line can be properly managed.	SAWPA will notify all upstream dischargers in advance of a shutdown. IEUA's dischargers do not discharge to this part of the Brine Line and will not be impacted.

Siddiqui, Naeem A CIV CESPL CESPD (USA)

To: Siddiqui, Naeem A CIV CESPL CESPD (USA)
Subject: RE: [Non-DoD Source] Re: [EXTERNAL] RE: Draft SEA/EIR Addendum for the Alcoa Dike Phase II Project - Available for Review and Comment

From: Christensen, Rebecca A [redacted]>
Date: Thursday, Mar 04, 2021, 5:45 PM
To: Lovan, Hayley J CIV (USA) [redacted]>, Siddiqui, Naeem A CIV CESPL CESPD (USA) [redacted]>
Cc: Snibbe, Jenni J CIV USARMY CESPL (USA) [redacted], Cleary-Rose, Karin [redacted]>, May, Jenna C CIV USARMY CESPL (USA) [redacted]>
Subject: Re: [Non-DoD Source] Re: [EXTERNAL] RE: Draft SEA/EIR Addendum for the Alcoa Dike Phase II Project - Available for
Review and Comment

OK, thanks Naeem and Hayley. I think my questions about the Alcoa Dike project have been sufficiently answered.

Rebecca Christensen
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
Palm Springs Fish and Wildlife Office
777 E. Tahquitz Canyon Way, Suite 208
Palm Springs, California 92262
[redacted]

From: Lovan, Hayley J CIV (USA) [redacted]> **Sent:** Thursday, March 4, 2021 1:50 PM

To: Siddiqui, Naeem A CIV CESPL CESPD (USA) <[redacted]>; Christensen, Rebecca A [redacted]>

Cc: Snibbe, Jenni J CIV USARMY CESPL (USA) [redacted]>; Cleary-Rose, Karin <[redacted]

[redacted]>; May, Jenna C CIV USARMY CESPL (USA) [redacted]

Subject: RE: [Non-DoD Source] Re: [EXTERNAL] RE: Draft SEA/EIR Addendum for the Alcoa Dike Phase II Project - Available for Review and Comment

We'll be initiating a Supplemental EA soon for all remaining bike and equestrian trail segments including this one that will use the River Road bridge to cross Temescal. This SEA will be in support of an Outgrant from our Asset Management Division for Riverside County's construction, operation and maintenance of the entire trail through Prado Basin. I think the County is planning to just re-stripe the bridge lanes and use the shoulder, rather than expanding the length/width of the bridge, but I don't know all details at his point.

The EA would be a Supplement to a previous Trails EA (and Section 7 consultation) from a few years ago, and will have little overlap with SARM. Riverside County would be responsible for all costs, including any mitigation costs that are directly associated with the trail.

One of the proposed trail segments would be traveling along the toe of the Auxiliary Dike and also crossing that dike around the spillway. With or without the trail, the Corps has a need to expand the Vegetation Free Zone along the interior of the Auxiliary Dike from 15 feet to 50 feet to conform with Corps Dam and Levee Safety policy. The Auxiliary Dike is technically an extension of the dam embankment, so requires the same veg free zone. My thought is that we would use this SEA to evaluate the impacts of that Veg Free Zone expansion, and the Corps/SARM project would cover any mitigation required by that action. The SEA would also include Riverside County's construction and O&M of a trail within that same 50' wide corridor. Again, if there are impacts associated with the trail that are "over and above" the effects to vegetation communities (for instance, any fill of Waters of the U.S.), then Riverside County would be responsible for that mitigation.

Our schedule is to complete the Draft SEA and initiate Section 7 consultation (if required) in about 6 months, looking to sign the FONSI in about a year.

I know this is more than you asked for and has little to do with Alcoa, but I thought it would be a good idea to bring you up to date on the larger trail project.

From: Siddiqui, Naeem A CIV CESPL CESPD (USA) [redacted] > **Sent:** Thursday, March 4, 2021 12:43 PM

To: Christensen, Rebecca A [redacted]; Lovan, Hayley J CIV (USA) [redacted] >

Cc: Snibbe, Jenni J CIV USARMY CESPL (USA) [redacted] >; Cleary-Rose, Karin < [redacted] >; May, Jenna C CIV USARMY CESPL (USA) [redacted] >

Subject: RE: [Non-DoD Source] Re: [EXTERNAL] RE: Draft SEA/EIR Addendum for the Alcoa Dike Phase II Project - Available for Review and Comment

Yes, both are correct.

