DRAFT

Initial Study and Mitigated Negative Declaration

EAST SIDE DIKE IMPROVEMENT PROJECT – PHASE 1

April 2019

Lead Agency:

Coachella Valley Water District

75-515 Hovley Lane East

Palm Desert, California 92211

Prepared by:

215 North Fifth Street

Redlands, California 92374

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DRAFT MITIGATED NEGATIVE DECLARATION
EAST SIDE DIKE IMPROVEMENT PROJECT – PHASE 1

Lead Agency/Applicant: Coachella Valley Water District

Project Location: The project site is the East Side Dike beginning at the dike's intersection with Dune Palms Road and continuing in a southeasterly direction for approximately 3,420 lineal feet and ending adjacent north to the Talavera residential development in the City of Indio, Riverside County. The project site lies in the eastern half of Section 32, Township 3 South, Range 4 East of the San Bernardino Base and Meridian.

Project Description:

The Coachella Valley Water District (CVWD) intends to certify the East Side Dike, from Dune Palms Road to Interstate 10 (I-10), with the Federal Emergency Management Agency (FEMA) as a flood protection structure. CVWD previously completed hydraulic and scour analyses, and geotechnical investigation for the East Side Dike. The results obtained from the studies indicate that the western end of the East Side Dike adjacent to the Talavera Development is susceptible to erosion, In order to accredit a levee, FEMA requires that no appreciable erosion would occur during the 100-year flood (44 CFR 65.10). The definition of "appreciable erosion" is generally accepted to mean that any erosion that occurs would not threaten the stability of the levee. For the East Side Dike, erosion or loss of the levee embankment can occur from the removal of sediments from the waterside slope of the embankment by high velocities and by scour near the toe of the embankment, loss of support, and failure of part of the embankment slope.

To address the erosion potential and protect the dike from scour, CVWD proposes construction of approximately 3,420 lineal feet of concrete slope lining along the northern slope (water side slope) of the dike beginning at the dike's intersection with Dune Palms Road and continuing in a southeasterly direction ending adjacent to the Talavera development in Indio, Riverside County. Construction access to the site would be from Dune Palms Road and from the intersection of Avenue 38 and Madison Street. The Proposed Project would take place on parcels: APN 750-290-003; APN 750-300-015; APN 750-310-016; and APN 750-330-007.

The slope lining width varies from 27 feet to 34.5 feet and would extend from near the top of the existing dike down below the toe of the slope, where a 20-foot excavated trench would be required for construction of the footing. Temporarily excavated material would be stored north of trench and would be backfilled to cover the completed work to match the existing topography. The slope lining would require approximately 2,700 cubic yards (CY) of concrete and 22 CY of rebar to be placed. The temporary work area required during construction would be approximately 4,000 feet in length and approximately 90 feet wide. Construction equipment staging would occur within these limits.

Estimated earthwork includes excavation of approximately 115,000 CY balanced cut/fill. Construction equipment required at the site includes excavators, dozers, backhoe, graders, concrete trucks, dump trucks, water trucks and utility trucks. Construction access to the site will be from Dune Palms Road and from the

intersection of Avenue 38 and Madison Street. Concrete required for the slope lining would be supplied by ready mix plants in the vicinity of the project site (Thousand Palms and Indio), up to 10-miles distance from the project site. It is anticipated that 80 CY of concrete would be placed a day, which will require an average of 8 concrete truck deliveries per day (with an estimated load capacity of 10 CY). The placement of concrete would require approximately 35 workdays.

Aggregate base would be applied to a portion of the 20-foot wide access road on top of dike to ensure a stable driving surface. These road repairs would begin from the dike's northwestern terminus for approximately 1,200 feet to the southeast. The aggregate base would vary in thickness from approximately 3 to 30 inches. Repairs to the surface of the dike would be performed as part of the Proposed Project to address locations with minor surficial erosion.

30-Day Public Review Period: April 18, 2019 through May 17, 2019

Mitigation Measures: The following mitigation measure have been identified to avoid potential significant environmental effects. Section 21081.6 of the California Public Resources Code requires a public agency to adopt a mitigation monitoring and reporting program (MMRP) to ensure that the mitigation measures are implemented.

Biological Resources

BIO-1: **General Pre-Construction Survey:** A general preconstruction survey shall be conducted by a qualified biologist familiar with the biological resources of the Coachella Valley in the project site within 14 days prior to the start ground disturbing activities. The biologist will focus the survey on Mecca-aster and Palm Springs pocket mouse in accordance with the avoidance and minimization measures outlined in the CVWD O&M Manual, and special-status wildlife species with a high potential to occur on the project site that are not covered under the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP) (loggerhead shrike and American badger). The survey shall be conducted so that 100 percent coverage of the project site and surrounding areas is achieved. Visual surveys and examination of burrowing owl pellets shall be conducted in order to identify presence of Palm Springs pocket mouse or their remains in accordance with the CVWD O&M Manual. Should any special-status species not covered under the CVMSHCP be identified during pre-construction surveys, then additional avoidance and minimization measures may need to be developed with California Department of Fish and Wildlife if project impacts to special-status species not covered under the CVMSHCP found present are expected to be significant. If no special-status species are identified during the survey, then project activities may proceed. If Mecca-aster is found within the footprint of any covered activity, then CVWD's biologist shall be contacted to determine if salvage of plant and/or seeds is feasible. During project activities, avoidance and minimization measures outlined in the CVWD O&M Manual shall be implemented in order to avoid impacts to Mecca-aster and Palm Springs pocket mouse.

BIO-2: **Pre-Construction Focused Burrowing Owl Surveys:** Prior to ground disturbing activities, focused burrowing owl surveys shall be conducted by a qualified biologist familiar with burrowing owl identification and ecology to determine if any burrowing owls, occupied burrows, or potential

burrows are present within the project site or a 500-foot buffer in accordance with the burrowing owl avoidance, minimization, and mitigation measure outlined in Section 4.4 of the CVMSHCP and the burrowing owl avoidance and minimization measure outlined in the CVWD O&M Manual. The protocol for the burrowing owl surveys will be determined by the CVCC in coordination with CVWD and CDFW, likely using the methods described in the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012). If an occupied burrow with an owl present is identified within a project work area, then a no-work buffer will be established around the burrow (160 feet during the non-breeding season and 250 feet during the breeding season) until the burrow is no longer active. A burrow is assumed occupied if records indicate that, based on surveys conducted following protocol, at least one burrowing owl has been observed occupying a burrow on site during the past three years. If there are no records for the site, surveys must be conducted to determine, prior to construction, if burrowing owls are present. If potential (i.e., unoccupied) burrows are identified, then burrow excavation and collapse activities will be necessary; however, burrow excavation and collapse activities shall only be conducted during the non-breeding season for burrowing owls (September 1 through January 31). Coordination with CDFW on burrow excavation and collapse activities will need to occur, and methods will follow the specific protocols and guidance outlined in the CDFW *Staff Report on Burrowing Owl Mitigation* (2012).

BIO-3: **Pre-Construction Desert Tortoise Presence/Absence Survey:** Prior to ground disturbing activities, and in accordance with the desert tortoise avoidance and minimization measure outlined in the CVWD O&M Manual, a desert tortoise presence/absence survey shall be conducted no more than 15 days prior to the start of ground-breaking activities within work areas and access roads to determine whether desert tortoises or their sign (i.e., burrows, carcasses, tracks, scat, or egg shells) are present within the project site or a 100-foot buffer. The survey shall be conducted by a qualified biologist familiar with desert tortoise identification and ecology in accordance with the USFWS desert tortoise survey protocol (2010) and provide 100 percent coverage of the project site. The survey shall be conducted by during the desert tortoise active period identified in the CVMSHCP, between February 15 and October 31. If desert tortoise burrows are identified during the survey, then a 100-foot buffer shall be established around the burrow. If desert tortoise individuals are found to be present on the project site, then coordination with the regulatory agencies may need to be conducted prior to the start of ground-breaking activities. Following the survey, the avoidance and minimization measures outlined in the CVWD O&M Manual shall be adhered to, including conducting a worker education briefing for all construction personnel prior to initiation of the project.

During periods of high desert tortoise activity, approximately March through October, a biologist shall be present to monitor Covered Activities in areas not previously cleared or stabilized. During project activities, avoidance and minimization measures outlined in the CVWD O&M Manual shall be implemented in order to avoid impacts to desert tortoises.

BIO-4: **Pre-Construction Focused Le Conte's Thrasher Survey:** Prior to ground disturbing activities, a focused survey for Le Conte's thrasher shall be conducted by a qualified avian biologist familiar with the identification and ecology of the species in modeled Le Conte's thrasher habitat within

the project site in accordance with the Le Conte's thrasher avoidance, minimization, and mitigation measure outlined in Section 4.4 of the CVMSHCP. The survey shall be conducted prior to construction activities if activities are planned to occur during the Le Conte's thrasher breeding season, January 15 through June 15. The survey shall focus on identifying active nests. If active nests are located on the project site or within a 500-foot buffer, then a 500-foot no-work buffer will be established around the nest during the Le Conte's thrasher breeding season until it is no longer active.

BIO-5: **Pre-Construction Survey for Nesting Birds:** Any construction activities within the project site shall be conducted during the non-breeding season for birds (September 16 through December 31). This will avoid violations of the MBTA and California Fish and Game Code Sections 3503, 3503.5 and 3513. If activities with the potential to disrupt nesting birds are scheduled to occur during the bird breeding season (January 1 through July 31 for raptors and March 1 through September 15 for songbirds), a pre-construction nesting bird survey shall be conducted by a qualified biologist in accordance with the CVWD O&M Manual. The nest surveys shall include the project site and adjacent areas where project activities have the potential to cause nest failure. If no nesting birds are observed during the survey, site preparation and construction activities may begin. If nesting birds (including nesting raptors) are found to be present, then avoidance or minimization measures shall be undertaken in consultation with CDFW. Measures shall include establishment of an avoidance buffer until nesting has been completed. The width of the buffer will be determined by the project biologist. Typically this is a minimum of 300 feet from the nest site in all directions (500 feet is typically recommended by CDFW for raptors), until the juveniles have fledged and there has been no evidence of a second attempt at nesting. The monitoring biologist will monitor the nest(s) during construction and document any findings.

BIO-6: **Conserved Natural Community Avoidance:** Mesquite hummocks, a state-sensitive habitat and a modeled Conserved Natural Community under the CVMSHCP, is present on the extreme western portion of the project site. Impacts to mesquite hummocks shall be avoided to the maximum extent possible within the project site in accordance with the mesquite hummocks and mesquite bosque natural communities AMMM outlined in Section 4.4 of the CVMSHCP. Prior to the start of ground-breaking project activities, the mesquite hummock community will be fenced under the direction of a biologist or botanist and designated as an environmentally sensitive area (ESA). The fencing will remain in place for the duration of project activities and no work or other project activities will occur within the fenced area to ensure no impacts occur to the area. Upon completion of project activities, the ESA fencing will be removed.

Cultural Resources

CUL-1: **Worker Environmental Awareness Program Training:** A cultural resources Worker Environmental Awareness Program (WEAP) training shall be conducted prior to initiating ground disturbing activities associated with project construction. The purpose of the WEAP training is to educate construction personnel about the potential for cultural resources within the project area and the measures to protect these resources if they are encountered. The WEAP shall explain the measures to avoid impact to cultural resources and the consequences of not complying with protective

measures. The WEAP training shall be given to all construction personnel prior to commencing construction activities on the project site. A list of personnel trained shall be kept on site and copies of the WEAP sign-in sheets submitted to the CVWD.

CUL-2: Cultural Resources: If subsurface deposits believed to be archaeological resources (e.g., stone tools, pottery, or milling-related artifacts like manos or metates, or historic-age resources such as cans or glass bottles) are discovered during construction, all work must halt within a 100-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeology, shall be retained to evaluate the significance of the find, and shall have the authority to modify the no-work radius as appropriate, using professional judgement. If the professional archaeologist determines that the find does not represent an archaeological resource, work may resume immediately and no agency notifications are required. If the professional archaeologist determines that the find does not represent an archaeological resource from any time period or cultural affiliation, he or she shall immediately notify the Construction Inspector and CVWD environmental staff. CVWD shall consult on a finding of eligibility for inclusion in the National Register of Historic Places (NRHP) and California Register of Historical Places (CRHR). Work may not resume within the no-work radius until the lead agency determines, through consultation as appropriate, that the site either; 1) is not eligible for the NRHP or CRHR; or 2) that the treatment measures have been completed to their satisfaction.

CUL-3: Paleontological Resources: The CVWD shall retain a qualified paleontologist to determine if the older Quaternary sediments are being disturbed during the initial excavation of the 20-foot trench that will be required below the toe of the dike's slope. If the paleontologist determines that the older Quaternary deposits are being disturbed then the paleontologist shall establish a monitoring program to recover any significant fossils that may be encountered.

Hazards and Hazardous Materials

HAZ-1: To reduce potentially hazardous conditions and minimize the impacts from the handling of potentially hazardous materials, the following shall be included in project's construction specifications:

- No fueling or maintenance of equipment shall occur on the project site.
- No fuel or other hazardous materials shall be stored on the project site.

Noise

NOI-1: Noise: Construction activities shall be restricted to the hours of to the hours of 7 a.m. and 6 p.m. Monday through Friday, 8 a.m. and 6 p.m. on Saturdays, and 9 a.m. and 5 p.m. on Sundays and holidays. The Project's building plans shall specify this requirement.

Transportation/Traffic

T-1: **Traffic:** Prior to construction, the Construction Contractor shall submit an approved Traffic Control Plan to ensure proper access by emergency vehicles during construction and to maintain traffic flow. The plan shall include methods to minimize disruption to the neighboring uses to the fullest extent that is reasonable and practicable. The plan shall include construction parking and vehicle access and specifying staging areas and delivery and hauling truck routes.

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ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
AQMP	Air Quality Management Plan
BMPs	Best Management Practices
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CH_4	Methane
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
CO Plan	Federal Attainment Plan for Carbon Monoxide
CRHR	California Register of Historic Places
CVAG	Coachella Valley Association of Governments
CVWD	Coachella Valley Water District
CWA	California Water Act
DTSC	Department of Toxic Substances Control
EIC	Eastern Information Center
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
GHGs	Greenhouse Gases
LSTs	Localized Significance Thresholds
MBTA	Migratory Bird Treaty Act
MLD	Most Likely Descendent
MMT	Million Metric Tons
MND	Mitigated Negative Declaration
CVMSHCP	Coachella Valley Multiple Species Habitat Conservation Plan
$MTCO_2eq$	Metric Tons of Carbon Dioxide Equivalent
NAHC	Native American Heritage Commission
ND	Negative Declaration
NPDES	National Pollutant Discharge Elimination System
N_2O	Nitrous Oxide
NO_x	Nitrogen Oxides
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
OPR	California Office of Planning and Research
PM_{10} and $PM_{2.5}$	Particulate Matter

RCPG	Regional Comprehensive Plan and Guide
ROG	Reactive Organic Gases
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategy
SIP	State Implementation Plan
SP	Service Population
SoCAB	South Coast Air Basin
SR	State Route
SRA	Sensitive Receptor Area
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
USACE	United States Army Corps of Engineers

SECTION 1.0 BACKGROUND

1.1 Summary

Project Title:	East Side Dike Improvement Project – Phase 1
Lead Agency Name and Address:	Coachella Valley Water District 75-515 Hovley Lane East Palm Desert, CA 92211
Lead Agency Contact:	William Patterson, Environmental Supervisor 760-398-2651
Project Location:	The project site is the East Side Dike beginning at the dike's intersection with Dune Palms Road and continuing in a southeasterly direction for approximately 3,420 lineal feet and ending adjacent north to the Talavera residential development in the City of Indio, Riverside County. The project site lies in the eastern half of Section 32, Township 3 South, Range 4 East of the San Bernardino Base and Meridian.
City of Indio General Plan Designation:	Open Space
City of Indio Zoning:	Open Space

1.2 CEQA Determination

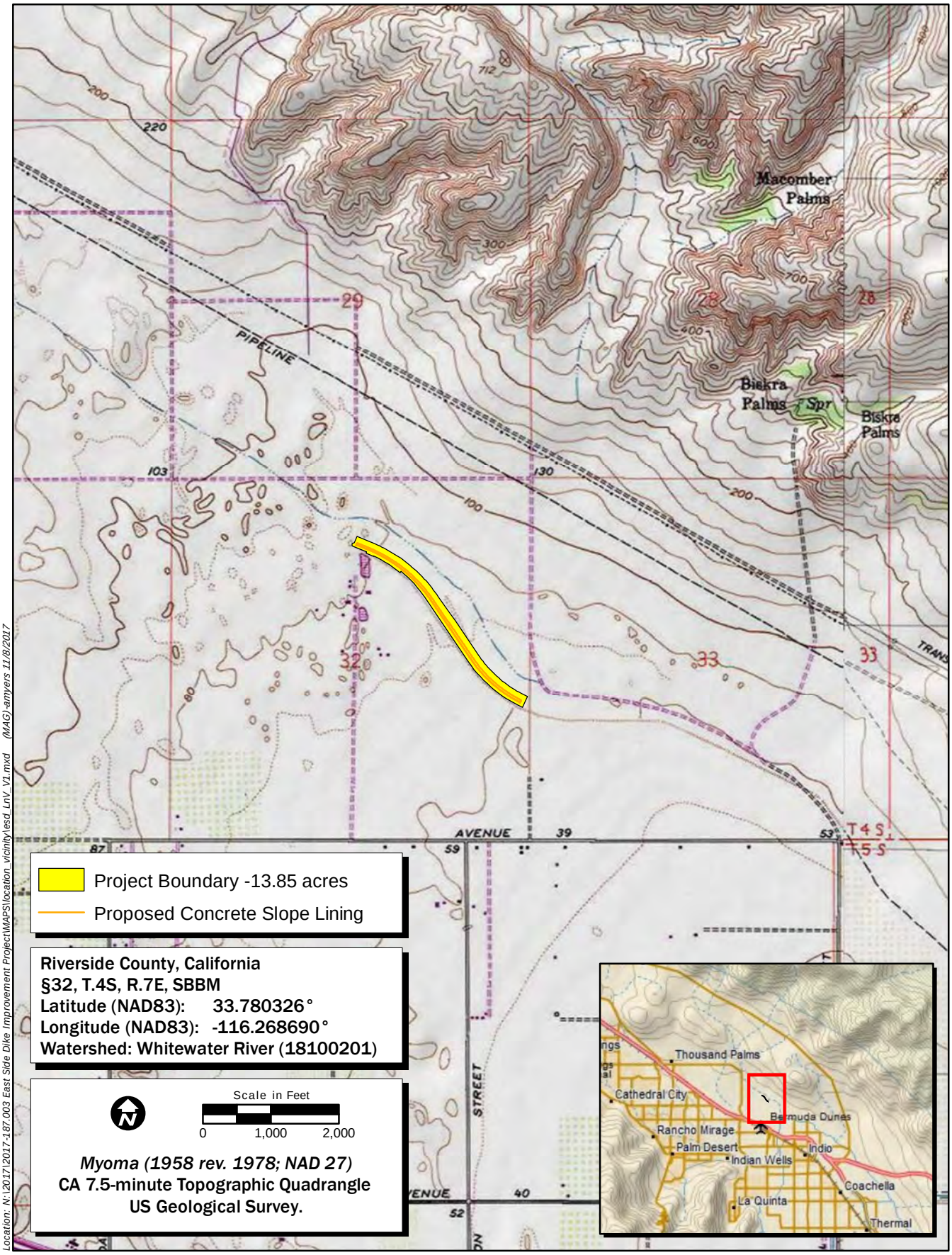
The Coachella Valley Water District (CVWD) is the Lead Agency for the proposed project. CVWD has prepared an Initial Study to identify and assess the anticipated environmental impacts of the East Side Dike Improvement Project – Phase 1 (Proposed Project). This document has been prepared to satisfy the California Environmental Quality Act (CEQA) (Pub. Res. Code, Section 21000 *et seq.*) and State CEQA Guidelines (14 CCR 15000 *et seq.*). CEQA requires that a lead agency consider the environmental consequences of Projects over which they have discretionary authority before acting on those Projects. A CEQA Initial Study is used to determine which CEQA document is appropriate for a Project (Negative Declaration [ND], Mitigated Negative Declaration [MND], or Environmental Impact Report [EIR]). The assessment contained within this Initial Study concludes that a Mitigated Negative Declaration is the appropriate document for this project because there would not be a significant effect on the environment after incorporation of the mitigation measures described herein as part of the Proposed Project.

1.3 Surrounding Land Uses

The project site is located in the City of Indio along the East Side Dike beginning at the dike's intersection with Dune Palms Road and continuing in a southeasterly direction for approximately 3,420 lineal feet (Figure 1 and 2). The East Side Dike is located along the southern boundary of the East Indio Hills Conservation Area associated with the Coachella Valley Multiple Species Conservation Habitat Plan. Surrounding land uses are described in Table 1-1.

Table 1-1. Surrounding Land Uses

Location	Existing Land Use
Project Site	Flood Control Structure
North	Open Space
East	Open Space
South	Residential
West	Undeveloped/open space and Residential



Location: N:\2017\2017-187.003 East Side Dike Improvement Project\MAPS\location_vicinity\esd_LnV_V1.mxd (MAG)-amyers 11/8/2017

Map Date: 11/8/2017

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 1. Project Vicnity

2017-187.003 East Side Dike Improvement Project

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Location: N:\2017\2017-187.003 East Side Dike Improvement Project\MAPS\aerial_maps\ESD_Aerial_V2.mxd (MAG, AA)-mapping_guest 10/19/2018

Map Date: 10/19/2018
Photo Source: NAIP 2016

Figure 2. Project Location

2017-187.003 East Side Dike Improvement Project

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

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SECTION 2.0 PROJECT DESCRIPTION

2.1 Project Background

The East Side Dike was designed and built by the U.S. Bureau of Reclamation (USBR) in 1948, to protect the Coachella branch of the All-American Canal and agricultural lands. The East Side Dike collects, retains, and directs floodwaters originating from watersheds in the Little San Bernardino Mountains and Indio Hills to Wasteway No. 3 which connects to the Coachella Valley Storm Channel and ultimately the Salton Sea. As a result, the East Side Dike also protects communities to the south and southeast from flood hazards associated with these watersheds. However, the East Side Dike has not been certified by CVWD or USBR and has not been accredited by the Federal Emergency Management Agency (FEMA) because a portion of the dike may be susceptible to erosion during the 100-year flood event and would require scour protection to comply with FEMA and CVWD standards (NHC 2017).