V/r,

Naeem

From: Christensen, Rebecca A [redacted]>
Date: Thursday, Mar 04, 2021, 11:38 AM
To: Siddiqui, Naeem A CIV CESPL CESPD (USA) <[redacted]>, Lovan, Hayley J CIV (USA) [redacted]>
Cc: Snibbe, Jenni J CIV USARMY CESPL (USA) [redacted]>, Cleary-Rose, Karin <[redacted]>, May, Jenna C CIV USARMY CESPL (USA) <[redacted]>
Subject: [Non-DoD Source] Re: [EXTERNAL] RE: Draft SEA/EIR Addendum for the Alcoa Dike Phase II Project - Available for Review and Comment

Hi Naeem,

OK, so there will be no change to the existing bridge that crosses Temescal Creek on Rincon Street; the raising of Rincon Street will begin just southeast of this location, correct? Shown below:


Rincon Street Bridge
Google


1550 W Rincon St
Exit Street View
Google Earth

The Santa Ana River Trail will cross this location, but this is not part of the Corps' Alcoa Dike project, also correct?

Thank you,

Rebecca Christensen
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Palm Springs, California 92262
[redacted]

From: Siddiqui, Naeem A CIV CESPL CESPD (USA) <[redacted] **Sent:** Thursday, March 4, 2021 10:25 AM

To: Christensen, Rebecca A <[redacted]>; Lovan, Hayley J CIV (USA) <[redacted]>

Cc: Snibbe, Jenni J CIV USARMY CESPL (USA) <[redacted]; Cleary-Rose, Karin [redacted] May, Jenna C CIV USARMY CESPL (USA) <[redacted]>

Subject: RE: [EXTERNAL] RE: Draft SEA/EIR Addendum for the Alcoa Dike Phase II Project - Available for Review and Comment

Hi Rebecca, thank you for your email reply. Also the project does not propose to alter the Temescal creek undercrossing at Rincon Street. The creek will continue to flow west into Prado Basin and wildlife will still be able to move upstream and downstream through the undercrossing. The new culverts that are being installed as part of the project will convey flows under Rincon Street, between the proposed basins on the south side of the dike. Additional culverts will connect the proposed basins to Temescal Wash, to the east of Auburndale Street and south of Rincon.

Therefore, Rincon street does not cross temescal creek and ties into the existing bridge to the north, see attached graphic.

I hope this clarify your confusion. Please let me know if you have any question.

Thanks.

Naeem.

From: Christensen, Rebecca A <[redacted]> **Sent:** Thursday, March 4, 2021 9:34 AM

To: Lovan, Hayley J CIV (USA) [redacted]; Siddiqui, Naeem A CIV CESPL CESPD (USA) [redacted]

Cc: Snibbe, Jenni J CIV USARMY CESPL (USA) [redacted]>; Cleary-Rose, Karin [redacted]>; May, Jenna C CIV USARMY CESPL (USA) [redacted]>

Subject: [Non-DoD Source] Re: [EXTERNAL] RE: Draft SEA/EIR Addendum for the Alcoa Dike Phase II Project - Available for Review and Comment

Hi Naeem,

I received your other email. As we discussed, based on the information provided, it does not appear there will impacts to vireo through Phase 2 of Alcoa Dike. That determination is, of course, up to the Corps.

However, there is one outstanding question from this previous email thread: **How will the raising of Rincon Street, to match the elevation of the proposed dike, affect streamflow from Temescal Creek into Prado Basin, and wildlife movement?** I took another look at the figures provided and I may have misunderstood where the culverts are going but I do not see how Rincon will not have to cross Temescal Creek at some point. Maybe we should have a brief web call with graphics so you can show me where the road ties into the dike and the feature(s) that allows water and wildlife movement under/across it.

Thanks,

Rebecca Christensen
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Palm Springs Fish and Wildlife Office
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Palm Springs, California 92262

[redacted]

From: Christensen, Rebecca A <[redacted]
Sent: Tuesday, December 22, 2020 2:42 PM
To: Lovan, Hayley J CIV (USA) <[redacted]; Snibbe, Jenni J CIV USARMY CESPL (USA) <[redacted]
Cc: Cleary-Rose, Karin <[redacted]>; Siddiqui, Naeem A CIV CESPL CESPD (USA) <[redacted]>
Subject: [Non-DoD Source] Re: [EXTERNAL] RE: Draft SEA/EIR Addendum for the Alcoa Dike Phase II Project - Available for Review and Comment

Thanks Hayley and Jenni,

The Service has the following questions and comments on the Draft Supplemental Environmental Assessment/Environmental Impact Report (SEA/EIR) Addendum for the Alcoa Dike Project (Phase II).

1. Page 2 of the document states that a fourth pond or detention basin will be constructed behind the dike for a total storage volume of 82 acre-feet for interior drainage. Similarly, Table 2-1 on page 11 states there will be an additional one pond or detention basin for a total storage volume of 82 acre-feet for interior drainage behind the dike. However, if you follow this project feature across Table 2-1, I cannot tell if this will be a fourth or a fifth basin, as the 2018 project design stated there would be an additional three, for a total of four detention basins. Please clarify. I also cannot determine from the figures provided where this additional detention basin will be located, nor the previous three (four?). **Please show the location of detention basins on a figure and be sure they are accounted for in the project/impact footprint.**
2. Page 24 states that the "proposed Phase II project footprint increased from the Phase I footprint in three small areas: downstream along Temescal Wash, northeast of Rincon Street; upstream along Temescal Wash immediately west of Lincoln Avenue, south of the bridge; and at the corner of the roadway at Rincon Street and Smith Avenue. (Figure 3.2.1-1)." (Note: I think this is referring to Figure 6-3 or 7-3; the figure numbers appear to be changed from the text.) Based on Figures 6-3 and 7-3, it appears that some acreage of native riparian that was going to be temporarily impacted in the 2018 design will now be permanently impacted. **Please quantify the new acreage of temporary and permanent impacts to native riparian vegetation, and provide the anticipated updated acreage of native riparian habitat that will be restored on- and offsite due to impacts to native riparian vegetation** (see CM9 through CM 12 of the Reinitiation of Formal Section 7 Consultation on the Santa Ana River Mainstem Flood Control Project at the Alcoa Dike Biological Opinion [FWS-WRIV-08B0408-18F1350].
3. Some portion of the native riparian habitat to be temporarily and permanently impacted has been previously been used as a Corps mitigation site, which have achieved the success criteria through a contract with Ultrasystems (see September 9, 2019 letter from E. DeMesa to S. Sobiech). **Please report the number of mitigation acres that will be temporarily and permanently impacted by the new Alcoa Dike design, and how**

these acres will be compensated for elsewhere.

4. The Service is concerned that the new dike design may alter the natural stream flow from Temescal Creek into Prado Basin at Rincon Street, based on the figures provided. **Please provide more details on how the natural stream flow from Temescal Creek will be maintained.**
5. Additionally, the Service is concerned that the raising of Rincon Street and its tie-in to the Alcoa Dike may inhibit wildlife movement between Temescal Wash and Prado Basin. **Please provide more details on how wildlife movement through this corridor was considered and what measures will be taken to minimize potential impacts, taking into consideration the proposed Santa Ana River Trail crossing at this location.**

Thank you for the opportunity to comment on the SEA/EIR Addendum for the Alcoa Dike Project (Phase II).

Rebecca Christensen
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U.S. Fish and Wildlife Service
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[redacted]

From: Christensen, Rebecca A <[redacted]>
Sent: Thursday, February 4, 2021 11:50 AM
To: Siddiqui, Naeem A CIV CESPL CESPD (USA) [redacted]>
Cc: Lovan, Hayley J CIV (USA) [redacted]; Snibbe, Jenni J CIV USARMY CESPL (USA) [redacted]>; Cleary-Rose, Karin [redacted]>
Subject: [Non-DoD Source] Re: [EXTERNAL] RE: Draft SEA/EIR Addendum for the Alcoa Dike Phase II Project - Available for Review and Comment

Hi Naeem,

Thank you for providing these responses, and for our phone call discussion on Monday.

As we discussed in our phone call, it appears from Figures 6-3 and 7-3 that the detention basins were not included in the area of permanent impacts, but were included with the temporary impact footprint. I did not know where these basins were located until I received the above attachment, so this was not commented on within our initial comment response. This is an area of 36.33 acres. It doesn't cause additional concern for the Service's trust resources as the habitat is all identified as non-native upland, however, it should be corrected within the Final SEA/EIR Addendum.