The CVWD intends to certify the East Side Dike, from Dune Palms Road to Interstate 10 (I-10), with FEMA as a flood protection structure. The CVWD tasked Northwest Hydraulic Consultants (NHC) to complete several studies to assess the hydrologic, hydraulic, and preliminary erosion performance of the dike (NHC 2015, 2017). The studies demonstrated that: 1) the crest of East Side Dike provides adequate freeboard to meet the FEMA 100-year flood project standard, as well as the CVWD 100-year flood protection standard with the exception of the levee crest elevation from station 522+30 to 529+00; and 2) a portion of the dike may be susceptible to erosion during the 100-year flood event and will require scour protection to comply with FEMA and CVWD standards.

The CVWD 100-year standard for setting the minimum levee crest elevation (CVWD Ordinance 1234.2 and Development Design Manual) is the 100-year water surface elevation plus four feet of freeboard. FEMA's applicable standard is 100-year water surface elevation plus 3 feet of freeboard. The Proposed Project is located from station 495+00 to station 530+00 which contains adequate freeboard.

In order to accredit a levee, FEMA requires that no appreciable erosion will occur during the 100-year flood (44 CFR 65.10). The definition of "appreciable erosion" is generally accepted to mean that any erosion that occurs would not threaten the stability of the levee. For the East Side Dike, erosion or loss of the levee embankment can occur from the removal of sediments from the waterside slope of the embankment by high velocities and by scour near the toe of the embankment, loss of support, and failure of part of the embankment slope (NHC 2017).

2.2 Project Construction

To address the erosion potential and protect the dike from scour, CVWD proposes construction of approximately 3,420 lineal feet of concrete slope lining along the northern slope (waterside slope) of the dike beginning at the dike's intersection with Dune Palms Road and continuing in a southeasterly direction ending adjacent to the Talavera development in Indio, Riverside County (Figure 3). Construction access to the site would be from Dune Palms Road and from the intersection of Avenue 38 and Madison Street. The Proposed Project would take place on parcels: APN 750-290-003; APN 750-300-015; APN 750-310-016; and

APN 750-330-007. The project site lies in the eastern half of Section 32, Township 3 South, Range 4 East of the San Bernardino Base and Meridian.

The slope lining width varies from 27 feet to 34.5 feet and would extend from near the top of the existing dike down below the toe of the slope, where a 20-foot excavated trench would be required for construction of the footing. Temporarily excavated material would be stored north of trench and would be backfilled to cover the completed work to match the existing topography. The slope lining would require approximately 2,700 cubic yards (CY) of concrete and 22 CY of rebar to be placed. The temporary work area required during construction would be approximately 4,000 feet in length and approximately 90 feet wide (Figure 2). Construction equipment staging would occur within these limits. Access to the project site would likely be either from Dune Palms Road, Avenue 38 & Madison Street, and/or Monroe Street.

Estimated earthwork includes excavation of approximately 115,000 CY balanced cut/fill. Construction equipment required at the site includes excavators, dozers, backhoe, graders, concrete trucks, dump trucks, water trucks and utility trucks. Construction access to the site will be from Dune Palms Road and from the intersection of Avenue 38 and Madison Street. Concrete required for the slope lining would be supplied by ready mix plants in the vicinity of the project site (Thousand Palms and Indio), up to 10-miles distance from the project site. It is anticipated that 80 CY of concrete would be placed a day, which will require an average of 8 concrete truck deliveries per day (with an estimated load capacity of 10 CY). The placement of concrete would require approximately 35 workdays.

Aggregate base would be applied to a portion of the 20-foot wide access road on top of dike to ensure a stable driving surface. These road repairs would begin from the dike's northwestern terminus for approximately 1,200 feet to the southeast. The aggregate base would vary in thickness from approximately 3 to 30 inches. Repairs to the surface of the dike would be performed as part of the Proposed Project to address locations with minor surficial erosion.

Construction is estimated for approximately 110 workdays (six months), beginning in July 2019.

2.3 Anticipated Regulatory Requirements, Permits, and Approvals

The following approvals and regulatory permits may be required for implementation of the Proposed Project:

- Coachella Valley Association of Governments, Coachella Valley Conservation Commission: Joint Project Review
- Compliance with the Regional Water Quality Control Board's General Order 2009-009-DWQ (General Construction Permit)
- California Department of Fish and Wildlife: Section 1602 Streambed and Lake Alteration Agreement
- County of Riverside: Traffic Control Plan
- South Coast Air Quality Management District: Fugitive Dust Control Plan

LOCATED IN THE CITIES OF COACHELLA AND INDIO, AND UNINCORPORATED COMMUNITIES OF RIVERSIDE COUNTY, STATE OF CALIFORNIA

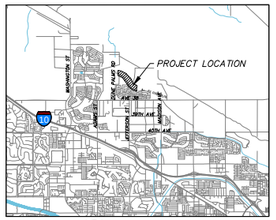
EAST SIDE DIKE IMPROVEMENT PROJECT - PHASE 1
(DUNE PALMS ROAD TO I-10)

PREPARED FOR:

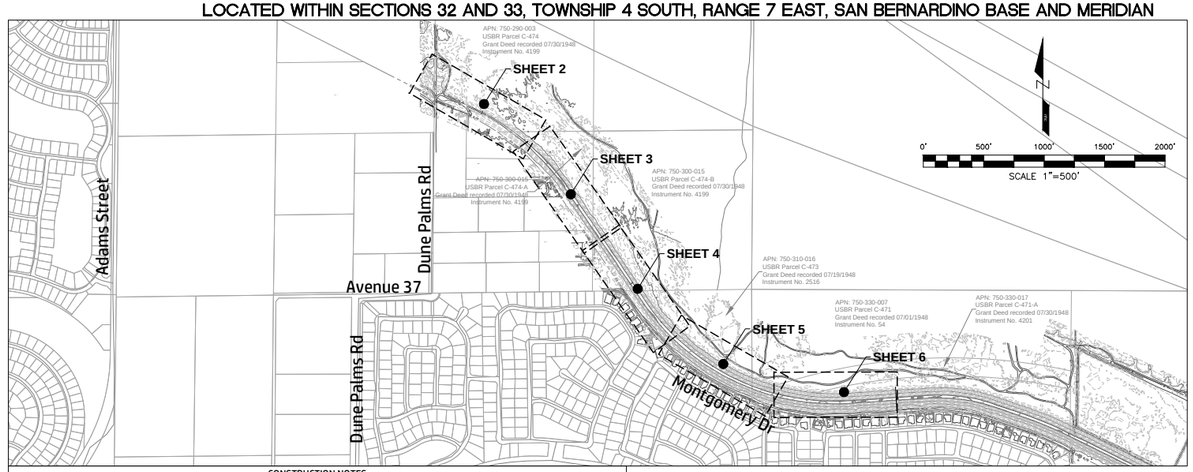
COACHELLA VALLEY WATER DISTRICT

BOARD OF DIRECTORS: JOHN P. POWELL, JR - PRESIDENT, CÁSTULO R. ESTRADA - VICE PRESIDENT
ANTHONY BIANCO, G. PATRICK O'DOWD, PETER NELSON
GENERAL MANAGER - J.M. BARRETT
SPECIFICATION NO. 2018-63

LOCATED WITHIN SECTIONS 32 AND 33, TOWNSHIP 4 SOUTH, RANGE 7 EAST, SAN BERNARDINO BASE AND MERIDIAN



VICINITY MAP
1"=10,000'



GENERAL NOTES

1. THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATION, AS MAY BE NECESSARY AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES TO AVOID DAMAGE THERETO. CONTRACTOR SHALL POTHOLE AND LOCATE THE EXISTING UNDERGROUND LINES TO DETERMINE ELEVATIONS PRIOR TO COMMENCEMENT OF THE WORK.

2. THE CONTRACTOR SHALL CALL IN A LOCATION REQUEST TO UNDERGROUND SERVICE ALERT TWO WORKING DAYS IN ADVANCE OF DIGGING OPERATIONS. NO INSPECTION WILL BE PROVIDED BY THE ENGINEER.

3. TOPOGRAPHIC SURVEY CONDUCTED IN DECEMBER 2016. HORIZONTAL PROJECTION IS NAD83, CALIFORNIA STATE PLANE VI, US FEET. VERTICAL DATUM IS NAVD88, US FEET.

4. STAGING AND STORAGE OF MATERIAL FOR CSP CONSTRUCTION ALLOWED FROM TOE OF CSP TO WORK LIMIT SHOWN ON PLANS. ALL OTHER WORK SHOWN ON PLANS SHALL BE WITHIN EXISTING DIKE FOOTPRINT WITHIN CVWD'S RIGHT OF WAY.

5. PARCEL BOUNDARIES SHOWN ARE APPROXIMATE.

UTILITIES

1. COACHELLA VALLEY WATER DISTRICT
   85-995 AVENUE 52
   COACHELLA, CA 92236 760-398-2651
2. IMPERIAL IRRIGATION DISTRICT
   81-600 AVENUE 58
   LA QUINTA, CA 92253 800-303-7756
3. SOUTHERN CALIFORNIA GAS COMPANY
   75-095 MAYFAIR DRIVE
   PALM DESERT, CA 92211 800-427-2000
4. FRONTIER COMMUNICATIONS
   9 SOUTH 4TH STREET
   REDLANDS, CA 92373 909-748-6640
5. CHARTER COMMUNICATIONS
   83-473 AVENUE 45
   INDIO, CA 92201 760-674-5455

OWNER

COACHELLA VALLEY WATER DISTRICT
51-501 TYLER STREET, COACHELLA, CA 92236
PHONE: 760-398-2651

ASSESSOR PARCEL NO(S):

750-290-003
750-300-015
750-310-016
750-330-007

LEGEND

- 185 — EXISTING MAJOR CONTOURS
- EXISTING MINOR CONTOURS
- EXISTING FENCE
- EXISTING CVWD RIGHT-OF-WAY
- EXISTING UNPAVED ROAD EXTENTS
- EXISTING FORCE MAIN SEWER LINE
- EXISTING OVERHEAD ELECTRIC LINE
- EXISTING IRRIGATION LINE
- EXISTING GRAVITY SEWER LINE
- NEW ROADWAY EDGE
- DEMOLITION OR RELOCATE
- DAYLIGHT LINE
- DIKE REPAIR ZONE

CONSTRUCTION NOTES

(1)	CONSTRUCT SLOPE PROTECTION PER SHEET 7	3,460 LF
(2)	CONSTRUCT DIKE ACCESS ROAD PER TYPICAL SECTION A, SHEET 6	780 LF
(3)	CONSTRUCT SLOPE PROTECTION ANCHOR WALL PER DETAIL E, SHEET 7	2 EA
(4)	REMOVE AND REINSTALL ACCESS GATE; LOCATION TO BE MARKED IN FIELD BY ENGINEER	1 EA
(5)	PROTECT IN PLACE SPECIFIED ITEM	5 EA
(6)	TRANSITION SLOPE PROTECTION LENGTH FROM 27' TO 30' (STA 523+00 TO 522+50)	50 LF
(7)	TRANSITION SLOPE PROTECTION LENGTH FROM 30' TO 34.5' (STA 512+00 TO 510+75)	125 LF
(8)	MINIMUM 3" CLASS 2 AGGREGATE BASE	23,000 SF
(9)	TOP OF DIKE TO TOP OF CSP, ENGINEERED FILL AT 3:1 SLOPE PER TYPICAL SECTIONS SHEET 6	6,500 CY
(10)	REPAIR DIKE EROSION WITHIN EXTENTS SHOWN PER EARTHWORK SPECIFICATION	3,200 SF

SURVEY BENCHMARKS

##	NORTHING	EASTING	ELEVATION	DESCRIPTION
3	2228137.0618	6555481.9475	89.2	SET 100D SPIKE PUNCHED
5	2226716.6514	6556944.5623	89.7	SET 100D SPIKE PUNCHED
208	2227292.0252	6556067.8464	89.5	SET 1" IP w/PP STAMPED PSOMAS CNTL DN 0.3'
209	2227597.6600	6555848.3754	89.0	SET 1" IP w/PP STAMPED PSOMAS CNTL DN 0.3'
210	2228633.3443	6554971.3888	78.3	SET 1" IP w/PP STAMPED PSOMAS CNTL DN 0.3'
211	2228949.9283	6554574.3720	80.5	SET 1" IP w/PP STAMPED PSOMAS CNTL DN 0.3'

STATION LINE DATA

BEGIN STATION	END STATION	BEARING	LENGTH	RADIUS	DELTA	CHORD
531+00.00	527+26.44	N67°55'21.2196"W	373.56			
527+26.44	516+08.01	N51°04'02.7736"W	1118.43	1900.00	33°43'36.8921"	1102.35
516+08.01	504+69.68	N34°12'14.3275"W	1138.33			
504+69.68	485+16.77	N63°38'59.1066"W	1952.92	1900.00	58°53'29.5580"	1868.08

ABBREVIATIONS

C/L	CENTERLINE	FG	FINISH GRADE	R/W	RIGHT OF WAY
CONST.	CONSTRUCT	FPS	FEET PER SECOND	S	SEWER
CSP	CONCRETE SLOPE PROTECTION	GB	GRADE BREAK	S(FM)	SEWER FORCE MAIN
CFS	CUBIC FEET PER SECOND	IRR	IRRIGATION DRAIN PIPING	TMH	TOP OF MANHOLE
D	DEPTH	MH	MANHOLE	TYP.	TYPICAL
ø	DIAMETER	MIN.	MINIMUM	VERT	VERTICAL
DWG.	DRAWING	N	NORTHING	WTR.	WATER
E	EASTING	NO.	NUMBER	WSE	WATER SURFACE ELEVATION
EG	EX GRADE	N.T.S	NOT TO SCALE	(N)	NORTH
EL	ELEVATION	OC	ON CENTER	(S)	SOUTH
EP	EDGE OF PAVEMENT	P/L	PROPERTY LINE	(E)	EAST
ESMT.	EASEMENT	PIP	PROTECT IN PLACE	(W)	WEST
EW	EACH WAY	PROP	PROPOSED	RC	RELATIVE COMPACTION
EX	EXISTING	Q	DESIGN FLOW RATE		

FLOOD PROTECTION DETENTION DIKE NO. 2 (USBR, 1947) REFERENCE DRAWINGS

REFERENCE NO.	
212-D-7483	LOCATION MAP
212-D-7485	DIKE PROFILES
212-D-7488	TYPICAL DIKE SECTIONS

EARTHWORK QUANTITIES

	RAW CUT (C.Y.)	RAW FILL (C.Y.) 10% SHRINKAGE
TOTAL	115,000 CY	103,500 CY FILL

SHEET INDEX

C.V.W.D. DRAWING APPROVAL

Checked: _____ PROJECT ENGINEER — DATE
Recommended: _____ DIRECTOR OF ENGINEERING — DWG. No.

Revisions:	DATE	APPR.

DIGALERT — DIAL TOLL FREE 1-800-227-2600 — AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

BENCHMARK:
CP#209
SURVEY CONTROL POINT
NAVD88 ELEV. 89.0
Latitude : N33° 46' 49.52"
Longitude : W116° 16' 08.93"
NAD83 CA ZONE 6
Northing : 2227597.6600
Easting : 6555848.3754

BASIS OF BEARINGS:
THE BEARINGS OF THIS DRAWING ARE BASED UPON THE CALIFORNIA COORDINATE SYSTEM (CCS83), ZONE 6, NAD 83, (2007.00) EPOCH ADJUSTMENT AS DETERMINED LOCALLY BY A LINE BETWEEN CONTINUOUS GLOBAL POSITION STATIONS (CGPS) "TMAP" AND "CACT".

DRAWN
100% CHECK SET
DESIGNED tvs/rm
CHECKED bcw
DATE 10/23/2018
JOB NO. 5001450
SCALE

REGISTERED PROFESSIONAL ENGINEER — BRENT C. WOLFE — No. 65181 — Exp. 09/30/19 — CIVIL — STATE OF CALIFORNIA

PRELIMINARY — NOT FOR CONSTRUCTION

DATE:

nhc — natural heritage consultants
2600 capitol avenue, suite 140
sacramento, california 95816-5928
phone: (916) 371-7400
fax: (916) 371-7475
www.nhcweb.com

DATE	BY	DESCRIPTION	APP'D	DATE

REVISIONS

LOCATED IN CITIES OF COACHELLA AND INDIO, AND UNINCORPORATED COMMUNITIES OF RIVERSIDE COUNTY, STATE OF CALIFORNIA
EAST SIDE DIKE IMPROVEMENT PROJECT - PHASE 1
(DUNE PALMS ROAD TO I-10)
TITLE SHEET
LOCATED WITHIN SECTIONS 32 AND 33, T. 4 S., R. 7 E., SB B&M
FOR: Coachella Valley Water District

SHEET 1 OF 7 SHEETS
DWG. NAME
DWG. NO.

Map Date: 10/23/2018
Source: NHC 2018

ECORP Consulting, Inc.
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Figure 3a. Site Plans (Sheet 1 of 7)

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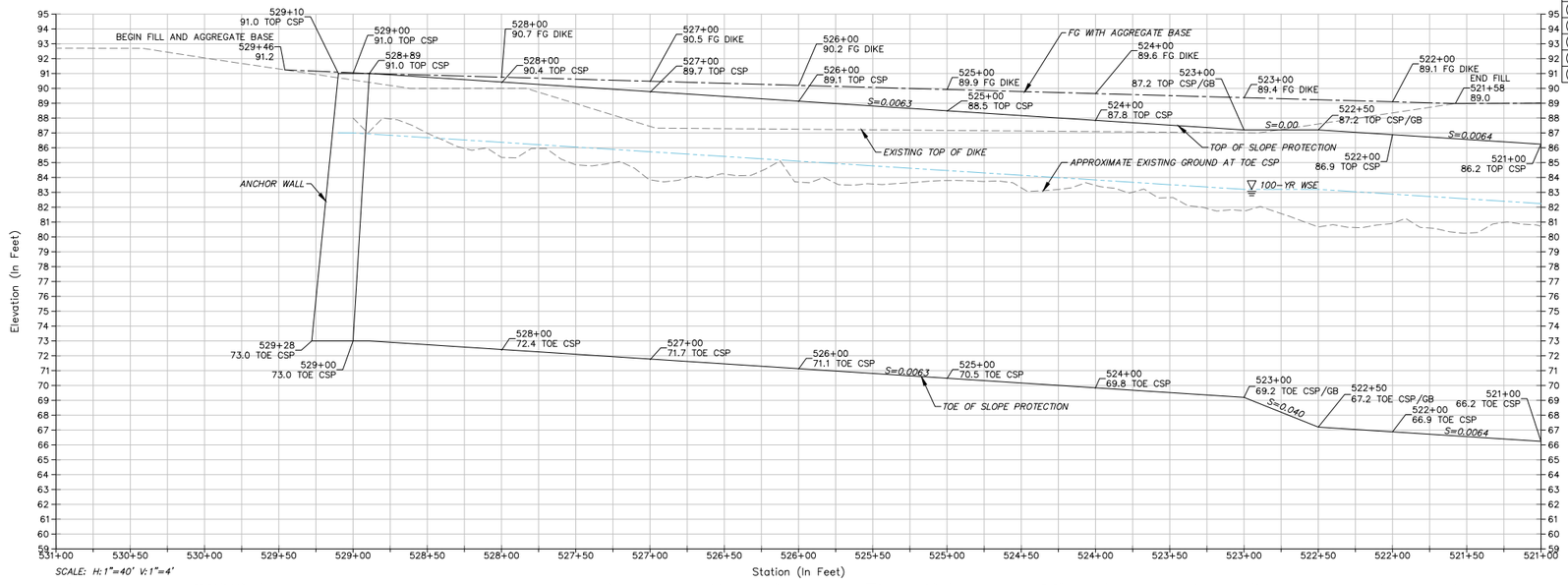
NOTE:
CONTRACTOR TO FIELD VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION

SURVEY BENCHMARKS

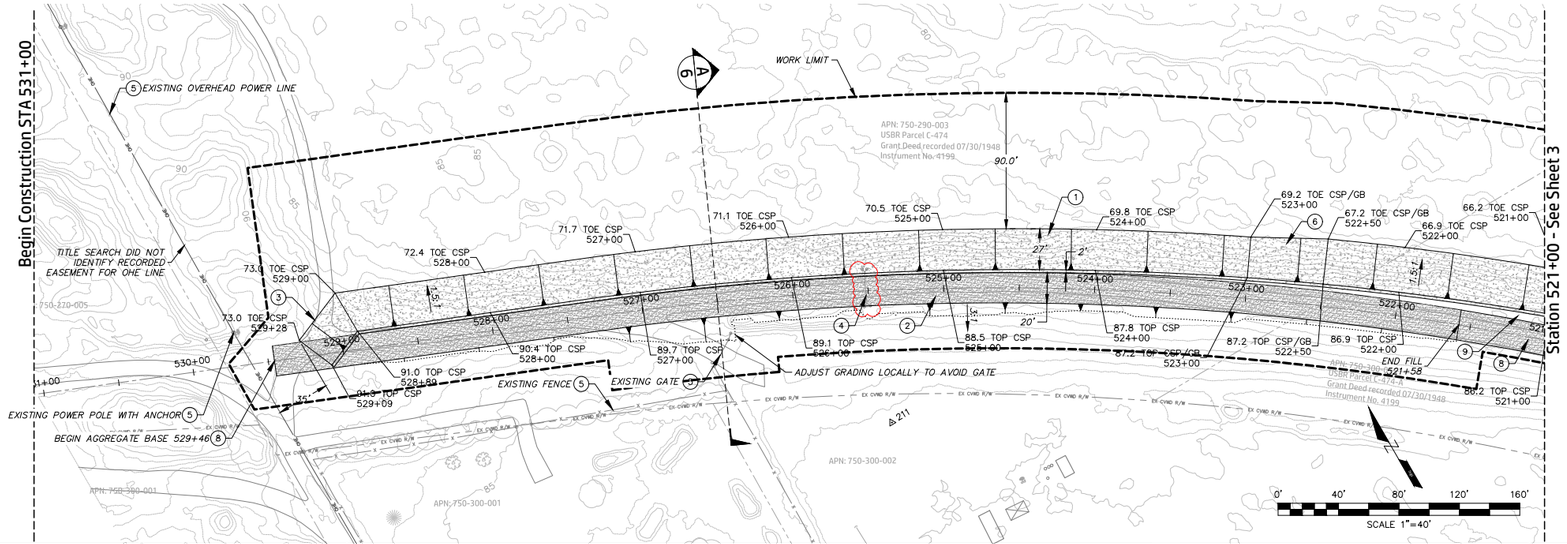
##	NORTHING	EASTING	ELEVATION	DESCRIPTION
211	2228949.9283	6554574.3720	80.5	SET 1" IP w/PP STAMPED PSOMAS CNTL DN 0.3'

CONSTRUCTION NOTES

1	CONSTRUCT SLOPE PROTECTION PER DETAILS, SHEET 7
2	CONSTRUCT DIKE ACCESS ROAD PER TYPICAL SECTION A, SHEET 6
3	CONSTRUCT SLOPE PROTECTION ANCHOR WALL PER DETAIL E, SHEET 7
4	REMOVE AND REINSTALL ACCESS GATE; LOCATION TO BE MARKED IN FIELD BY ENGINEER
5	PROTECT IN PLACE SPECIFIED ITEM
6	TRANSITION SLOPE PROTECTION LENGTH FROM 27' TO 30' (STA 523+00 TO 522+50)
8	MINIMUM 3" CLASS 2 AGGREGATE BASE
9	TOP OF DIKE TO TOP OF CSP, ENGINEERED FILL 3:1 SLOPE PER SECTIONS SHEET 6



SCALE: H: 1"=40' V: 1"=4'



C.V.W.D. DRAWING APPROVAL

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Recommended: _____ DIRECTOR OF ENGINEERING — DWG. No.

Revisions:	DATE	APPR.

DIGALERT DIAL TOLL FREE 1-800-227-2600 AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

BENCHMARK:
CP#209
SURVEY CONTROL POINT
NAVD88 ELEV 89.0
Latitude : N33° 46' 49.52"
Longitude : W116° 16' 08.93"
NAD83 CA ZONE 6
Northing : 2227597.6600
Easting : 6555848.3754

BASIS OF BEARINGS:
THE BEARINGS OF THIS DRAWING ARE BASED UPON THE CALIFORNIA COORDINATE SYSTEM (CCS83), ZONE 6, NAD 83, (2007.00) EPOCH ADJUSTMENT AS DETERMINED LOCALLY BY A LINE BETWEEN CONTINUOUS GLOBAL POSITION STATIONS (CGPS) "TMAP" AND "CACT".

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CHECKED bcw
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JOB NO. 5001450
SCALE

REGISTERED PROFESSIONAL ENGINEER BRENT C. WOLFE No. 65781 Exp. 09/30/19 CIVIL STATE OF CALIFORNIA

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2600 capitol avenue, suite 140
sacramento, california 95816-5928
phone: (916) 371-7400
fax: (916) 371-7475
www.nhcweb.com

DATE: _____

DATE	BY	DESCRIPTION	APP'D	DATE

REVISIONS

LOCATED IN CITIES OF COACHELLA AND INDIO, AND UNINCORPORATED COMMUNITIES OF RIVERSIDE COUNTY, STATE OF CALIFORNIA

EAST SIDE DIKE IMPROVEMENT
PROJECT - PHASE 1
(DUNE PALMS ROAD TO I-10)
PLAN SHEET
STA 531+00 - 521+00
LOCATED WITHIN SECTIONS 32 AND 33, T. 4 S., R. 7 E., SB B&M
FOR: Coachella Valley Water District

SHEET 2 OF 7 SHEETS
DWG. NAME
DWG. NO.

Map Date: 10/23/2018
Source: NHC 2018

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Figure 3b. Project Site Plan (Sheet 2 of 7)

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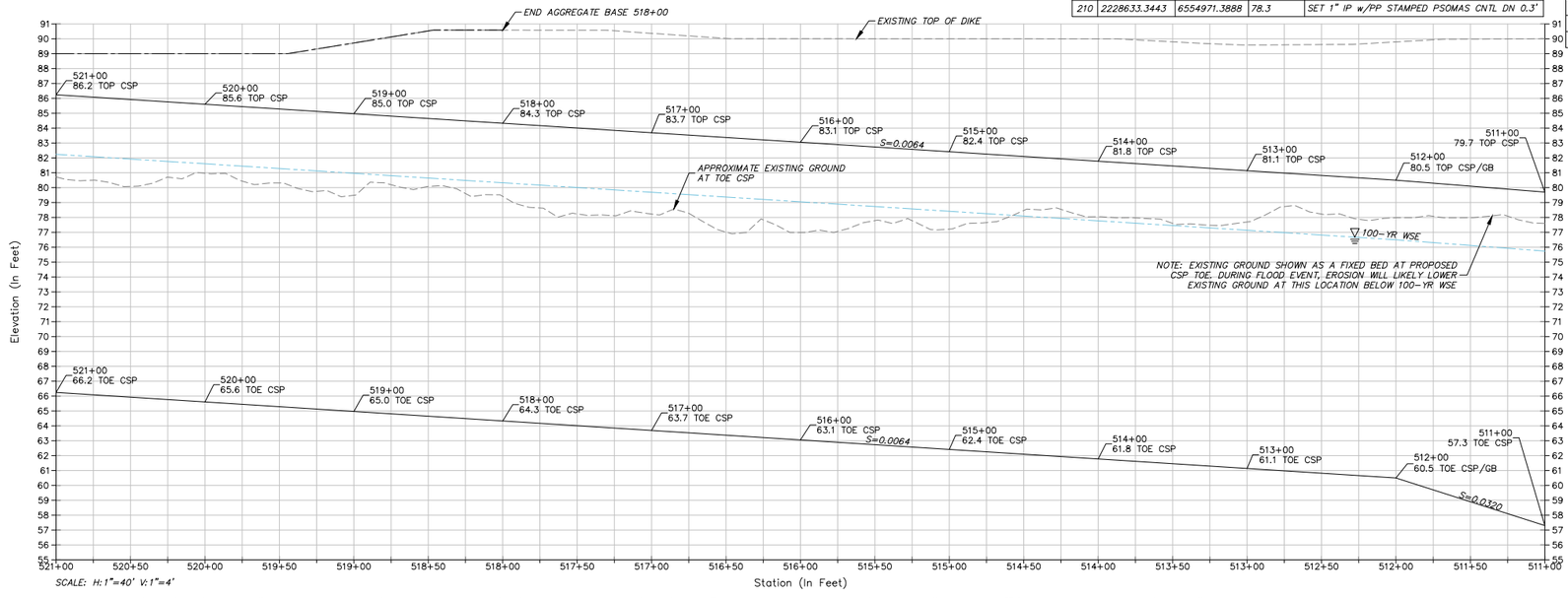
NOTE:
CONTRACTOR TO FIELD VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION

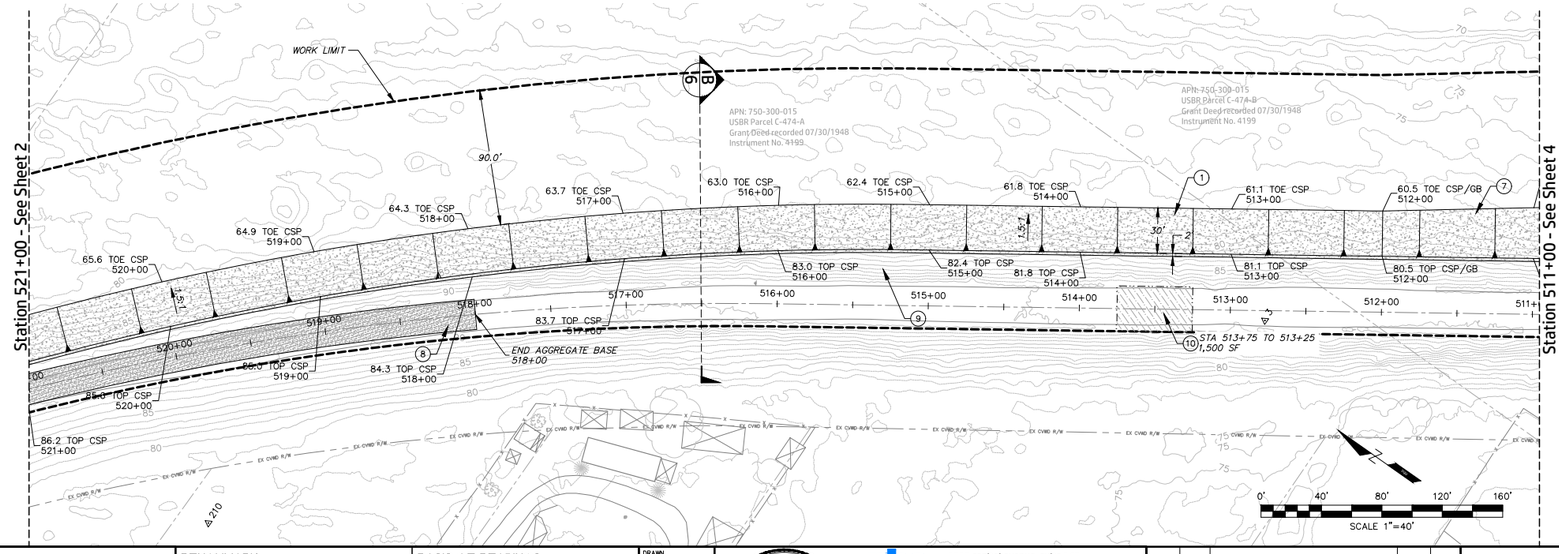
SURVEY BENCHMARKS

##	NORTHING	EASTING	ELEVATION	DESCRIPTION
3	2228137.0618	6555481.9475	89.2	SET 100D SPIKE PUNCHED
210	2228633.3443	6554971.3888	78.3	SET 1" IP w/PP STAMPED PSOMAS CNTL DN 0.3'

CONSTRUCTION NOTES

1	CONSTRUCT SLOPE PROTECTION PER DETAILS, SHEET 7
7	TRANSITION SLOPE PROTECTION LENGTH FROM 30' TO 34.5' (STA 512+00 TO 510+75)
8	MINIMUM 3" CLASS 2 AGGREGATE BASE
9	TOP OF DIKE TO TOP OF CSP, ENGINEERED FILL 3:1 SLOPE PER SECTIONS SHEET 6
10	REPAIR DIKE EROSION WITHIN EXTENTS SHOWN PER EARTHWORK SPECIFICATION





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BENCHMARK:
CP#209
SURVEY CONTROL POINT
NAVD88 ELEV 89.0
Latitude : N33° 46' 49.52"
Longitude : W116° 16' 08.93"
NAD83 CA ZONE 6
Northing : 2227597.6600
Easting : 6555848.3754

BASIS OF BEARINGS:
THE BEARINGS OF THIS DRAWING ARE BASED UPON THE CALIFORNIA COORDINATE SYSTEM (CCS83), ZONE 6, NAD 83, (2007.00) EPOCH ADJUSTMENT AS DETERMINED LOCALLY BY A LINE BETWEEN CONTINUOUS GLOBAL POSITION STATIONS (CGPS) "TMAP" AND "CACT".

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DESIGNED tvs/rm
CHECKED bcw
DATE 10/23/2018
JOB NO. 5001450
SCALE

REGISTERED PROFESSIONAL ENGINEER BRENT C. WOLFE No. 65181 Exp: 09/30/19 CIVIL STATE OF CALIFORNIA

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2600 capitol avenue, suite 140
sacramento, california 95816-5928
phone: (916) 371-7400
fax: (916) 371-7475
www.nhcweb.com

DATE:

DATE	BY	DESCRIPTION	APP'D	DATE

REVISIONS

C.V.W.D. DRAWING APPROVAL
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Recommended: _____ DIRECTOR OF ENGINEERING — DWG. No.

Revisions:	DATE	APPR.

LOCATED IN CITIES OF COACHELLA AND INDIO, AND UNINCORPORATED COMMUNITIES OF RIVERSIDE COUNTY, STATE OF CALIFORNIA

EAST SIDE DIKE IMPROVEMENT PROJECT - PHASE 1 (DUNE PALMS ROAD TO I-10)
PLAN SHEET
STA 521+00 - 511+00
LOCATED WITHIN SECTIONS 32 AND 33, T. 4 S., R. 7 E., SB B&M
FOR: Coachella Valley Water District

SHEET 3 OF 7 SHEETS
DWG. NAME
DWG. NO.

Map Date: 10/23/2018
Source: NHC 2018

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Figure 3b. Project Site Plan (Sheet 3 of 7)

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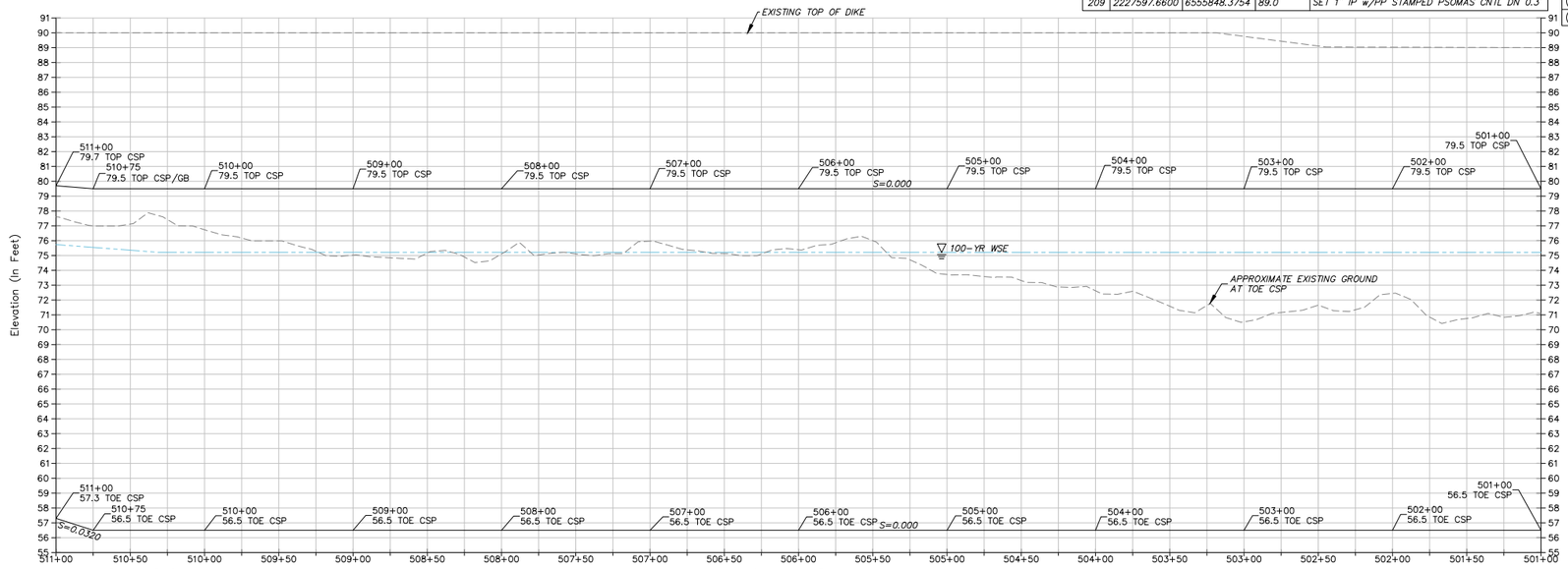
NOTE:
CONTRACTOR TO FIELD VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION

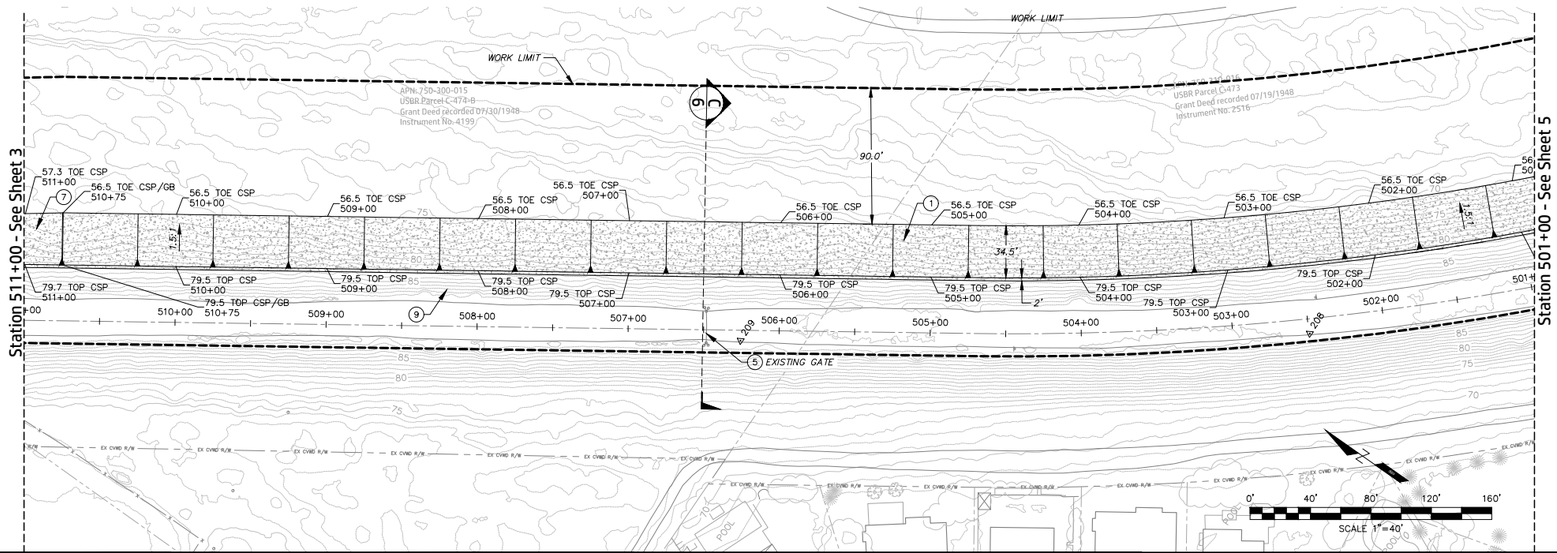
SURVEY BENCHMARKS

##	NORTHING	EASTING	ELEVATION	DESCRIPTION
208	2227292.0252	6556067.8464	89.5	SET 1" IP w/PP STAMPED PSOMAS CNTL DN 0.3'
209	2227597.6600	6555848.3754	89.0	SET 1" IP w/PP STAMPED PSOMAS CNTL DN 0.3'

CONSTRUCTION NOTES

1	CONSTRUCT SLOPE PROTECTION PER DETAILS, SHEET 7
5	PROTECT IN PLACE SPECIFIED ITEM
7	TRANSITION SLOPE PROTECTION LENGTH FROM 30' TO 34.5' (STA 512+00 TO 510+75)
9	TOP OF DIKE TO TOP OF CSP, ENGINEERED FILL AT 3:1 SLOPE PER SECTIONS SHEET 6





C.V.W.D. DRAWING APPROVAL	
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Recommended: DIRECTOR OF ENGINEERING	DWG. No.
Revisions:	DATE / APPR.

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UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

BENCHMARK:
CP#209
SURVEY CONTROL POINT
NAVD88 ELEV 89.0
Latitude : N33° 46' 49.52"
Longitude : W116° 16' 08.93"
NAD83 CA ZONE 6
Northing : 2227597.6600
Easting : 6555848.3754

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fax: (916) 371-7475
www.nhcweb.com

DATE:

DATE	BY	DESCRIPTION	APP'D	DATE

REVISIONS

LOCATED IN CITIES OF COACHELLA AND INDIO, AND UNINCORPORATED COMMUNITIES OF RIVERSIDE COUNTY, STATE OF CALIFORNIA

EAST SIDE DIKE IMPROVEMENT
PROJECT - PHASE 1
(DUNE PALMS ROAD TO I-10)
PLAN SHEET
STA 511+00 - 501+00
LOCATED WITHIN SECTIONS 32 AND 33, T. 4 S., R. 7 E., SB B&M
FOR: Coachella Valley Water District

SHEET 4 OF 7 SHEETS
DWG. NAME
DWG. NO.