I'm a little confused at the statement the 2.22 acres of permanent impacts to the existing adjacent mitigation area "will be restored at the original Phase 1 Alcoa/ Norco mitigation site in Prado Basin and along Temescal Creek". **As this area has already reached its success criteria and been signed off on, I expected the new impacts would be added on to a future proposed mitigation area.** Are you proposing that an additional 11 acres of arundo removal will be added on to the existing mitigation site? Also, **please clarify where the 20.04 acres of mitigation for new permanent riparian impacts will occur** (i.e. in a future mitigation site?)

The temporary impacts should be restored in-place, as you state, with also the **removal of one acre of arundo off-site for each acre of riparian vegetation that is temporarily disturbed** (CM11 from the 2018 [FWS-WRIV-08B0408-18F1350] BO). **Please confirm this will occur as well**.

I also need further clarification on your response regarding wildlife movement (Item 5). You state:

"...it is unlikely that the project site was used as a significant wildlife movement corridor prior to the start of the project. Most wildlife movement in the area is localized along Temescal Creek and is expected to remain largely unchanged or better with implementation of the project..."

My concern is with the movement of wildlife along Temescal Creek, not the overall project footprint, or across the highly developed area of Corona leading to south of Magnolia Avenue. As previously stated, my specific concern is with the raising of Rincon Street and its tie-in to the Alcoa Dike which may inhibit wildlife movement between Temescal Wash and Prado Basin, and was not proposed in the original Project design. Please provide more details on how wildlife movement through this corridor was considered and what measures will be taken to minimize potential impacts, taking into consideration the proposed SART crossing at this location. There is currently a bridge where Rincon Street crosses Temescal Creek, which is to be converted into one culvert with four concrete boxes. To phrase my original questions a different way, **please explain how this culvert and the increased human activity along this section of the Santa Ana River Trail will still provide for wildlife movement.**

In fact, the Draft SEA/EIR states "The SAR, Temescal Wash, and associated uplands are recognized as vital pathways for wildlife movement" (pg. 32) and "Linkages and corridors facilitate regional wildlife movement and are generally centered around waterways, riparian corridors, flood control channels, and contiguous upland habitat. Drainage ways generally serve as movement corridors because they are natural elements in the landscape that guide animal movement..." (pg. 31) The Western Riverside MSHCP is working hard to maintain wildlife access corridors and such efforts should not be impeded where Temescal Wash meets Prado Basin.

Thank you for your further coordination on the SEA/EIR Addendum for the Alcoa Dike Project (Phase II).

Rebecca Christensen
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[redacted]

From: Pietro Cambiaso
To: Snibbe, Jenni J CIV USARMY CESPL (USA)
Subject: [Non-DoD Source] Phase II Alcoa Dike Draft SEA/EIR Addendum Review Comments
Date: Sunday, January 17, 2021 9:50:24 AM
Attachments: ieualogo_blue_16456a_e608be46-8d11-4c13-af88-f446139fe507.png
Twitter_b4b2e095-3238-475c-a92d-814dc6dcdf15.png
Facebook_95d75ac3-9f4b-4a29-8d70-db397fdb0375.png
SocialLink_Instagram_32x32_21f75f0c-c071-4f85-bf14-33efdceaa846.png
SocialLink_Linkedin_32x32_861740bc-9792-4750-a8ab-5b9b537053d0.png
SocialLink_Youtube_32x32_b7d1d85d-52ab-40c2-a39b-c730aca3c30f.png

Thank you for the opportunity to review and comment on the Corps Draft Supplemental Environmental Assessment/Environmental Impact Report (SEA/EIR) Addendum for the Santa Ana River Mainstem Project (SARMP), Prado Dam Separable Element: Phase II Alcoa Dike.
As indicated on Page3 “The temporary replacement and protection of a segment of the Inland Empire Brine Line by the Santa Ana Watershed Project Authority, to enable the Brine Line to withstand the additional load where it crosses under project features. The Corps. Authorization for right-of-way would be required”, it is anticipated that during this replacement and protection effort to handle the additional load from the Dike, the Brine Line may need temporary shutdown.
For this reason, Inland Empire Utilities Agency (IEUA) would like to be notified in advance on the timing of any Brine Line shutdown in support of the Alcoa Dike project to ensure that any IEUA discharges to the Brine Line can be properly managed.
If you have any questions, you can contact me at [redacted].

Sincerely,
Pietro Cambiaso

Pietro Cambiaso P.E.
Deputy Manager of Strategic Planning & Resources
"Water Smart - Thinking in Terms of Tomorrow"
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[redacted]
Connect with us