Map Date: 10/23/2018
Source: NHC 2018

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ENVIRONMENTAL CONSULTANTS

Figure 3d. Project Site Plan (Sheet 4 of 7)

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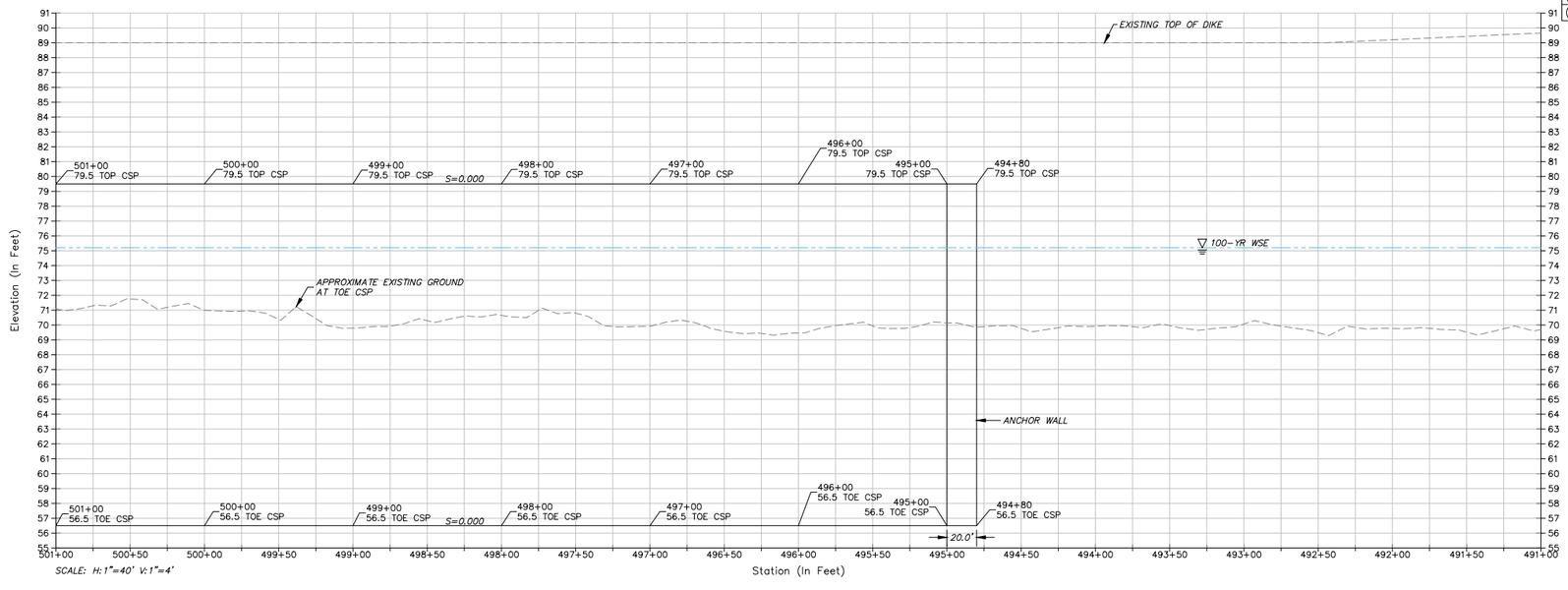
NOTE:
CONTRACTOR TO FIELD VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION

SURVEY BENCHMARKS

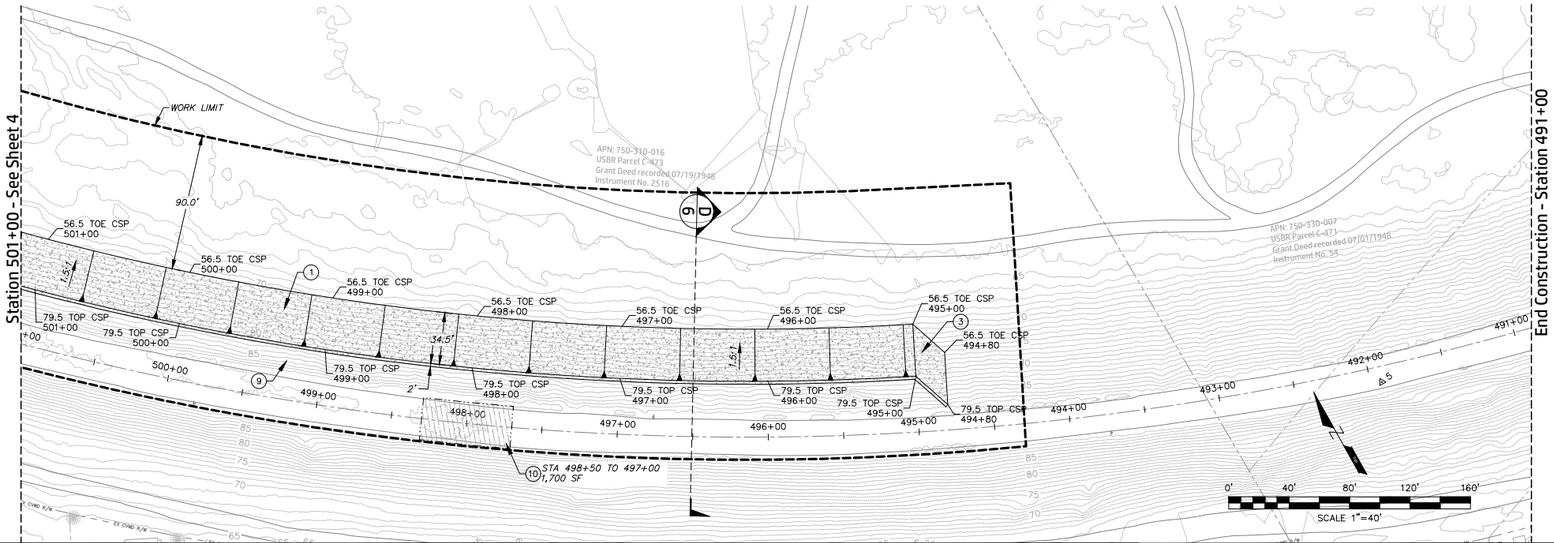
##	NORTHING	EASTING	ELEVATION	DESCRIPTION
5	2226716.6514	6556944.5623	89.7	SET 100D SPIKE PUNCHED

CONSTRUCTION NOTES

1	CONSTRUCT SLOPE PROTECTION PER DETAILS, SHEET 7
3	CONSTRUCT SLOPE PROTECTION ANCHOR WALL PER DETAIL E, SHEET 7
9	TOP OF DIKE TO TOP OF CSP, FILL AT 3:1 SLOPE PER TYPICAL SECTIONS SHEET 6
10	REPAIR DIKE EROSION WITHIN EXTENTS SHOWN PER EARTHWORK SPECIFICATION



SCALE: H:1"=40' V:1"=4'



C.V.W.D. DRAWING APPROVAL

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Recommended: _____ DIRECTOR OF ENGINEERING — DWG. No.

Revisions:	DATE	APPR.

DIG ALERT — DIAL TOLL FREE 1-800-227-2600 — AT LEAST TWO DAYS BEFORE YOU DIG — UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

BENCHMARK:
CP#209
SURVEY CONTROL POINT
NAVD88 ELEV 89.0
Latitude : N33° 46' 49.52"
Longitude : W116° 16' 08.93"
NAD83 CA ZONE 6
Northing : 2227597.6600
Easting : 6555848.3754

BASIS OF BEARINGS:
THE BEARINGS OF THIS DRAWING ARE BASED UPON THE CALIFORNIA COORDINATE SYSTEM (CCS83), ZONE 6, NAD 83, (2007.00) EPOCH ADJUSTMENT AS DETERMINED LOCALLY BY A LINE BETWEEN CONTINUOUS GLOBAL POSITION STATIONS (CGPS) "TMAP" AND "CACT".

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CHECKED: bcw
DATE: 10/23/2018
JOB NO.: 5001450
SCALE:

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sacramento, california 95816-5928
phone: (916) 371-7400
fax: (916) 371-7475
www.nhcweb.com

DATE: _____

DATE	BY	DESCRIPTION	APP'D	DATE

REVISIONS

LOCATED IN CITIES OF COACHELLA AND INDIO, AND UNINCORPORATED COMMUNITIES OF RIVERSIDE COUNTY, STATE OF CALIFORNIA

EAST SIDE DIKE IMPROVEMENT PROJECT - PHASE 1 (DUNE PALMS ROAD TO I-10) PLAN SHEET
STA 501+00 - 491+00
LOCATED WITHIN SECTIONS 32 AND 33, T. 4 S., R. 7 E., SB B&M
FOR: Coachella Valley Water District

SHEET 5 OF 7 SHEETS
DWG. NAME
DWG. NO.

Map Date: 10/23/2018
Source: NHC 2018

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Figure 3e. Project Site Plan (Sheet 5 of 7)

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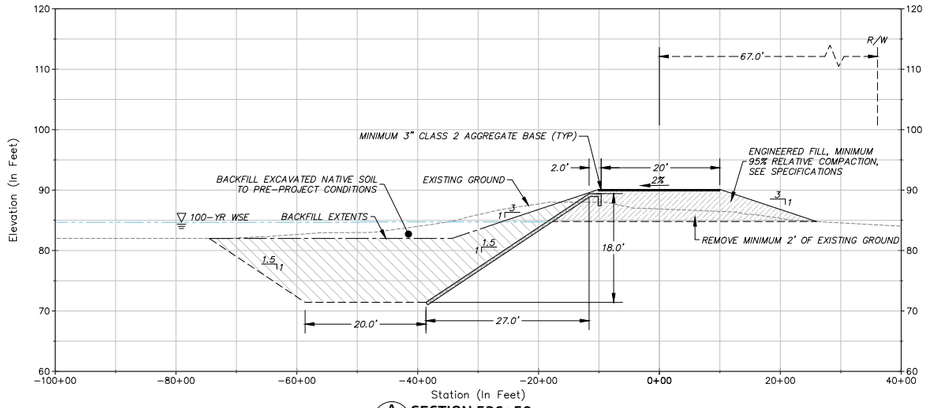
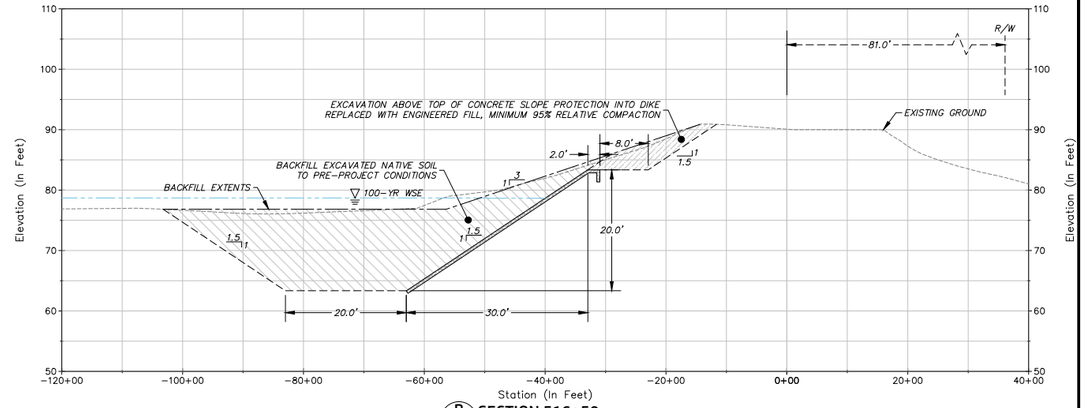


A 6 SECTION 526+50
SCALE: 1"=10'



B 6 SECTION 516+50
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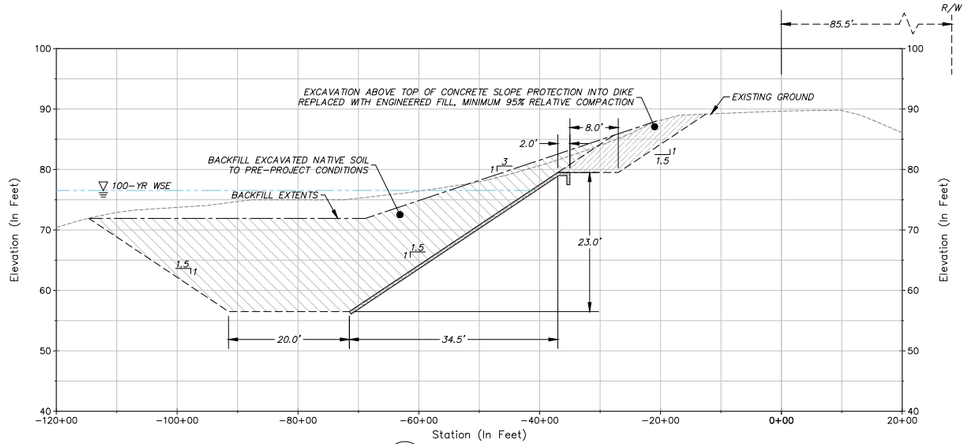

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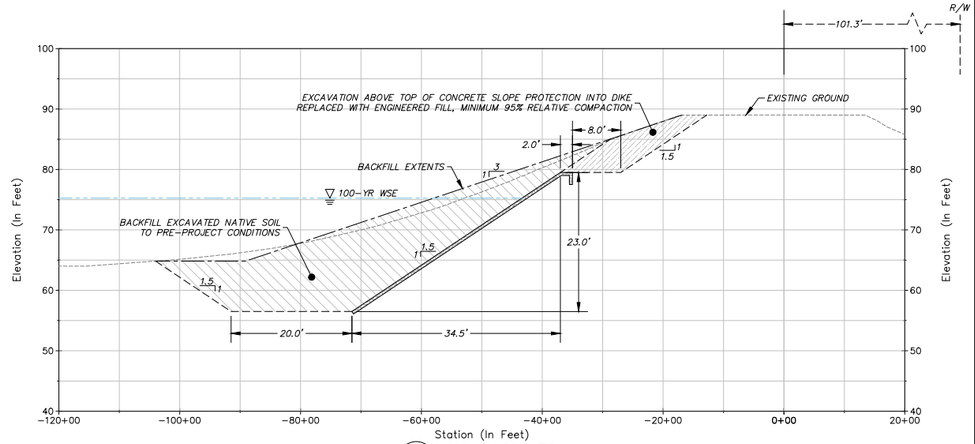

D 6 SECTION 496+50
SCALE: 1"=10'

C.V.W.D. DRAWING APPROVAL

Checked: _____ PROJECT ENGINEER — DATE

Recommended: _____ DIRECTOR OF ENGINEERING — DWG. No.

Revisions:	DATE	APPR.

DIG ALERT DIAL TOLL FREE 1-800-227-2600 AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

BENCHMARK:
CP#209
SURVEY CONTROL POINT
NAVD88 ELEV 89.0
Latitude : N33° 46' 49.52"
Longitude : W116° 16' 08.93"
NAD83 CA ZONE 6
Northing : 2227597.6600
Easting : 6555848.3754

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THE BEARINGS OF THIS DRAWING ARE BASED UPON THE CALIFORNIA COORDINATE SYSTEM (CCS83), ZONE 6, NAD 83, (2007.00) EPOCH ADJUSTMENT AS DETERMINED LOCALLY BY A LINE BETWEEN CONTINUOUS GLOBAL POSITION STATIONS (CGPS) "TMAP" AND "CACT".

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CHECKED bcw
DATE 10/23/2018
JOB NO. 5001450
SCALE

REGISTERED PROFESSIONAL ENGINEER — BRENT C. WOLFE — No. 65781 — Exp: 09/30/19 — CIVIL — STATE OF CALIFORNIA

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nhc northwest hydraulic consultants
2600 capitol avenue, suite 140
sacramento, california 95816-5928
phone: (916) 371-7400
fax: (916) 371-7475
www.nhcweb.com

DATE:

DATE	BY	DESCRIPTION	APP'D	DATE

REVISIONS

LOCATED IN CITIES OF COACHELLA AND INDIO, AND UNINCORPORATED COMMUNITIES OF RIVERSIDE COUNTY, STATE OF CALIFORNIA

EAST SIDE DIKE IMPROVEMENT PROJECT - PHASE 1 (DUNE PALMS ROAD TO I-10)

TYPICAL SECTIONS SHEET
LOCATED WITHIN SECTIONS 32 AND 33, T. 4 S., R. 7 E., SB B&M
FOR: Coachella Valley Water District

SHEET 6 OF 7 SHEETS
DWG. NAME
DWG. NO.

Map Date: 10/23/2018
Source: NHC 2018

ECORP Consulting, Inc. ENVIRONMENTAL CONSULTANTS

Figure 3f. Project Site Plan (Sheet 6 of 7)

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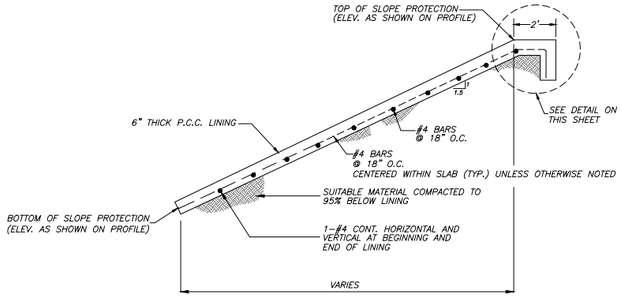
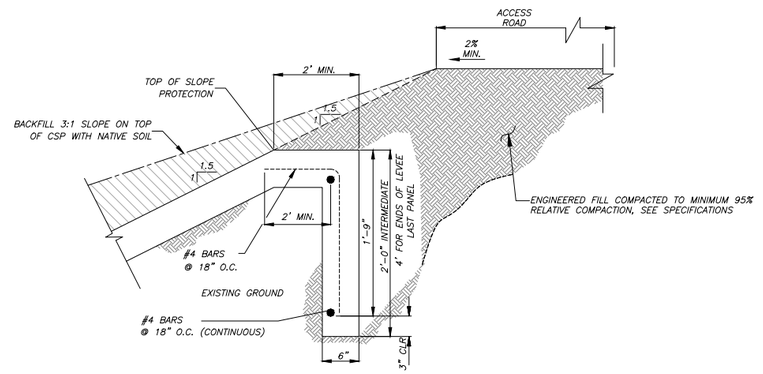
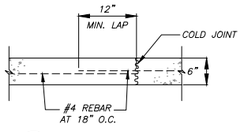


A/7 SLOPE PROTECTION DETAIL
NOT TO SCALE

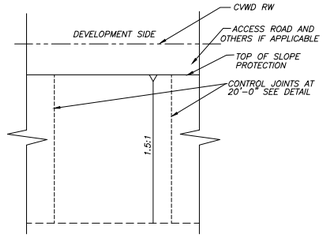
NOTE:
1. CONCRETE CLASS 560-C-3250 OF SUBSECTION 201-1.1.2 OF THE SSPWC (560 lbs/cy PORTLAND CEMENT, GRADE C AGGREGATE GRADATION, MIN. COMPRESSIVE STRENGTH OF 3500 PSI, 4-IN MAX SLUMP). WHEN APPLICABLE HIGHER STANDARDS MAY BE REQUIRED PER APPROVED SOILS REPORT.
2. MINIMUM REBAR COVERAGE = 1.5"
3. ALL REBAR SHALL BE DEFORMED BARS AND CONFORM TO ASTM A615 GR 60 OR A706 GR 60



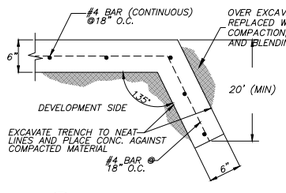
B/7 TOP OF SLOPE PROTECTION DETAIL
NOT TO SCALE



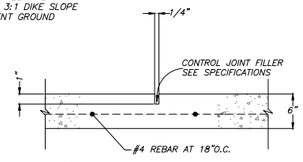
C/7 COLD JOINT DETAIL
NOT TO SCALE



D/7 CONTROL JOINT PLAN
NOT TO SCALE



E/7 DETAIL ANCHOR WALL
NOT TO SCALE



F/7 CONTROL JOINT DETAIL
NOT TO SCALE

C.V.W.D. DRAWING APPROVAL

Checked: _____ PROJECT ENGINEER — DATE

Recommended: _____ DIRECTOR OF ENGINEERING — DWG. No.

Revisions:	DATE	APPR.

DIGALERT — DIAL TOLL FREE 1-800-227-2600 — AT LEAST TWO DAYS BEFORE YOU DIG — UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

BENCHMARK:
CP#209
SURVEY CONTROL POINT
NAVD88 ELEV 89.0
Latitude : N33° 46' 49.52"
Longitude : W116° 16' 08.93"
NAD83 CA ZONE 6
Northing : 2227597.6600
Easting : 6555848.3754

BASIS OF BEARINGS:
THE BEARINGS OF THIS DRAWING ARE BASED UPON THE CALIFORNIA COORDINATE SYSTEM (CCS83), ZONE 6, NAD 83, (2007.00) EPOCH ADJUSTMENT AS DETERMINED LOCALLY BY A LINE BETWEEN CONTINUOUS GLOBAL POSITION STATIONS (CGPS) "TMAP" AND "CACT".

DRAWN 100% CHECK SET
DESIGNED tvs/rm
CHECKED bcw
DATE 10/23/2018
JOB NO. 5001450
SCALE

REGISTERED PROFESSIONAL ENGINEER — BRENT C. WOLFE — No. 69481 — CIVIL — Exp: 09/30/19 — STATE OF CALIFORNIA

PRELIMINARY
NOT FOR CONSTRUCTION

nhc northwest hydraulic consultants
2600 capitol avenue, suite 140
sacramento, california 95816-5928
phone: (916) 371-7400
fax: (916) 371-7475
www.nhcweb.com

DATE: _____

DATE	BY	DESCRIPTION	APP'D	DATE

REVISIONS

LOCATED IN CITIES OF COACHELLA AND INDIO, AND UNINCORPORATED COMMUNITIES OF RIVERSIDE COUNTY, STATE OF CALIFORNIA

EAST SIDE DIKE IMPROVEMENT
PROJECT - PHASE 1
(DUNE PALMS ROAD TO I-10)

DETAILS SHEET
LOCATED WITHIN SECTIONS 32 AND 33, T. 4 S., R. 7 E., SB B&M

FOR: Coachella Valley Water District

SHEET 7 OF 7 SHEETS
DWG. NAME
DWG. NO.

Map Date: 10/23/2018
Source: NHC 2018

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 3g. Project Site Plan (Sheet 7 of 7)

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SECTION 3.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED AND DETERMINATION

3.1 Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" and requiring mitigation as indicated by the checklist on the following pages.

☐ Aesthetics	☒ Hazards/Hazardous Materials	☐ Recreation
☐ Agriculture & Forestry Resources	☐ Hydrology/Water Quality	☒ Transportation/Traffic
☐ Air Quality	☐ Land Use and Planning	☐ Tribal Cultural Resources
☒ Biological Resources	☐ Mineral Resources	☐ Utilities and Service Systems
☒ Cultural Resources	☒ Noise	☐ Mandatory Findings of Significance
☐ Geology and Soils	☐ Population and Housing	
☐ Greenhouse Gas Emissions	☐ Public Services	

Determination

On the basis of this initial evaluation:

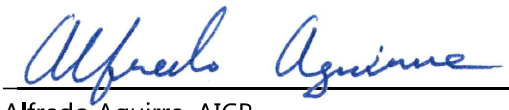
I find that the Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared. ☐

I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect with implementation of mitigation measures identified within the Mitigation Monitoring and Reporting Program. A MITIGATED NEGATIVE DECLARATION will be prepared. ☒

I find that the Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required. ☐

I find that the Project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed. ☐

I find that although the Project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the Project, nothing further is required. ☐

Prepared by:  4/9/2019

Alfredo Aguirre, AICP
Senior Environmental Planner
ECORP Consulting, Inc.

Date

Reviewed by:  Apr 11, 2019

Elizabeth Meyerhoff (Apr 11, 2019)

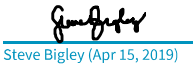
Elizabeth Meyerhoff
Environmental Specialist
Coachella Valley Water District

Date

Reviewed by:  Apr 11, 2019

William Patterson
Environmental Supervisor
Coachella Valley Water District

Date

Submitted by:  Apr 15, 2019

Steve Bigley (Apr 15, 2019)

Steve Bigley
Director of Environmental Services
Coachella Valley Water District

Date

Environmental Assessment Committee Determination

Concurrence by:  Apr 15, 2019

Sylvia Bermudez (Apr 15, 2019)

Sylvia Bermudez
Environmental Assessment Committee Chair
and Clerk of the Board
Coachella Valley Water District

Date

Approved by:  Apr 15, 2019

J.M. Barrett
General Manager
Coachella Valley Water District

Date

SECTION 4.0 ENVIRONMENTAL CHECKLIST AND DISCUSSION

4.1 Aesthetics

4.1.1 Aesthetics (I) Environmental Checklist and Discussion

	Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒

For purposes of determining significance under CEQA, a scenic vista is defined as a viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public. Scenic vistas can be officially designated by public agencies, or informally designated by the public. A substantial adverse effect to such a scenic vista is one that degrades the view from a public viewpoint. Scenic vistas in the project area include the Indio Hills located north of the project site. The Indio Hills rise to an approximate elevation of 1,660 feet above sea level and provides a scenic backdrop in the project area.

The Proposed Project would overall improve the aesthetics of the East Side Dike viewsacape in the project area through road improvements and the recontouring and re-grading of erosional features and eliminating future erosional features on the surface. Proposed improvements would be within the Dike's existing footprint. Road repairs would raise the top of the dike in varying amounts ranging from approximately 3 to 30 inches. This proposed elevation change compared to the existing road elevation would be minimal and would not have the potential to affect scenic vistas to the north of the project area. No impact would occur.

	Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒

The project site is not located within or near a state scenic highway (Caltrans 2017). No impact would occur.

	Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c)	Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐

Construction of the Proposed Project could have short-term visual impacts to the project area from the presence of construction equipment and activities on the project site. However, these impacts would be

temporary and would not substantially alter the visual character or quality of the project area. Proposed improvements would occur within the existing footprint of the dike. The concrete slope liner would be backfilled with existing material (dirt) from the dike at the end of construction, resulting in natural, pre-project visual setting. As such, impacts to the visual character or quality of the site would be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Would the project create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

The Proposed Project does not include new light sources or new structures that could produce glare. No nighttime construction requiring lighting is proposed. No impact would occur.

4.1.2 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.2 Agriculture and Forestry Resources

4.2.1 Agriculture and Forestry Resources (II) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒

The Proposed Project is not located within any existing farmland uses. The California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program (FMMP) has mapped the project area as "other land" (CDC 2017). Other land is land not included in any other mapping category of the FMMP. Therefore, the Proposed Project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) to non-agricultural use. No impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒

The project site is zoned Open Space and is not located in an agricultural use zone (City of Indio 2009). The project site is also not subject to a Williamson Act contract (CDC 2016). Therefore, the Proposed Project would not result in a conflict with an agricultural zoning designation or a Williamson Act contract. No impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒

The project site is zoned Open Space and is not zoned for forest land, timberland, or timberland production (City of Indio 2009). No impact would occur.

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒

The project site is not zoned for forest land, timberland, or timberland production (City of Indio 2009). No impact would occur.

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

The project site and the surrounding properties are not currently used for agriculture. The Proposed Project would not result in the conversion of forest land to non-forest use. No impact would occur.

4.2.2 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.3 Air Quality

4.3.1 Environmental Setting

Both the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) have established ambient air quality standards for common pollutants. These ambient air quality standards contain established levels of contaminants representing safe levels that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards include "criteria pollutants" based on the documented effects on human health. Areas that meet ambient air quality standards are classified as attainment areas, while areas that do not meet these standards are classified as nonattainment areas.

CARB divides the state into air basins that share similar meteorological and topographical features. The project site lies in the Coachella Valley portion of the Salton Sea Air Basin, which is predominately affected by the transport of air pollutants generated in the South Coast Air Basin to the west. As such, air quality planning in the project area is administered by the air pollution control agency for the South Coast Air Basin, the South Coast Air Quality Management District (SCAQMD).

The portion of the Salton Sea Air Basin encompassing the project site is designated as a nonattainment area for the federal ozone and coarse particulate matter (PM_{10}) standards and is also a nonattainment area for the state standards for ozone and PM_{10} standards (CARB 2016).

4.3.2 Air Quality (III) Environmental Checklist and Discussion

Would the Project:		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒

As part of its enforcement responsibilities, the EPA requires each state with nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the federal standards. The SIP must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in nonattainment areas, using a combination of performance standards and market-based programs. Similarly, under state law, the California Clean Air Act requires an air quality attainment plan to be prepared for areas designated as nonattainment with regard to the federal and state ambient air quality standards. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

In order to reduce emissions for which the Coachella Valley is in nonattainment, the SCAQMD has adopted the 2016 Air Quality Management Plan (AQMP) and Coachella Valley PM_{10} SIP. These air quality plans establish programs of rules and regulations directed at reducing air pollutant emissions and achieving state (California) and national ambient air quality standards. Pollutant control strategies are based on the latest scientific and technical information and planning assumptions, including the Southern California Association of Governments' (SCAG) latest Regional Transportation Plan/Sustainable Communities Strategy, updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts. SCAG's latest growth forecasts were defined in consultation with local governments and with reference to local general plans. The Coachella Valley Association of Governments (CVAG) relies on SCAG for emissions inventories and growth forecast. According to the SCAQMD, in order to determine consistency with SCAQMD's air quality planning two main criteria must be addressed.

Criterion 1:

With respect to the first criterion, SCAQMD methodologies require that an air quality analysis for a project include forecasts of project emissions in relation to contributing to air quality violations and delay of attainment.

a) Would the project result in an increase in the frequency or severity of existing air quality violations?

Since the consistency criteria identified under the first criterion pertain to pollutant concentrations, rather than to total regional emissions, an analysis of the Project's pollutant emissions relative to localized pollutant concentrations is used as the basis for evaluating Project consistency. As discussed in the response to question 4.3(d), below, localized concentrations of carbon monoxide (CO), nitrogen oxides (NO_X), and particulate matter (PM_{10} and $PM_{2.5}$) would be less than significant. Therefore, the Proposed Project would not result in an increase in the frequency or severity of existing air quality violations. Because reactive organic gasses (ROG) are not a criteria pollutant, there is no ambient standard or localized threshold for ROGs. Due to the role ROG plays in ozone formation, it is classified as a precursor pollutant and only a regional emissions threshold has been established.

b) Would the project cause or contribute to new air quality violations?

As discussed in the response to question 4.3(b), the Proposed Project would result in emissions that would be below the SCAQMD regional thresholds. Therefore, the Proposed Project would not have the potential to cause or affect a violation of the ambient air quality standards.

c) Would the project delay timely attainment of air quality standards or the interim emissions reductions specified in the AQMP?

The proposed Project would result in less than significant impact with regard to localized concentrations during Proposed Project construction. As such, the Proposed Project would not delay the attainment of air quality standards or AQMP emissions reductions.

Criterion 2:

With respect to the second criterion for determining consistency with SCAQMD and SCAG air quality policies, it is important to recognize that air quality planning within the Coachella Valley focuses on attainment of ambient air quality standards at the earliest feasible date. Projections for achieving air quality goals are based on assumptions regarding population, housing, and growth trends. Thus, the SCAQMD's second criterion for determining project consistency focuses on whether or not the Proposed Project exceeds the assumptions utilized in preparing the forecasts presented its air quality planning documents. Determining whether or not a project exceeds the assumptions reflected in the 2016 AQMP or Coachella Valley PM_{10} SIP involves the evaluation of the three criteria outlined below. The following discussion provides an analysis of each of these criteria.

a) Would the project be consistent with the population, housing, and employment growth projections utilized in the preparation of the AQMP and Coachella Valley PM_{10} SIP?

A project is consistent with regional air quality planning efforts in part if it is consistent with the population, housing, and employment assumptions that were used in the development of the SCAQMD air quality plans. Generally, four sources of data form the basis for the projections of air pollutant emissions: The *City of Indio General Plan*, *Riverside County General Plan*, SCAG's *Growth Management* Chapter of the *Regional Comprehensive Plan and Guide* (RCPG), and SCAG's *2016 Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS). The RTP/SCS also provides socioeconomic forecast projections of regional population growth. The Proposed Project involves the improvement of flood protection facilities along a floodway in order to improve public safety and achieve FEMA certification of the East Side Dike, which is not a trip generating land use. Rather, the Proposed Project would address existing stormwater management deficiencies and implement improvements consistent with both the City of Indio and Riverside County General Plans to protect life and property by improving existing flood protection barriers. Therefore, the Proposed Project would be considered consistent with the applicable General Plans. Furthermore, the Proposed Project does not involve any uses that would increase population beyond what is considered in either the City of Indio or Riverside County General Plans and, therefore, would not affect local plans for population growth. Thus, the Proposed Project is consistent with the types, intensity, and patterns of land use envisioned for the project vicinity in the RCPG. The population, housing, and employment forecasts, which are adopted by SCAG's Regional Council, are based on the local plans and policies applicable; these are used by SCAG in all phases of implementation and review. Additionally, as the SCAQMD has incorporated these same projections into the 2016 AQMP and Coachella Valley PM_{10} SIP, it can be concluded that the Proposed Project would be consistent with the projections.

b) Would the project implement all feasible air quality mitigation measures?

The Proposed Project would result in less than significant air quality impacts. Compliance with emission reduction measures identified by the SCAQMD would be required as identified in the response to question 4.3(b). As such, the Proposed Project meets this consistency criterion.

c) Would the project be consistent with the land use planning strategies set forth by SCAQMD air quality planning efforts?

The Proposed Project would serve to implement regional goals to manage stormwater in the area. The Proposed Project is located adjacent to a developed portion of the City of Indio. The purpose of the Proposed Project is to make improvements to the East Side Dike which is necessary for FEMA certification dike.

In conclusion, the determination of AQMP consistency is primarily concerned with the long-term influence of a project on air quality. The Proposed Project would not result in a long-term impact on the region's ability to meet State and Federal air quality standards. As discussed above, the Proposed Project's long-term influence would also be consistent with the goals and policies of the SCAQMD's 2016 AQMP and Coachella Valley PM_{10} SIP and is, therefore, considered consistent with the SCAQMD's 2016 AQMP and Coachella Valley PM_{10} SIP. No impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐

The Proposed Project would introduce construction source emissions, which would adversely affect regional air quality. Short-term operational emissions associated with the Proposed Project were quantified using the California Emissions Estimator Model (CalEEMod) land use emissions model (see Appendix A for model data outputs). These quantified emissions projections were then compared with the significance thresholds established by the SCAQMD.

Construction Impacts

Construction activities would primarily involve earthwork to excavate for the placement on concrete slope lining protection. Construction would also include intensive concrete mixing and laying, as well as metal (rebar) work. Construction of the Proposed Project is anticipated to be completed within 5 months. Construction activities would require the movement of approximately 115,000 cubic yards of soil on-site.

Table 4.3-1 depicts the construction emissions associated with the Proposed Project. Emitted pollutants would include ROG, CO, NO_X, PM_{10}, and fine particulate matter ($PM_{2.5}$). PM_{10} and $PM_{2.5}$ emissions would occur from fugitive dust (due to earthwork and excavation) and from construction equipment exhaust. The majority of PM_{10} and $PM_{2.5}$ emissions would be generated by fugitive dust from earthwork activities. Exhaust emissions from construction activities include emissions associated with the transport of machinery and supplies to and from the project site, emissions produced on-site as the equipment is used, and emissions from trucks transporting materials to and from the project site.

The Proposed Project is subject to SCAQMD rules and regulations to reduce fugitive dust emissions and to mitigate potential air quality impacts. SCAQMD Rule 403 and 403.1 (for the Coachella Valley) requires fugitive dust sources to implement Best Available Control Measures for all sources, and all forms of visible particulate matter are prohibited from crossing any property line. SCAQMD Rule 403 is intended to reduce

PM_{10} emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust. Potential PM_{10} suppression techniques are summarized below.

a. Portions of the construction site to remain inactive longer than a period of three months will be watered daily or otherwise stabilized in a manner acceptable to the CVWD.

b. Gravel base will be applied to all on-site roads as soon as feasible or watered periodically.

c. All material transported off-site will be either sufficiently watered or securely covered to prevent excessive amounts of dust.

d. The area disturbed by clearing, grading, earth moving, or excavation operations will be minimized at all times.

e. Where vehicles leave the construction site and enter adjacent public streets, the streets will be swept daily or washed down at the end of the work day to remove soil tracked onto the paved surface.

f. Installation and utilization of a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the site.

Project specific techniques will be identified during the preparation of the Dust Control Plan in coordination with SCAQMD.

SCAQMD Rule 403.1, *Supplemental Fugitive Dust Control Requirements for Coachella Valley Sources,* requires the preparation of a Fugitive Dust Control Plan for all construction activities involving more than 5,000 square feet of ground disturbance. Under Rule 403.1, the Project Contractor will be required to prepare of a dust control plan subject to CVWD and SCAQMD-approval. Construction activities may not commence until the SCAQMD has approved or conditionally approved the dust control plan, which must describe all fugitive dust control measures that are to be implemented before, during, and after any dust-generating activity. The description of the control measures must be sufficiently detailed to demonstrate that the applicable best available control measures will be utilized and/or installed during all periods of active operations.

The estimated maximum daily construction emissions, accounting for compliance with SCAQMD Rule 403, are summarized in Table 4.3-1. Detailed construction model outputs are presented in Appendix A. As depicted in Table 4.3-1, construction-related emissions would not exceed the established SCAQMD thresholds for criteria pollutants. Therefore, construction-generated emissions would be less than significant.

Table 4.3-1. Construction-Generated Air Pollutant Emissions

Construction Phase	Pollutant (pounds/day)				
	ROG	NO_x	CO	PM_{10}	$PM_{2.5}$
Site Preparation	0.94	11.60	6.13	0.71	0.46
Grading	2.91	47.36	18.02	1.95	1.28
Dike Improvement Construction	4.12	33.89	30.39	5.56	1.98
Combined Emissions	**7.06**	**81.29**	**48.44**	**7.54**	**3.28**
SCAQMD Thresholds	*75*	*100*	*550*	*150*	*55*

Construction Phase	Pollutant (pounds/day)				
	ROG	NO_x	CO	PM_{10}	$PM_{2.5}$
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***

Source: Emissions were calculated by ECORP Consulting using CalEEMod 2016.3.1

Notes: ROG = reactive organic gases; NO_X = nitrogen oxides; CO = carbon monoxide; PM_{10} = particulate matter up to 10 microns; $PM_{2.5}$ = particulate matter up to 2.5 microns. Construction activities anticipated to endure 5 months. Grading and Dike Improvement Construction phases anticipated to overlap. Emissions estimates account for the disturbance of 13.8 acres and the movement of 115,000 cubic yards of soil within the project site.

Long-Term Operational Impacts

The Proposed Project would not include the provision of new permanent stationary or mobile sources of emissions, and therefore, by its very nature, would not generate quantifiable criteria emissions from Proposed Project operations. The Proposed Project does not propose any buildings and therefore no permanent source or stationary source emissions. Once the Proposed Project is completed, there would be no resultant increase in automobile trips to the area because the improved facilities would not require daily visits. While it is anticipated that the Proposed Project would require intermittent maintenance to be conducted by District staff, such maintenance would be minimal requiring a negligible amount of traffic trips on an annual basis. Impacts in this regard would be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐

Projects could contribute to an existing or projected air quality exceedance because the Coachella Valley is currently in nonattainment for ozone and PM_{10}. With regard to determining the significance of the cumulative contribution from the Proposed Project, the SCAQMD recommends that any given project's potential contribution to cumulative impacts be assessed using the same significance criteria as for project-specific impacts (SCAQMD 1993). Therefore, individual projects that do not generate operational or construction emissions that exceed the SCAQMD's daily thresholds for project-specific impacts would also not cause a cumulatively considerable increase in emissions for those pollutants for which the air basin is in nonattainment and therefore would not be considered to have a significant, adverse air quality impact. Alternatively, individual project-related construction and operational emissions that exceed SCAQMD thresholds for project-specific impacts would be considered cumulatively considerable. As previously noted, the Proposed Project would not exceed the applicable SCAQMD regional thresholds for construction or operational-source emissions. As such, the Proposed Project would result in a cumulatively less than significant impact.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐

Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis.

Sensitive receptors closest to the project site include residents adjacent to the south. In order to identify impacts to sensitive receptors, the SCAQMD recommends addressing localized significance thresholds for construction and operations impacts (area sources only).

Localized Significance Thresholds (LST)

Localized Significance Thresholds (LSTs) were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The SCAQMD provided the *Final Localized Significance Threshold Methodology* (dated June 2003 [revised 2008]) for guidance. The LST methodology assists lead agencies in analyzing localized impacts associated with project-specific level projects. The SCAQMD provides the LST lookup tables for one, two, and five-acre projects emitting CO, NO_X, $PM_{2.5}$, or PM_{10}. The LST methodology and associated mass rates are not designed to evaluate localized impacts from mobile sources traveling over the roadways. The Proposed Project is located within Sensitive Receptor Area (SRA) 30, Coachella Valley. It is noted that an operational LST analysis was not prepared, as the Proposed Project would not result in operational emissions.

The Proposed Project would disturb approximately 13.8 acres during construction of the proposed dike improvements. As described, the SCAQMD has produced look-up tables for projects that disturb less than or equal to 5 acres daily. However, the SCAQMD has also issued guidance on applying the CalEEMod emissions software to LSTs for projects greater than 5 acres. Since CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily soil disturbance activity possible for each piece of equipment, Table 4.3-2 is used to determine the maximum daily disturbed-acreage for comparison to LSTs.

Table 4.3-2. Equipment-Specific Grading Rates

Construction Phase	Equipment Type	Equipment Quantity	Acres Graded/Disturbed per 8-Hour Day	Operating Hours per Day	Acres Graded per Day
Site Preparation	Crawler Tractor	1	0.5	8	0.5
	Excavator	1	0.5	8	0.5

Construction Phase	Equipment Type	Equipment Quantity	Acres Graded/Disturbed per 8-Hour Day	Operating Hours per Day	Acres Graded per Day
Grading & Dike Improvement Construction	Crawler Tractor	2	0.5	8	1.0
	Excavator	2	0.5	8	1.0
	Water Truck	1	0.0	4	0.0
	Roller	1	0.0	8	0.0
	Crane	1	0.0	8	0.0
	Concrete Truck	4	0.0	8	0.0
Total Acres Graded per Day					**3.0**
Applicable LST Mass Rate Look-Up Table					3.0 acres

Source: Emissions were calculated by ECORP Consulting using CalEEMod 2016.3.1

Notes: The Localized Significance Threshold was determined using Appendix C of the SCAQMD Final Localized Significant Threshold Methodology guidance document for pollutants NO_X, CO, PM_{10}, and $PM_{2.5}$. The Localized Significance Threshold was based on the size of the construction site, the distance to sensitive receptors, and the source receptor area (SRA 30).

Construction activities anticipated to endure 5 months. Grading and Dike Improvement Construction phases anticipated to overlap.

NO_X = nitrogen oxides; CO = carbon monoxide; PM_{10} = particulate matter up to 10 microns; $PM_{2.5}$ = particulate matter up to 2.5 microns.

As shown in Table 4.3-2, Proposed Project implementation could potentially disturb up to 3 acres daily. Therefore, the LST threshold value for a 3-acre construction were sourced from the LST lookup tables.

The closest sensitive receptors to the Project site are residential uses (back yards) adjacent to the southern boundary of the construction area at approximately 30 feet distance (9 meters). These sensitive land uses may be potentially affected by air pollutant emissions generated during on-site construction activities. LST thresholds are provided for distances to sensitive receptors of 25, 50, 100, 200, and 500 meters. Notwithstanding, the SCAQMD methodology explicitly states: "It is possible that a project may have receptors closer than 25 meters. Projects with boundaries located closer than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters." Therefore, LSTs for receptors located at 25 meters were utilized in this analysis.

Table 4.3-3 shows the construction-related emissions for NO_X, CO, PM_{10}, and $PM_{2.5}$ compared to the LSTs for SRA 30, Coachella Valley. As shown in Table 4.3-3, construction emissions would not exceed the LSTs for SRA 30. Therefore, localized impacts from construction would be less than significant.

Table 4.3-3. Localized Significance Thresholds

Construction Phase	Pollutant (pounds/day)			
	NO_x	CO	PM_{10}	$PM_{2.5}$
Site Preparation	11.59	5.94	0.67	0.45
Grading & Dike Improvement Construction	42.53	24.37	2.29	1.73
SCAQMD Thresholds	*203*	*1,359*	*9*	*6*
Threshold Exceeded?	***No***	***No***	***No***	***No***

Source: Emissions were calculated by ECORP Consulting using CalEEMod 2016.3.1

Construction Phase	Pollutant (pounds/day)			
	NO_x	CO	PM_{10}	$PM_{2.5}$

Notes: The Localized Significance Threshold was determined using Appendix C of the SCAQMD Final Localized Significant Threshold Methodology guidance document for pollutants NO_X, CO, PM_{10}, and $PM_{2.5}$. The Localized Significance Threshold was based on the size of the construction site, the distance to sensitive receptors, and the source receptor area (SRA 30).
Construction activities anticipated to endure 5 months. Grading and Dike Improvement Construction phases anticipated to overlap.
NO_X = nitrogen oxides; CO = carbon monoxide; PM_{10} = particulate matter up to 10 microns; $PM_{2.5}$ = particulate matter up to 2.5 microns.

Carbon Monoxide Hotspots

CO emissions are a function of vehicle idling time, meteorological conditions, and traffic flow. Under certain extreme meteorological conditions, CO concentrations near a congested roadway or intersection may reach unhealthful levels (i.e., adversely affecting residents, school children, hospital patients, the elderly, etc.).

The Coachella Valley is designated as an attainment/maintenance area for the Federal CO standards and an attainment area for State standards. There has been a decline in CO emissions even though vehicle miles traveled on U.S. urban and rural roads have increased. On-road mobile source CO emissions have declined 24 percent between 1989 and 1998, despite a 23 percent rise in motor vehicle miles traveled over the same 10 years. California trends have been consistent with national trends; CO emissions declined 20 percent in California from 1985 through 1997 while vehicle miles traveled increased 18 percent in the 1990s. Three major control programs have contributed to the reduced per-vehicle CO emissions: exhaust standards, cleaner burning fuels, and motor vehicle inspection/maintenance programs.

A detailed CO analysis was conducted in the *Federal Attainment Plan for Carbon Monoxide* (*CO Plan*) for the SCAQMD's *2003 Air Quality Management Plan*. The locations selected for microscale modeling in the CO Plan are worst-case intersections in southern California, and would likely experience the highest CO concentrations. Thus, CO analysis within the CO Plan is utilized in a comparison to the Proposed Project, since it represents a worst-case scenario with heavy traffic volumes.

Of these locations, the Wilshire Boulevard/Veteran Avenue intersection in Los Angeles experienced the highest CO concentration (4.6 parts per million [ppm]), which is well below the 35-ppm 1-hr CO Federal standard. The Wilshire Boulevard/Veteran Avenue intersection is one of the most congested intersections in southern California with an average daily traffic (ADT) volume of approximately 100,000 vehicles per day. As the CO hotspots were not experienced at the Wilshire Boulevard/Veteran Avenue intersection, it can be reasonably inferred that CO hotspots would not be experienced at any intersections within the City of Indio near the project site due to the lower volume of traffic experienced in Indio. Additionally, the Proposed Project would not generate any new traffic trips and average daily trips would be the same with and without project implementation.

For the reasons described, air quality impacts would be less than significant in this regard.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

According to the SCAQMD CEQA Air Quality Handbook, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The Proposed Project does not include any uses identified by the SCAQMD as being associated with odors.

Construction activities associated with the Proposed Project may generate detectable odors from heavy-duty equipment exhaust. Construction-related odors would be short-term in nature and cease upon project completion. Any impacts to existing adjacent land uses would be short-term and are less than significant.

4.3.3 Mitigation Measures

No significant air quality impacts were identified, and no mitigation measures are required.

4.4 Biological Resources

A Biological Technical Report was prepared for the Proposed Project (ECORP 2019a; Appendix B). The following section summarizes the findings of this report. A reconnaissance-level biological survey was conducted to document the existing biological resources, to assess the habitat for its potential to support sensitive plant and wildlife species, and to determine whether impacts would occur to sensitive biological resources, as required under CEQA.

The project site lies within the area covered by the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP), which provides the framework and guidelines for conservation of habitats and natural communities within the area. Specifically, the project site is located within the East Indio Hills Conservation Area, as designated by the CVMSHCP, and will be subject to the Land Use Adjacency Guidelines and other requirements of the plan. The project is a covered activity within a Conservation Area under the CVMSHCP (see Table 7-6 in Section 7.3.1 of the CVMSHCP) and implementation of the CVMSHCP will provide authorization for take of species covered under the plan. The Joint Project Review Process conducted for the project determined that the project will need to comply with the Land Use Adjacency Guidelines and the applicable avoidance, minimization, and mitigation measures outlined in Section 4.4 of the CVMSHCP. Furthermore, CVWD has an established Operations and Maintenance (O&M) Manual that outlines avoidance and minimization measures to be implemented when working within a Conservation Area. The following section summarizes the results of the Biological Technical Report and discusses the project in the context of the CVMSHCP, the Joint Project Review Process determination, and the avoidance and minimization measures in the CVWD O&M Manual.

4.4.1 Environmental Setting

Vegetation Communities

The project site is subjected to repeated and ongoing disturbance from off-highway vehicle use. Despite this, the dominant vegetation community on the project site is four wing saltbush scrub (see Figure 2 in the Biological Technical Report, Appendix B). Mesquite thickets are located at the extreme west end of the project site but will be fenced off and avoided. Several small stands of tamarisk thickets are present adjacent to, but not within, the project site. In addition, two land cover types, disturbed areas and developed areas, were observed on and adjacent to the project site. The plant species observed within these cover types consisted of nonnative or invasive weedy species (ECORP 2018).

Wildlife

The project site provides habitat for species adapted to high levels of disturbance and adjacent to urban environments. Nine wildlife species were observed during the reconnaissance visit, including the western pygmy-blue butterfly (*Brephidium exile*), sidewinder (*Crotalus cerastes*), western side-blotched lizard (*Uta stansburiana elegans*), mourning dove (*Zenaida macroura*), Greater roadrunner (*Geococcyx californianus*), sage sparrow (*Amphispiza belli*), common raven (*Corvus corax*), Coyote (*Canis latrans*), and black-tailed jackrabbit (*Lepus californicus*).

Soils

Soils types were determined using the Natural Resources Conservation Service (NRCS) Web Soil Survey (USDA 2017). Soils within the project site consisted of three types: Borrow pits, Myoma fine sand (5 to 15 percent slopes), and Coachella fine sand (0 to 2 percent slopes).

Wildlife Movement Corridors

The project site is bordered by residential development to the south and Extensive amounts of open land exist to the north of the project site. The project site was heavily disturbed and contained very little cover that would only allow for limited movement of smaller, resident populations of wildlife. No migratory wildlife corridors or native wildlife nursery sites were identified within the project site (ECORP 2018).

4.4.2 Biological Resources (IV) Environmental Checklist and Discussion

Would the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐

Special-Status Plant Species

Of the 34 special-status plants identified in the literature search conducted for the Biological Technical Report (ECORP 2018), one species (Mecca-aster, CNPS List 1B.2) was determined to have a high potential to occur on the project site; one species (Glandular ditaxis, CNPS List 2B.2) was determined to have a moderate potential to occur on the project site; and five species (gravel milk-vetch, CNPS List 2B.2; California ditaxis, CNPS List 3.2; Abrams' spurge, CNPS List 2B.2; slender cottonheads, CNPS List 1B.2; and narrow-leaf sandpaper-plant, CNPS List 2B.3) were determined to have a low potential to occur on the project site. The only species that is a covered species under the CVMSHCP is Mecca-aster, the remaining species are not covered species. All of these species have the potential to occur within the fourwing saltbush scrub on the project site; however, the quality and suitability of the fourwing saltbush scrub is low due to existing disturbances and may preclude the presence of these special-status plant species.

Core Habitat for Mecca-aster, a covered species under the CVMSHCP, is present within the East Indio Hills Conservation Area, but the Core Habitat is not located within the project site. The remaining six species are not covered under the CVMSHCP (ECORP 2018). Direct impacts to these species may occur during project construction in the form of individual loss and habitat degradation; however, the loss of approximately 6.69 acres of low quality habitat is not considered significant due to the small amount and poor quality of the habitat lost. Furthermore, the presence of individuals is likely precluded due to the high levels of disturbances present within the project site. Impacts to special-status plant species not covered under the CVMSHCP are not expected to be significant.

Special-Status Wildlife

Of the 27 special-status wildlife species identified in the literature search conducted for the Biological Technical Report (ECORP 2018), seven wildlife species (Coachella Valley fringe-toed lizard, federally listed as threatened and state-listed as endangered; flat-tailed horned lizard, a California Species of Special Concern [SSC]; burrowing owl, a SSC; loggerhead shrike, a SSC; Palm Springs pocket mouse, a SSC; American badger, a SSC; and Palm Springs round-tailed ground squirrel, a SSC) have a high potential to occur on the project site; one species (desert tortoise, federally and state listed as threatened) has a moderate potential to occur on the project site; and three species (pallid San Diego pocket mouse, a SSC; crissal thrasher, a SSC; and Le Conte's thrasher, a SSC) have a low potential to occur on the project site (ECORP 2018). All of these species except loggerhead shrike, American badger, and pallid San Diego pocket mouse are covered species under the CVMSHCP.

The project would involve the ground-disturbing activities within the existing CVWD easement and removal of existing vegetation. Impacts to special-status wildlife species potentially occurring on the project site are described below.

Indirect and direct project impacts resulting in take of most of the covered species with potential to occur (Coachella Valley fringe-toed lizard, flat-tailed horned lizard, and Palm Springs round-tailed ground squirrel) is addressed under the CVMSHCP and further analysis of these species is not necessary.

Special-status species that are not covered under the CVMSHCP (loggerhead shrike, American badger, and pallid San Diego pocket mouse may occur on site due to the presence of suitable habitat within the fourwing

saltbush scrub on the project site. The loggerhead shrike and American badger were found to have a high potential to occur on the project site due to existing recent documented occurrences of these species in the vicinity of the project and the presence of potentially suitable habitat. The quality and suitability of the fourwing saltbush scrub is low due to existing disturbances and may preclude the presence of these special-status species. However, direct impacts to loggerhead shrike and American badger through ground disturbance, vegetation removal, habitat loss, and mortality and indirect impacts from construction noise and vibrations may occur. Impacts to these species would be less than significant with the implementation of **Mitigation Measure BIO-1 General Preconstruction Survey**. Potential impacts to pallid San Diego pocket mouse are not expected to be significant because the species has a very low potential to occur on the project site due to low quality habitat and no recent records located nearby. Furthermore, the loss of approximately 6.69 acres of habitat for a species that is unlikely to be present would not be considered significant.

Burrowing owl was determined to have a high potential to occur due to the presence of suitable open habitat with soils suitable for burrowing and the observation of several burrows of adequate size. Furthermore, it was determined during the Joint Project Review Process that the avoidance, minimization, and mitigation measures outlined in Section 4.4 of the CVMSHCP will need to be implemented in addition to the avoidance and minimization measures for burrowing owl in the CVWD O&M Manual to avoid impacts to the species. As such, direct impacts to burrowing owl through ground disturbance and indirect impacts from construction noise and vibrations may occur. Impacts to burrowing owl would be less than significant with the implementation of **Mitigation Measure BIO-2 Focused Burrowing Owl Survey** and the avoidance and minimization measures outlined in the CVWD O&M Manual.

Desert tortoise was determined to have a moderate potential to occur due to the presence of suitable habitat in the fourwing saltbush scrub habitat within the project site and a nearby recorded observation of the species. Although presence of desert tortoise is relatively uncommon within the lower elevations of the Coachella Valley, there is potential for this species to be present. As such, direct impacts to desert tortoise through ground disturbance, vegetation removal, habitat loss, and mortality and indirect impacts from construction noise and vibrations may occur. Impacts to desert tortoise would be less than significant with the implementation of **Mitigation Measure BIO-3 Desert Tortoise Presence/Absence Survey** and the avoidance and minimization measures outlined in the CVWD O&M Manual.

Le Conte's thrasher was determined to have a low potential to occur because suitable foraging and nesting habitat is present within the mesquite thickets on the project site and the fact that there is CVMSHCP modeled habitat within the project site. Only historic records of this species occur within the vicinity. It was also determined during the Joint Project Review Process that the avoidance, minimization, and mitigation measures outlined in Section 4.4 of the CVMSHCP will need to be implemented to avoid impacts to the species. As such, direct impacts to nesting Le Conte's thrasher through ground disturbance and indirect impacts from construction noise and vibrations may occur. Impacts to Le Conte's thrasher would be less than significant with the implementation of **BIO-4 Focused Le Conte's Thrasher Survey** and **Mitigation Measure BIO-5 Preconstruction Survey for Nesting Birds**.

Nesting Birds

If construction of the project occurs during the bird breeding season (January 1 through July 31 for raptors and March 1 through September 15 for songbirds), ground-disturbing construction activities could directly affect birds protected by the MBTA and their nests through the removal of habitat and indirectly through increased noise, ground vibrations, and human activity. Impacts to nesting birds would be less than significant with the implementation of **Mitigation Measure BIO-5 Preconstruction Survey for Nesting Birds** and the avoidance and minimization measures for nesting bird species outlined in the CVWD O&M Manual.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐

One state-sensitive habitat, mesquite thickets, was identified adjacent to the project site (Figure 2 in the Biological Technical Report, Appendix B). Mesquite thickets has a State Rarity Rank of S3.2, indicating that it is a sensitive plant community. This community is also a modeled Conserved Natural Community that typically requires conservation within the East Indio Hills Conservation Area of the CVMSHCP (under the community classification Mesquite Hummocks and Mesquite Bosque). Approximately 0.08 acre of mesquite thickets occurs within the project site. Direct impacts to mesquite thickets may occur through ground disturbance and vegetation removal. With the implementation of **Mitigation Measures BIO-6 Conserved Natural Community Avoidance** impacts would be less than significant.

The project site contains a seasonal pool area that is potentially CDFW jurisdictional. A site visit was conducted on January 3, 2019 with CDFW's 1600 Program Coordinator Charley Land and CVWD's Environmental Supervisor William Patterson. Potential hydrological indicators (dispersed soil cracking, and vegetation appearances changes) were identified during the site visit in the southeast corner of the project area. Mr. Land indicated that due to the presence of hydrological indicators within the project site the Proposed Project would require a Notification of Lake or Streambed Alteration Agreement to be submitted to the CDFW for processing.

The Proposed Project would not expand or modify the size of the East Side Dike; therefore, permanent impacts to potentially jurisdictional features are not anticipated. However, construction of the Proposed Project would result in temporary ground disturbing activities in areas identified as potentially jurisdictional features (seasonal pool) to the CDFW. Prior to the commencement of project construction activities that could impact the jurisdictional features on the project site, authorization for potential impacts would be acquired through the permitting process from the CDFW. A Notification of Lake or Streambed Alteration application would be submitted to the local office of the CDFW. The CDFW would determine if a Lake or Streambed Alteration Agreement is required. If required the agreement would list mitigation requirements.

Compliance with regulatory permitting procedures with CDFW would result in less than significant impacts to CDFW jurisdictional features.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒

There are no suspected wetlands or Waters of the U.S. present within the project site otherwise subject to section 404 of the CWA. (ECORP 2019b). A site visit was conducted on January 4, 2019 by U.S. Army Corps of Engineers (USACE) Los Angeles District Regulatory Division staff Kyle Dahl and Stephen Roethle and CVWD's Environmental Supervisor William Patterson. Based on the site visit no wetland or discernable ordinary high water mark (OHWM) indicators were identified on the project site. It was determined that the project site is upland habitat. An approved jurisdictional determination was submitted by CVWD to the USACE in January 2019. No impact to wetlands or Waters of the U.S. would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒

The project site is bordered by residential development to the south and open land to the north. No migratory wildlife corridors or native wildlife nursery sites were identified within the project site. Therefore, no impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒

The project is identified in the CVMSHCP as a covered activity. In addition, because the project site is located within the East Indio Hills Conservation Area and adjacent to the Indio Hills Conservation Area, the project was required to undergo Joint Project Review Process with the Coachella Valley Conservation Commission

(CVCC). It was determined through this process that the project would need to implement the necessary avoidance, minimization, and mitigation measures outlined in Section 4.4 of the CVMSHCP and ensure that the project is consistent with the Land Use Adjacency Guidelines in Section 4.5 of the CVMSHCP in order to maintain compliance with the plan. The project is consistent with the CVMSHCP and no impact would occur. See item f) below for an expanded discussion on this topic.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

The project site is located in an area that is covered by the CVMSHCP and would be subject to the requirements of the plan.

Conservation Objectives for Conserved Habitats

The project lies within the planning area of the CVMSHCP and is located within the East Indio Hills Conservation Area. Conserved Habitats have been modeled for several covered species within and adjacent to the project site. However, during the Joint Project Review Process, it was determined through coordination with CVCC and a Rough Step analysis that impacts to these modeled Conserved Habitats have already been mitigated for and that additional avoidance, minimization, or mitigation measure would be required. The project is consistent with the acreages identified in the Conservation Objectives for the East Indio Hills Conservation Area. Table 4.4-1, taken from the Joint Project Review Process document dated August 30, 2018, outlines the Conservation Objectives identified for the East Indio Hills Conservation Area.

Table 4.4-1. Conservation Objectives for the East Indio Hills Conservation Area

Conservation Objective	Total Acres of Proposed Disturbance	Acres of Disturbance Authorized by the Plan	Proposed Disturbance as a Percentage of Authorized Disturbance	Rough Step (Acres of Disturbance Currently Available)	Acres Conserved by Project	Acres to be Conserved by Plan	% Required Conservation
Conserve "Other Conserved Habitat" for flat-tailed horned lizard (predicted)	0.00	11	0.00%	11.99	0.00	100	0
Conserve "Other Conserved Habitat" for Le Conte's thrasher	10.25	12	85.42%	12.51	0.00	105	0
Conserve "Other Conserved Habitat" for CV round-tailed ground squirrel	0.25	11	2.27%	11.67	0.00	103	0

Conservation Objective	Total Acres of Proposed Disturbance	Acres of Disturbance Authorized by the Plan	Proposed Disturbance as a Percentage of Authorized Disturbance	Rough Step (Acres of Disturbance Currently Available)	Acres Conserved by Project	Acres to be Conserved by Plan	% Required Conservation
Conserve "Other Conserved Habitat" for Palm Springs pocket mouse	0.25	11	2.27%	11.67	0.00	103	0
Conserve stabilized shielded desert sand fields	10.25	11	93.18%	11.99	0.00	100	0
Conserve mesquite hummocks	0.00	0	0.00%	0.00	0.00	2	0

Biological Corridors and Linkages

There are no CVMSHCP-designated biological corridors or linkages within the East Indio Hills Conservation Area, although its proximity to the biological corridors and linkages in the adjacent Indio Hills Palms Conservation Area may encourage wildlife to use the habitat within the East Indio Hills Conservation Area for movement. The project site was heavily disturbed and contained very little cover that would only allow for limited movement of smaller, resident populations of wildlife. Furthermore, the entire site is bordered by residential development along the south side, which prevents wildlife from moving through the project site from the north. The berm may influence east-west travel in the area but does not comprise a wildlife corridor. Therefore, no impacts to biological corridors and linkages under the CVMSHCP would occur.

CVMSHCP's Land Use Adjacency Guidelines

The Proposed Project would be required to comply with the CVMSHCP Land Use Adjacency Guidelines, which would include compliance with required measures prior to and/or during the design and development of the Proposed Project. These measures, taken word-for-word from Section 4.5 of the CVMSHCP, include:

- Drainage: Proposed Development adjacent to or within a Conservation Area shall incorporate plans to ensure that the quantity and quality of runoff discharged to the adjacent Conservation Area is not altered in an adverse way when compared with existing conditions. Stormwater systems shall be designed to prevent the release of toxins, chemicals, petroleum products, exotic plant materials or other elements that might degrade or harm biological resources or ecosystem processes within the adjacent Conservation Area.
- Toxics: Land uses proposed adjacent to or within a Conservation Area that use chemicals or generate bioproducts such as manure that are potentially toxic or may adversely affect wildlife and plant species, Habitat, or water quality shall incorporate measures to ensure that application of such chemicals does not result in any discharge to the adjacent Conservation Area.
- Lighting: For proposed Development adjacent to or within a Conservation Area, lighting shall be shielded and directed toward the developed area. Landscape shielding or other appropriate

methods shall be incorporated in project designs to minimize the effects of lighting adjacent to or within the adjacent Conservation Area in accordance with the guidelines to be included in the Implementation Manual.

- Noise: Proposed Development adjacent to or within a Conservation Area that generates noise in excess of 75 dBA Leq hourly shall incorporate setbacks, berms, or walls, as appropriate, to minimize the effects of noise on the adjacent Conservation Area in accordance with the guidelines to be included in the Implementation Manual.

- Invasives: Invasive, non-native plant species shall not be incorporated in the landscape for land uses adjacent to or within a Conservation Area. Landscape treatments within or adjacent to a Conservation Area shall incorporate native plant materials to the maximum extent Feasible; recommended native species are listed in Table 4-112 [of the CVMSHCP]. The plants listed in Table 4-113 [in the CVMSHCP] shall not be used within or adjacent to a Conservation Area. This list may be ameded from time to time through a Minor Amendment with Wildlife Agencies' concurrence.

- Barriers: Land uses adjacent to or within a Conservation Area shall incorporate barriers in individual project designs to minimize unauthorized public access, domestic animal predation, illegal trespass, or dumping in a Conservation Area. Such barriers may include native landscaping, rocks/boulders, fencing, walls and/or signage.

- Grading/Land Development: Manufactured slopes associated with site Development shall not extend into adjacent land in a Conservation Area.

The development and design of the Proposed Project is expected to be in compliance with the Land Use Adjacency Guidelines and, therefore, no impact would occur.

4.4.3 Mitigation Measures

BIO-1: **General Pre-Construction Survey:** A general preconstruction survey shall be conducted by a qualified biologist familiar with the biological resources of the Coachella Valley in the project site within 14 days prior to the start ground disturbing activities. The biologist will focus the survey on Mecca-aster and Palm Springs pocket mouse in accordance with the avoidance and minimization measures outlined in the CVWD O&M Manual, and special-status wildlife species with a high potential to occur on the project site that are not covered under the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP) (loggerhead shrike and American badger). The survey shall be conducted so that 100 percent coverage of the project site and surrounding areas is achieved. Visual surveys and examination of burrowing owl pellets shall be conducted in order to identify presence of Palm Springs pocket mouse or their remains in accordance with the CVWD O&M Manual. Should any special-status species not covered under the CVMSHCP be identified during pre-construction surveys, then additional avoidance and minimization measures may need to be developed with California Department of Fish and Wildlife if project impacts to special-status species not covered under the CVMSHCP found present are expected to be significant. If no special-status species are identified during the survey, then project activities may proceed. If Mecca-aster is found within the footprint of any covered activity,

then CVWD's biologist shall be contacted to determine if salvage of plant and/or seeds is feasible. During project activities, avoidance and minimization measures outlined in the CVWD O&M Manual shall be implemented in order to avoid impacts to Mecca-aster and Palm Springs pocket mouse.

BIO-2: **Pre-Construction Focused Burrowing Owl Surveys:** Prior to ground disturbing activities, focused burrowing owl surveys shall be conducted by a qualified biologist familiar with burrowing owl identification and ecology to determine if any burrowing owls, occupied burrows, or potential burrows are present within the project site or a 500-foot buffer in accordance with the burrowing owl avoidance, minimization, and mitigation measure outlined in Section 4.4 of the CVMSHCP and the burrowing owl avoidance and minimization measure outlined in the CVWD O&M Manual. The protocol for the burrowing owl surveys will be determined by the CVCC in coordination with CVWD and CDFW, likely using the methods described in the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012). If an occupied burrow with an owl present is identified within a project work area, then a no-work buffer will be established around the burrow (160 feet during the non-breeding season and 250 feet during the breeding season) until the burrow is no longer active. A burrow is assumed occupied if records indicate that, based on surveys conducted following protocol, at least one burrowing owl has been observed occupying a burrow on site during the past three years. If there are no records for the site, surveys must be conducted to determine, prior to construction, if burrowing owls are present. If potential (i.e., unoccupied) burrows are identified, then burrow excavation and collapse activities will be necessary; however, burrow excavation and collapse activities shall only be conducted during the non-breeding season for burrowing owls (September 1 through January 31). Coordination with CDFW on burrow excavation and collapse activities will need to occur, and methods will follow the specific protocols and guidance outlined in the CDFW *Staff Report on Burrowing Owl Mitigation* (2012).

BIO-3: **Pre-Construction Desert Tortoise Presence/Absence Survey:** Prior to ground disturbing activities, and in accordance with the desert tortoise avoidance and minimization measure outlined in the CVWD O&M Manual, a desert tortoise presence/absence survey shall be conducted no more than 15 days prior to the start of ground-breaking activities within work areas and access roads to determine whether desert tortoises or their sign (i.e., burrows, carcasses, tracks, scat, or egg shells) are present within the project site or a 100-foot buffer. The survey shall be conducted by a qualified biologist familiar with desert tortoise identification and ecology in accordance with the USFWS desert tortoise survey protocol (2010) and provide 100 percent coverage of the project site. The survey shall be conducted by during the desert tortoise active period identified in the CVMSHCP, between February 15 and October 31. If desert tortoise burrows are identified during the survey, then a 100-foot buffer shall be established around the burrow. If desert tortoise individuals are found to be present on the project site, then coordination with the regulatory agencies may need to be conducted prior to the start of ground-breaking activities. Following the survey, the avoidance and minimization measures outlined in the CVWD O&M Manual shall be adhered to, including conducting a worker education briefing for all construction personnel prior to initiation of the project.

During periods of high desert tortoise activity, approximately March through October, a biologist shall be present to monitor Covered Activities in areas not previously cleared or stabilized. During project activities, avoidance and minimization measures outlined in the CVWD O&M Manual shall be implemented in order to avoid impacts to desert tortoises.

BIO-4: **Pre-Construction Focused Le Conte's Thrasher Survey:** Prior to ground disturbing activities, a focused survey for Le Conte's thrasher shall be conducted by a qualified avian biologist familiar with the identification and ecology of the species in modeled Le Conte's thrasher habitat within the project site in accordance with the Le Conte's thrasher avoidance, minimization, and mitigation measure outlined in Section 4.4 of the CVMSHCP. The survey shall be conducted prior to construction activities if activities are planned to occur during the Le Conte's thrasher breeding season, January 15 through June 15. The survey shall focus on identifying active nests. If active nests are located on the project site or within a 500-foot buffer, then a 500-foot no-work buffer will be established around the nest during the Le Conte's thrasher breeding season until it is no longer active.

BIO-5: **Pre-Construction Survey for Nesting Birds:** Any construction activities within the project site shall be conducted during the non-breeding season for birds (September 16 through December 31). This will avoid violations of the MBTA and California Fish and Game Code Sections 3503, 3503.5 and 3513. If activities with the potential to disrupt nesting birds are scheduled to occur during the bird breeding season (January 1 through July 31 for raptors and March 1 through September 15 for songbirds), a pre-construction nesting bird survey shall be conducted by a qualified biologist in accordance with the CVWD O&M Manual. The nest surveys shall include the project site and adjacent areas where project activities have the potential to cause nest failure. If no nesting birds are observed during the survey, site preparation and construction activities may begin. If nesting birds (including nesting raptors) are found to be present, then avoidance or minimization measures shall be undertaken in consultation with CDFW. Measures shall include establishment of an avoidance buffer until nesting has been completed. The width of the buffer will be determined by the project biologist. Typically this is a minimum of 300 feet from the nest site in all directions (500 feet is typically recommended by CDFW for raptors), until the juveniles have fledged and there has been no evidence of a second attempt at nesting. The monitoring biologist will monitor the nest(s) during construction and document any findings.

BIO-6: **Conserved Natural Community Avoidance:** Mesquite hummocks, a state-sensitive habitat and a modeled Conserved Natural Community under the CVMSHCP, is present on the extreme western portion of the project site. Impacts to mesquite hummocks shall be avoided to the maximum extent possible within the project site in accordance with the mesquite hummocks and mesquite bosque natural communities AMMM outlined in Section 4.4 of the CVMSHCP. Prior to the start of ground-breaking project activities, the mesquite hummock community will be fenced under the direction of a biologist or botanist and designated as an environmentally sensitive area (ESA). The fencing will remain in place for the duration of project activities and no work or other project activities will occur within the fenced area to ensure no impacts occur to the area. Upon completion of project activities, the ESA fencing will be removed.

4.5 Cultural Resources

A cultural resources assessment was completed for the Proposed Project (ECORP 2017) and is provided as Appendix C. The assessment consisted of a cultural resources records search, Native American Heritage Commission (NAHC) Sacred Lands File search, field survey of the entire project site, and evaluation for California Register of Historical Resources (CRHR) eligibility for any identified resources. The following section summarizes the results of the cultural resources assessment.

4.5.1 Environmental Setting

Cultural Resources

A cultural resources records search was conducted on October 10, 2017 using the California Historical Resources Information System, at the Eastern Information Center, at the University of California, Riverside. A search of the Sacred Lands File was requested from the NAHC and an intensive systematic pedestrian survey of the project site was conducted. The records search results indicate that 17 cultural resources have been documented within one mile of the project site. No previously recorded resources are located within the project site. Twenty-five previous cultural resource investigations have been conducted within a one-mile radius between 1977 and 2017. One of the previous studies, conducted in 1977, overlaps the project site.

The results of the search of the Sacred Lands File by the NAHC did not indicate the presence of any Native American Sacred lands within one mile of the project site. In addition to the search of the Sacred Lands File, the NAHC identified 29 Native American groups and individuals with historical and traditional ties to the project area.

Paleontological Resources

A search of the paleontology collection records in the Vertebrate Paleontology Section of the Natural History Museum of Los Angeles County was conducted to provide information about paleontological resources that may occur in the project area. The search indicated that surface deposits in the entire project area consist of younger Quaternary alluvial fan deposits derived from the Indio Hills just to the northeast. The closest fossil vertebrate locality in somewhat similar older Quaternary deposits is LACM 1269, located west-northwest of the project area on the northwest flank of Edom Hill on the southern side of Seven Palms Valley. LACM 1269 contained specimens of fossil horse (Natural History Museum of Los Angeles County 2017).

4.5.2 Cultural Resources (V) Environmental Checklist and Discussion

Would the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	☒

The records search did not identify any previously recorded resources within the project site (ECORP 2017). During the cultural resources field survey, two historic-period features (CV-001 and CV-002) were identified within the project footprint.

CV-001 is the historic-period East Side Dike. CV-002 is a historic-period utility pole located northwest of the project site approximately 400 feet. Both CV-001 and CV-002 were evaluated for eligibility for the CRHR using the four standard eligibility criteria and seven elements of integrity.

The East Side Dike (CV-001) was originally constructed in 1948 as part of the Boulder Dam project. The dike was constructed as a regional flood control structure to protect the National Register of Historic Places (NRHP) eligible Coachella Canal. CV-001 is not eligible for the CRHR as an individual resource but is eligible under Criterion A as a contributing element to the Coachella Canal.

According to CEQA Guidelines §15064.5, substantial adverse change in the significance of a historical resource is a significant effect on the environment. A historical resource is defined as a resource listed in or eligible for listing on the CRHR, included on a local register of historical resources, or a resource otherwise determined by the lead agency as significant. Substantial adverse change is defined as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired. CV-002 is a common utilitarian feature and has been evaluated as not eligible under any CRHR eligibility criteria. CV-002 is not considered a historical resource under CEQA.

The Proposed Project entails repairing and reinforcing the East Side Dike (CV-001) and would not alter the historical association with the Coachella Canal. Therefore, the Proposed Project would not materially impair the significance of the resource. As such, no impact to a historical resource would occur with project implementation.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐

Two historic-period features (CV-001 and CV-002) were identified during the field survey (ECORP 2017). As discussed above in section A), no impacts to CV-001 would occur and CV-002 was found to not be a historical resource under CEQA. The potential to encounter unknown historic-period resources is low based on the level of ground disturbance in the project area attributed to the construction of the dike (ECORP 2017).

No prehistoric resources were identified during the field survey; however, the prehistoric archaeological sensitivity of the project area is considered moderate due to the presence of eight previously recorded prehistoric resources within one mile of the project site (ECORP 2017). There also remains the possibility that unrecorded cultural resources are present beneath the ground surface, and that such resources may be exposed during ground disturbing construction activities. If a previously unrecorded historical resource

is encountered during construction, implementation of **Mitigation Measures CUL-1 and CUL-2** would reduce impacts to a less than significant level.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

A search of the paleontology collection records in the Vertebrate Paleontology Section of the Natural History Museum of Los Angeles County indicated that surface deposits in the entire project area consist of younger Quaternary alluvial fan deposits derived from the Indio Hills just to the northeast. The closest fossil vertebrate locality in somewhat similar older Quaternary deposits is LACM 1269, located approximately 12 miles west-northwest of the project area on the northwest flank of Edom Hill on the southern side of Seven Palms Valley. LACM 1269 contained specimens of fossil horse (Natural History Museum of Los Angeles County 2017).

Shallow excavations in the soil and younger Quaternary Alluvium in the project site are unlikely to uncover significant vertebrate fossils. Deeper excavations that extend down into older Quaternary deposits, however, may encounter significant fossil vertebrate remains. The Proposed Project would require a 20-foot excavated trench at the toe of the Dike's slope for construction of the slope lining footing. If fossil vertebrate remains are encountered during excavation activities significant impacts may occur. With the implementation of **Mitigation Measure CUL-3** impacts would be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☐	☐	☒

No known formal cemeteries are located in or near the project area. Most Native American human remains are found in prehistoric archaeological sites. No prehistoric archaeological sites have been recorded within the project area or within the near vicinity. No impacts to human remains are anticipated; however, if any are encountered during ground disturbing activities the requirements of CEQA Guidelines § 15064.5(e), AB 2641, Health and Safety Code 7050.5, and Public Resources Code - PRC § 5097.98, shall be followed. No impact would occur.

4.5.3 Mitigation Measures

CUL-1: WEAP Training: A cultural resources Worker Environmental Awareness Program (WEAP) training shall be conducted prior to initiating ground disturbing activities associated with project construction. The purpose of the WEAP training is to educate construction personnel about the potential for cultural resources within the project area and the measures to protect these resources

if they are encountered. The WEAP shall explain the measures to avoid impact to cultural resources and the consequences of not complying with protective measures. The WEAP training shall be given to all construction personnel prior to commencing construction activities on the project site. A list of personnel trained shall be kept on site and copies of the WEAP sign-in sheets submitted to the CVWD.

CUL-2: Cultural Resources: If subsurface deposits believed to be archaeological resources (e.g., stone tools, pottery, or milling-related artifacts like manos or metates, or historic-age resources such as cans or glass bottles) are discovered during construction, all work must halt within a 100-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeology, shall be retained to evaluate the significance of the find, and shall have the authority to modify the no-work radius as appropriate, using professional judgement. If the professional archaeologist determines that the find does not represent an archaeological resource, work may resume immediately and no agency notifications are required. If the professional archaeologist determines that the find does not represent an archaeological resource from any time period or cultural affiliation, he or she shall immediately notify the Construction Inspector and CVWD environmental staff. CVWD shall consult on a finding of eligibility for inclusion in the National Register of Historic Places (NRHP) and California Register of Historical Places (CRHR). Work may not resume within the no-work radius until the lead agency determines, through consultation as appropriate, that the site either; 1) is not eligible for the NRHP or CRHR; or 2) that the treatment measures have been completed to their satisfaction.

CUL-3: Paleontological Resources: The CVWD shall retain a qualified paleontologist to determine if the older Quaternary sediments are being disturbed during the initial excavation of the 20-foot trench that will be required below the toe of the dike's slope. The paleontologist shall examine the trench to the maximum depth of excavation. If the paleontologist determines that the older Quaternary deposits are being disturbed then the paleontologist shall establish a monitoring program to recover any significant fossils that may be encountered.

4.6 Geology and Soils

4.6.1 Environmental Setting

Geomorphic Setting

The project area is located on the north side of the Coachella Valley, which lies in the northern end of the Salton Trough, a broad structural depression that extends to the southeast and includes the Salton Sea and Imperial Valley. The Coachella Valley is filled with alluvium and lacustrine (lake-bed) sediments several thousand feet thick. Dune and other sand deposits are often observed on the valley floor, formed by the northwest winds that blow sand down the valley.

The Coachella Valley is bordered on the north by the San Bernardino and Little San Bernardino Mountains and on the south by the Santa Rosa Mountains. In the project area, the Indio Hills lie along the northeastern edge of the Coachella Valley; the Little San Bernardino Mountains lie north and east of the Indio Hills. The Indio Hills are relatively low, reaching maximum elevation of around 1,000 feet and are composed of coarse-grained, alluvial fanglomerates of Pleistocene age. These deposits are easily eroded and provide abundant sediments for development of downslope alluvial fans. The Little San Bernardino Mountains are formed in Precambrian to Mesozoic age crystalline igneous and metamorphic rock. Maximum elevations near the study area are about 8,800 feet. The larger streams flow through the Indio Hills and have most of their watershed area in the Little San Bernardino Mountains. West Macomber Palms and Macomber Palms watersheds lie in the Indio Hills (NHC 2015).

Regional Seismicity and Fault Zones

An "active fault," according to California Department of Conservation, Division of Mines and Geology, is a fault that has indicated surface displacement within the last 11,700 years. A fault that has not shown geologic evidence of surface displacement in the last 11,700 years is considered "inactive." Construction near an active fault is regulated by the Alquist-Priolo Special Studies Zone Act.

The San Andreas Fault and the San Andreas Fault Zone (SAFZ) is located along the northeastern margin of the Coachella Valley and parallels the Indio Hills, approximately one mile north of the project site. Major faults in this system include the Mission Creek, Banning, Garnet Hill, and Indio Hills Faults. The San Andreas Fault Zone is considered to be active; however, the Proposed Project is not located within an Alquist-Priolo fault zone.

Soils

Soils types were determined using the NRCS Web Soil Survey (USDA 2017). Soils within the project site consisted of three types: Borrow pits, Myoma fine sand (5 to 15 percent slopes), and Coachella fine sand (0 to 2 percent slopes).

4.6.2 Geology and Soils (VI) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☐	☒

Responses to checklist item a) i through iv are provided below.

i) The San Andreas Fault is located approximately one mile north of the project site along the Indio Hills. The San Andreas Fault crosses the dike in at least two locations; however, none of the intersections are within the limits of the Proposed Project (NHC 2017). There is potential for surface rupture to occur during a significant earthquake (NHC 2017). It is anticipated that if surface rupture would occur due to a significant earthquake near the Dike, CVWD would address any potential issues regarding the structural integrity of the dike. The Proposed Project is not located within an Alquist-Priolo Earthquake Fault Zone (CDC 1974). Impacts would be less than significant.

ii) Just like most of southern California, in the event of an earthquake strong ground shaking is expected to occur on the project site. The Proposed Project would not expose people or structures to strong seismic ground shaking greater than what currently exists. Design and construction would comply with current building codes and standards which would reduce the risk of loss, injury, or death resulting from strong ground shaking. Impacts would be less than significant.

iii) Liquefaction is a phenomenon were water-saturated granular soil loses shear strength during strong ground shaking produced by earthquakes. The loss of soil strength occurs when cyclic pore water pressure increases below the groundwater surface. Potential hazards due to liquefaction include the loss of bearing strength beneath structures, possibly causing foundation failure and/or significant settlements. The project site is located in an area with moderate liquefaction potential (Riverside County 2017a). The design and construction of the Proposed Project would take into account and incorporate recommendations from a project specific geotechnical investigation to ensure liquefaction hazards are minimized. Impacts would be less than significant.

iv) The Indio Hills are located approximately one mile to the north of the project site. However, the probability of seismically-induced landslides occurring on the project site is considered low due to the soil substrate characteristics, and the general lack of elevation difference and change in slope adjacent to the project site. No impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐

Implementation of the Proposed Project would require ground-disturbing activities, such as excavation, that could potentially result in soil erosion or loss of topsoil. Best Management Practices (BMPs) are included as part of the Storm Water Pollution Prevention Plan (SWPPP) that will be prepared for the Proposed Project and would be implemented to manage erosion and the loss of topsoil during construction-related activities (see Section 4.9 Hydrology and Water Quality). Soil erosion impacts would be reduced to a less than significant impact with adherence to the project's SWPPP.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐

Strong ground shaking can cause settlement, lateral spreading, or subsidence by allowing sediment particles to become more tightly packed, thereby reducing pore space. The potential for a landslide, lateral spreading, liquefaction, or collapse at the project site have been discussed in the responses to questions 4.6 a) i) to iv). The project site is located in an area that is susceptible to subsidence (Riverside County 2017b). The design and construction of the Proposed Project would take into consideration the recommendations listed in the geotechnical investigation conducted for the Proposed Project to minimize hazards associated with on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse. Impacts would be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	☒

Expansive soils are soils with a significant amount of clay particles that have the ability to give up water (shrink) or take on water (swell). Fine-grained soils, such as silts and clays, may contain variable amounts of expansive clay minerals. When these soils swell, the change in volume exerts significant pressures on loads that are placed on them. This shrink/swell movement can adversely affect structure foundations, often causing them to crack or shift, with resulting damage to the structures they support.

The project site is underlain by Quaternary alluvium and dune sand deposits (NHC 2015). Three soil units, or types, have been mapped within the project area. These include borrow pits, Myoma fine sand (5 to 15 percent slopes), and Coachella fine sand (0 to 2 percent slopes) (ECORP 2019). These soils types exhibit low expansive properties due to their lack of finer grains soils, such as silt and clay. No impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

The Proposed Project does not include the installation of a septic system or alternative waste water disposal system. No impacts would occur.

4.6.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.7 Greenhouse Gas Emissions

4.7.1 Environmental Setting

Greenhouse gases (GHGs) are released as byproducts of fossil fuel combustion, waste disposal, energy use, land use changes, and other human activities. This release of gases, such as carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O), creates a blanket around the earth that allows light to pass through but traps heat at the surface, preventing its escape into space.

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. For instance, per the CalEEMod v. 2016.3.1 emissions modeling software, methane traps over 25 times more heat per molecule than CO_2, and N_2O absorbs 298 times more heat per molecule than CO_2. Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO_2e), which weigh each gas by its global warming potential. Expressing GHG emissions in CO_2e takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted.

There is scientific consensus that the contribution of GHG emissions into the atmosphere is resulting in the change of the global climate. The global average temperature is expected to increase relative to the 1986–2005 period by 0.3 to 4.8 degrees Celsius (°C) (0.5–8.6 degrees Fahrenheit [°F]) by the end of the twenty-first century (2081–2100), depending on future GHG emission scenarios (IPCC 2014). According to the California Natural Resources Agency (2012), temperatures in California are projected to increase 2.7°F above 2000 averages by 2050 and, depending on emission levels, 4.1–8.6°F by 2100. Physical conditions beyond average temperatures could be indirectly affected by the accumulation of GHG emissions. For example, changes in weather patterns resulting from increases in global average temperature are expected to result in a decreased volume of precipitation falling as snow in California and an overall reduction in snowpack in the Sierra Nevada. The Global Warming Solutions Act, also known as Assembly Bill (AB) 32, is a legal mandate requiring that statewide GHG emissions be reduced to 1990 levels by 2020. Senate (SB) 32, is a legal mandate requiring that statewide GHG emissions be reduced below 1990 levels by 2030.

4.7.2 Greenhouse Gas Emissions (VII) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐

Project-related GHG emissions would include emissions from construction activities. Construction of the Proposed Project would result in direct emissions of CO_2, N_2O, and CH_4 from the operation of construction equipment. Transport of materials and construction workers to and from the project site would also result in GHG emissions. Construction activities would be short-term in duration and would cease upon project completion. Construction-generated GHG emissions were calculated using the California Emissions Estimator Model, which estimates a total of 675 metric tons of CO_2e generated during construction of the Proposed Project.

In terms of operational GHG emissions, the Proposed Project involves flood protection improvements and does not propose a trip-generated land use. The Proposed Project would not include the provision of new permanent stationary or mobile sources of emissions, and therefore, by its very nature, would not generate quantifiable GHG emissions from Proposed Project operations. The Proposed Project does not propose any buildings and therefore no permanent source or stationary source emissions. Once the Proposed Project is completed, there would be no resultant increase in automobile trips to the area because the improved facilities would not require daily visits. While it is anticipated that the Proposed Project would require intermittent maintenance to be conducted by CVWD staff, such maintenance would be minimal requiring a negligible amount of traffic trips on an annual basis.

The SCAQMD is currently recommending a bright-line, numeric significance threshold of 3,000 metric tons of CO_2e annually for CEQA-related GHG analysis. The Proposed Project would result in the generation of 675 metric tons of CO_2e during construction, and as previously described the Proposed Project would not generate quantifiable GHG emissions from project operations. Therefore, neither construction nor operation of the Proposed Project would generate GHG emissions in excess of the SCAQMD bright-line, numeric threshold of 3,000 metric tons of CO_2e per year and impacts. The Proposed Project would increase the level of flood protection in the project vicinity, and would not directly generate new trips or GHG emissions. GHG impacts would be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

The project site is located within the incorporated city limits of the City of Indio. Neither CVWD or the City of Indio has an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. However, the City of Indio, which encompasses the project site, is a member city of the Coachella Valley Association of Governments' (CVAG). The CVAG relies on air pollutant emission inventories and demographic growth forecasts prepared by the Southern California Association of Governments' (SCAG), the designated Metropolitan Planning Organization (MPO) and Regional Transportation Planning Agency for Riverside County. SCAG's 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), adopted April 7, 2016, is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. The RTP/SCS embodies a collective vision for the region's future and is developed with input from local governments, county transportation commissions, tribal governments, nonprofit organizations, businesses, and local stakeholders in Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura counties. The RTP/SCS establishes GHG emissions goals for automobiles and light-duty trucks for 2020 and 2035, and establishes an overall GHG target for the region consistent with both the statewide GHG-reduction targets for 2020 and the post-2020 statewide GHG reduction goals. The 2016 RTP/SCS contains over 4,000 transportation projects, including highway improvements, railroad grade separations, bicycle lanes, new transit hubs, and replacement bridges. These future investments were included in county plans developed by the six-county transportation commissions and seek to reduce traffic bottlenecks, improve the efficiency of the region's network, and expand mobility choices. The RTP/SCS is an important planning document for the region, allowing project sponsors to qualify for federal funding. In addition, the RTP/SCS is supported by a combination of transportation and land use strategies that help the region achieve state GHG emission reduction goals and federal Clean Air Act requirements, preserve open space areas, improve public health and roadway safety, support the vital goods movement industry, and use resources more efficiently.

The Proposed Project would in no way conflict with the RTP/SCS. Therefore, it can be assumed that regional mobile emissions would decrease in line with the goals of the RTP/SCS. Implementing SCAG's RTP/SCS would greatly reduce the regional GHG emissions from transportation, helping to achieve statewide emission reduction targets.

Therefore, the Proposed Project would not conflict with an adopted plan, policy, or regulation pertaining to GHGs. Also, the Proposed Project would result in minimal construction- and operation-related GHG emissions. Thus, a less than significant impact would occur in this regard.

4.7.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.8 Hazards and Hazardous Materials

4.8.1 Hazards and Hazardous Materials (VIII) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐

Some hazardous materials, such as diesel fuel, would be used by heavy equipment at the site during construction. Per Mitigation Measure HAZ-1 no fueling or maintenance of equipment would occur on the site. The use of such materials would not create a significant hazard to the public and impacts would be less than significant. No hazardous materials would be used after the construction of the Proposed Project. With the implementation of Mitigation Measure HAZ-1 impacts would be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐

During construction some hazardous materials, such as diesel fuel, would be used. A SWPPP, listing BMPs to prevent construction pollutants and products from violating any water quality standard or waste discharge requirements, would be prepared for the Proposed Project. The release of any spills would be prevented through the implementation of BMPs listed in the SWPPP. The Proposed Project would continue an existing use; therefore, operation of the Proposed Project would result in similar hazard conditions as the existing conditions. Operation of the East Side Dike would require intermittent maintenance to be conducted by District staff. Such maintenance would be minimal and would not result in a new hazard to the public or the environment. Impacts would be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐

There are no schools within one-quarter mile of the project site. The closest school to the project site is the Shadow Hills High School located approximately one mile to the south. Please see the response to question 4.8 b) above. Impacts would be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒

A search of the Department of Toxic Substances Control's (DTSC) Hazardous Waste and Substance List (Cortese List) and EnviroStor online database and the State Water Resources Control Board's (SWRCB) GeoTracker online database was conducted for the project area (DTSC 2017a and 2017b; SWRCB 2017). The searches revealed no known hazardous material sites within the project site. No impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒

The closest airport to the project site is the Bermuda Dunes Airport located approximately 2.5 miles to the south. The project site is located adjacent, but not within, to the Bermuda Dunes Airport Compatibility Zone E (RCALUC 2004). Zone E requires airspace review for objects greater than 100 feet tall. The Proposed Project does not propose any new structures; therefore, no compatibility issues would occur. No impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
f) Within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒

No private airstrips are located in the project area. No impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒

The Proposed Project would improve the East Side Dike. All proposed construction activities would occur on or directly adjacent to the East Side Dike. Evacuation routes for the City of Indio would not be affected by construction of the Proposed Project. No impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

The project site is not located in an area susceptible to wildland fires (Riverside County 2017b). No impact would occur.

4.8.2 Mitigation Measures

HAZ-1: To reduce potentially hazardous conditions and minimize the impacts from the handling of potentially hazardous materials, the following shall be included in project's construction specifications:

- No fueling or maintenance of equipment shall occur on the project site.
- No fuel or other hazardous materials shall be stored on the project site.

4.9 Hydrology and Water Quality

4.9.1 Environmental Setting

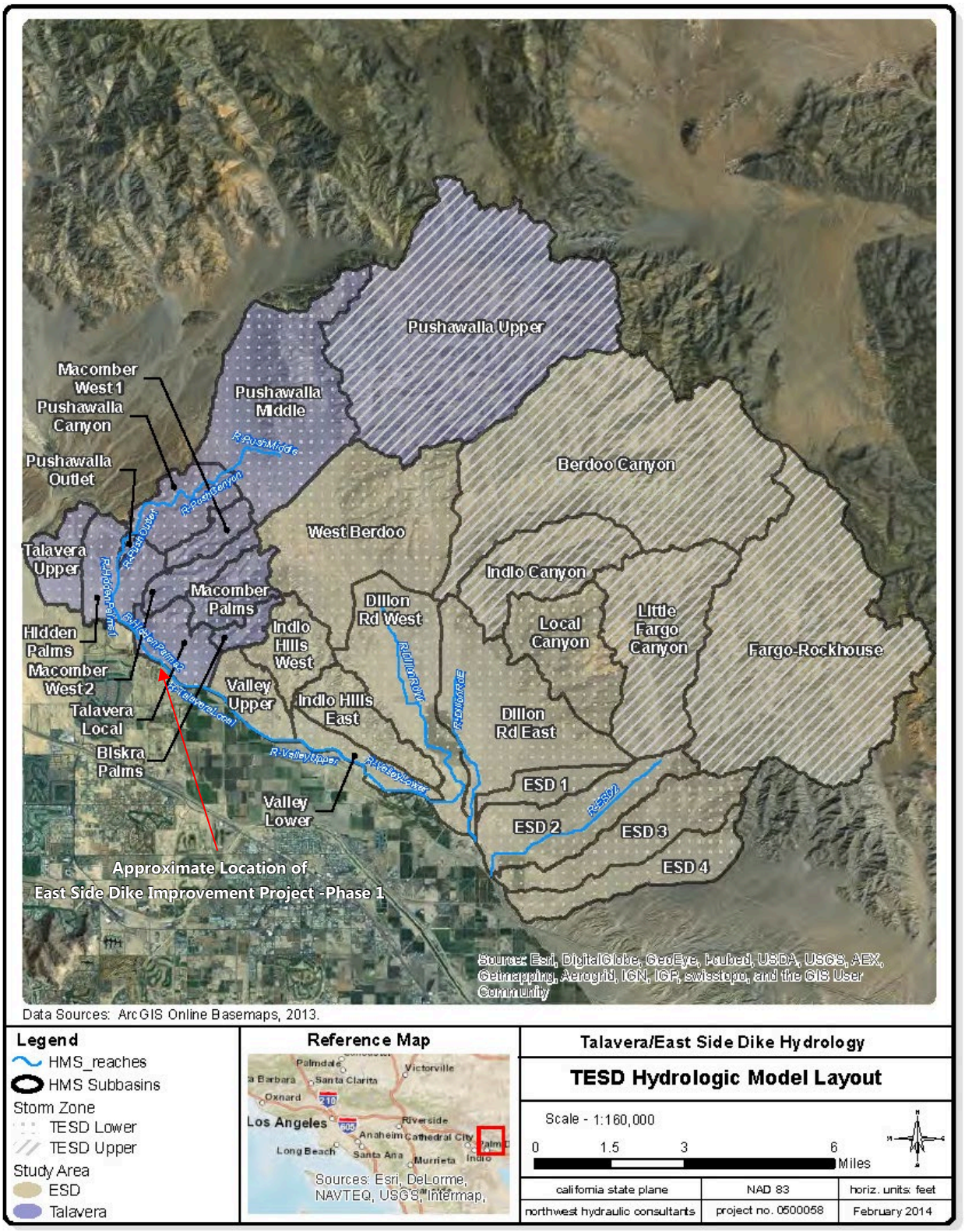
The East Side Dike collects, retains and directs floodwaters originating from watersheds in the Little San Bernardino Mountains and Indio Hills Wasteway No. 3 which connects to the Coachella Valley Storm Channel and ultimately the Salton Sea. However, continuous surface water connection is hindered by substantial changes in elevation along the course, allowing for groundwater replenishment. The area that contributes flow to the East Side Dike encompasses 144 square miles (Figure 4.9-1; NHC 2015). This total includes the watersheds tributary to the alluvial fans, the fans, and the valley floor behind the dike. The East Side Dike was designed and built by the USBR in 1948 to protect the concrete lined section of the Coachella branch of the All-American Canal [Northwest (NHC 2017).

There are no suspected wetlands or Waters of the U.S. present within the project site (ECORP 2019). A site visit was conducted on January 4, 2019 by USACE Los Angeles District Regulatory Division staff Kyle Dahl and Stephen Roethle and CVWD's Environmental Supervisor William Patterson. Based on the site visit no wetland or discernable OHWM indicators were identified on the project site. It was determined that the project site is upland habitat. An approved jurisdictional determination was submitted by CVWD to the USACE in January 2019.

The project site contains a seasonal pool area that is considered to be CDFW jurisdictional. A site visit was conducted on January 3, 2019 with CDFW's 1600 Program Coordinator Charlie Land and CVWD's Environmental Supervisor William Patterson. Potential hydrological indicators (dispersed soil cracking, and vegetation appearances changes) were identified during the site visit. Charlie Land indicated that due to the presence of hydrological indicators within the project site a Notification of Lake or Streambed Alteration should be submitted to the CDFW for processing.

Projects that disturb one or more acres of soil are required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit Order 2009-0009-DWQ). The CVWD would comply with this requirement.

Figure 4.9-1. Subbasins in the Project Vicnity



4.9.2 Hydrology and Water Quality (IX) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐

During construction of the Proposed Project water quality impacts could occur without proper controls (i.e. BMPS). Water quality impacts can occur from soils loosened during grading, spills of fluids or fuels from vehicles and equipment or miscellaneous construction materials and debris, if mobilized and transported offsite in overland flow, could degrade water quality. Because the area of ground disturbance affected by construction of the Proposed Project would exceed one acre, the Proposed Project would be subject to the requirements of the statewide National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-009-DWQ, NPDES No. CAS000002). A Stormwater Pollution Prevention Plan (SWPPP) would be prepared for the Proposed Project to comply with the requirements of the local NPDES Stormwater Program. The SWPPP would list BMPs to prevent construction pollutants and products from violating any water quality standards or waste discharge requirements. Sample BMPs include, but are not limited to, hydroseeding exposed soils, erosion control blankets, gravel bags, fiber rolls, sediment basins, and rumble plates. Compliance with the provisions of the NPDES General Permit would reduce impacts associated with water quality standards and discharge requirement to a less than significant level.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒

The Proposed Project does not involve the withdrawal of groundwater, nor does the concrete lining impede local groundwater recharge. No impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a	☐	☐	☒	☐

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
manner that would result in substantial erosion or siltation on- or off-site?				

All proposed improvements would occur within the Dike's existing footprint. Existing drainage patterns would be maintained, and no streams or rivers would be altered. Implementation of BMPs identified in the SWPPP would minimize the potential erosion or siltation from the site. BMPs could include fiber rolls, hydroseeding, and erosion control blankets. The project site will be returned to pre-construction contours. A less than significant impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	☐	☐	☐	☒

The Proposed Project would improve a portion of the East Side Dike, a flood control facility. Proposed improvements would protect the dike structure from scour potential during the 100-year flood event. As such, the Proposed Project would improve the dike's performance as a flood control facility during flood events. Furthermore, the proposed improvements would allow the dike to be certified by FEMA as a flood control facility. In order to accredit a levee, FEMA requires that no appreciable erosion occur during the 100-year flood (44 CFR 65.10). Beneficial impacts would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e) Create or contribute runoff water, which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☐	☒

The Proposed Project would construct a concrete liner on the dike's northern (water side) slope and complete repairs to the access road on top of the dike to address minor surficial erosion. The concrete lining would be re-buried with pre-construction soils present on the site, therefore mimicking pre-construction surface condition. The East Side Dike does not generate runoff and would not after the Proposed Project; and rather functions to maintain the stormwater drainage system. No impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
f) Otherwise substantially degrade water quality?	☐	☐	☒	☐

A SWPPP would be prepared for the Proposed Project to comply with the requirements of the local NPDES Stormwater Program. The SWPPP would list BMPs to prevent construction pollutants and products from violating any water quality standards. A less than significant impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒

The Proposed Project does not include housing and therefore would not place housing within any flood zones. No impact would occur.

The CVWD is working towards certifying the East Side Dike, from Dune Palms Road to I-10, with FEMA as a flood protection structure. The East Side Dike was designed and built by the USBR to protect the concrete lined section of the Coachella branch of the All-American Canal. The East Side Dike collects, retains, and releases floodwaters originating from watersheds in the Little San Bernardino Mountains and Indio Hills. As a result, the East Side Dike also protects communities to the south and southwest from flood hazards associated with these watersheds. The Proposed Project would install a concrete liner on the East Side Dike, which would enable the CVWD to apply to FEMA for certification. Implementation of the Proposed Project would result in a beneficial impact to housing located south and southeast of the project site because these areas would be removed from the 100-year flood hazard once the East Side Dike is certified by FEMA as a flood protection structure.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	☐	☐	☐	☒

Please see the response in Section 4.9 Hydrology and Water Quality, question g). The Proposed Project would improve an existing structure (East Side Dike). All improvements would occur within the existing footprint of the dike. No impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒

Please see the response in Section 4.9 Hydrology and Water Quality, question g). A hydrologic, hydraulic, and preliminary erosion study was completed by NHC (NHC 2017). The study determined that a portion of the East Side Dike may be susceptible to erosion during the 100-year flood event and would require scour protection to comply with FEMA and CVWD standards (NHC 2017). The Proposed Project would improve the East Side Dike by installing a concrete slope liner to address the erosion potential and serve as scour protection. Therefore, implementation of the Proposed Project would result in a beneficial impact.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
j) Be subject to inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

The project site is not subject to seiches because there are no lakes or large bodies of water in the vicinity of the project site. No impact would occur.

The project site is not subject to tsunamis, as it is over 23 miles from the Salton Sea and 80 miles inland from the Pacific Ocean. No impact would occur.

The project site is located in an area with a low to locally moderate susceptibility to seismically induced landslides and rockfalls (Riverside County 2017). However, the nearest hills with a potential to produce mudflow are the Indio Hills located approximately one mile to the north of the project site. Therefore, no impact would occur.

4.9.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.10 Land Use and Planning

4.10.1 Land Use and Planning (X) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	☒

The Proposed Project would improve an existing flood protection structure, the East Side Dike. The Proposed Project would not divide an established community. No impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

No conflicts with land use plans, policies, or regulations would occur, including CVWD stormwater Ordinance 1234.2. Furthermore, the Proposed Project has been designed to comply with CVWD's Development Design Manual. No impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

The Proposed Project would comply with the CVMSHCP as discussed in the response to Section 4.4 Biological Resources question f) of this Initial Study. No impact would occur.

4.10.2 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.11 Mineral Resources

4.11.1 Mineral Resources (XI) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒

According to the City of Indio's General Plan, no significant mineral deposits are known to exist within the City (City of Indio 2004). No impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

The Proposed Project would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan, because no mining operations exist on or in the vicinity of the project site (City of Indio 2004). No impact would occur.

4.11.2 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.12 Noise

4.12.1 Environmental Setting

Noise Fundamentals

Noise is generally defined as sound that is loud, disagreeable, or unexpected. The selection of a proper noise descriptor for a specific source is dependent on the spatial and temporal distribution, duration, and fluctuation of the noise. The noise descriptors most often encountered when dealing with traffic, community, and environmental noise include the average hourly noise level (in L_{eq}) and the average daily noise levels (in L_{dn}/CNEL).

Noise can be generated by a number of sources, including mobile sources, such as automobiles, trucks, and airplanes, and stationary sources, such as construction sites, machinery, and industrial operations. The rate depends on the ground surface and the number or type of objects between the noise source and the receiver. Mobile transportation sources, such as highways, and hard and flat surfaces, such as concrete or asphalt, have an attenuation rate of 3.0 dBA per doubling of distance. Soft surfaces, such as uneven or vegetated terrain, have an attenuation rate of about 4.5 dBA per doubling of distance from the source. Noise generated by stationary sources typically attenuates at a rate of approximately 6.0 to 7.5 dBA per doubling of distance from the source (EPA 1971).

Sound levels can be reduced by placing barriers between the noise source and the receiver. In general, barriers contribute to decreasing noise levels only when the structure breaks the "line of sight" between the source and the receiver. Buildings, concrete walls, and berms can all act as effective noise barriers. Wooden fences or broad areas of dense foliage can also reduce noise, but are less effective than solid barriers.

Vibration

Ground vibration can be measured several ways to quantify the amplitude of vibration produced. This can be through peak particle velocity or root mean square velocity. These measure maximum particle at one point or the average of the squared amplitude of the signal, respectively. Vibration impacts on people can be described as the level of annoyance and can vary depending on an individual's sensitivity. Generally, low-level vibrations may cause window rattling but do not pose any threats to the integrity of buildings or structures.

4.12.2 Noise (XII) Environmental Checklist and Discussion

Would the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐

It is difficult to specify noise levels that are generally acceptable to everyone; what is annoying to one person may be unnoticed by another. Standards may be based on documented complaints in response to documented noise levels or based on studies of the ability of people to sleep, talk, or work under various noise conditions. However, all such studies recognize that individual responses vary considerably. Standards usually address the needs of the majority of the general population.

Short-Term Noise Impacts

Noise levels in the project area would temporarily increase due to short-term construction activities. Construction-related noise increases would be temporary and would vary depending on the type of activities and equipment used.

Grading activities are typically involved in the site preparation phase of the Proposed Project and usually generate the highest noise levels. Construction-related noise impacts would typically occur during the initial earthwork phases. These phases of construction have the potential to create the highest levels of noise. Typical noise levels generated by construction equipment are shown in Table 4.12-1. Operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by three to four minutes at lower power settings. Other primary sources of acoustical disturbance would be due to random incidents, which would last less than one minute (such as dropping large pieces of equipment or the hydraulic movement of machinery lifts).

Table 4.12-1. Typical Construction Equipment Noise Levels

Equipment	Typical Noise Level (dBA) at 50 Feet from Source	
	L_{max}	L_{eq}
Backhoe	77.6	73.6
Compactor (ground)	83.2	76.2

Equipment	Typical Noise Level (dBA) at 50 Feet from Source	
	L_{max}	L_{eq}
Compressor (air)	77.7	73.7
Concrete Mixer Truck	78.8	74.8
Concrete Pump Truck	81.4	74.4
Concrete Saw	89.6	82.6
Crane	80.6	72.6
Dozer	81.7	77.7
Drill Rig Truck	79.1	72.2
Drill Rig Truck	79.1	72.2
Dump Truck	76.5	72.5
Excavator	80.7	76.7
Front End Loader	79.1	75.1
Generator	80.6	77.6
Gradall	83.4	79.4
Grader	85.0	81.0
Hydra Break Ram	90.0	80.0
Impact Pile Driver	101.3	94.3
Jackhammer	88.9	81.9
Pavement Scarifier	89.5	82.5
Paver	77.2	74.2
Pneumatic Tools	85.2	82.2
Pumps	80.9	77.9
Scraper	83.6	79.6
Tractor	84.0	80.0
Welder / Torch	74.0	70.0

Source: FHWA 2006

As depicted in Table 4.12-1, noise levels associated with impact pile drivers can reach levels of up to approximately 94.3 dBA L_{eq}. However, due to the nature of the proposed Project it is not anticipated that such equipment would be employed. As shown, noise levels associated with individual construction equipment used for typical construction projects can reach levels of up to approximately 82.5 dBA L_{eq} at a distance of 50 feet. The nearest sensitive receptors consist of residential backyard areas approximately 30 feet south of the Proposed Project's construction area. Therefore, based on a reverse calculation of the 6 dBA attenuation rate per doubling of distance from the source, the nearest sensitive receptors to Proposed Project construction activities could potentially experience noise levels of more than 83 dBA L_{eq}.

Chapter 9 of the City of Indio Municipal Code regulates construction noise by limiting construction activities to the hours of 7 a.m. and 6 p.m. Monday through Friday, 8 a.m. and 6 p.m. on Saturdays, and 9 a.m. and 5 p.m. on Sundays and holidays (while the project site is adjacent to land under the jurisdiction of Riverside County, there are no affected sensitive receptors in this jurisdiction existing in the project vicinity). The Proposed Project would be required to adhere to this restriction. Mitigation Measure NOI-1 would mitigate construction-generated noise levels for conformance with City noise standards by restricting construction activities to the hours of 7 a.m. and 6 p.m. Monday through Friday, 8 a.m. and 6 p.m. on Saturdays, and 9

a.m. and 5 p.m. on Sundays and holidays. Since there are no numerical thresholds for construction noise, and since Mitigation Measure NOI-1 implements Chapter 9 of the Municipal Code, construction noise associated with the Proposed Project would not exceed applicable noise standards and is less than significant.

Operational Noise

The Proposed Project would not introduce a new noise-generating source. The Proposed Project involves the improvement of flood protection facilities along a floodway in order to improve public safety and achieve FEMA certification of the East Side Dike. The Proposed Project would not include the provision of new permanent stationary or mobile noise sources, and therefore, by its very nature, would not result in an increase of existing noise levels from Proposed Project operations. No impact would occur in this regard.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐

Proposed Project construction would have the potential to result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and the operations involved. Vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. This impact discussion utilizes Caltrans's recommended standard of 0.2 inches per second (in/sec) peak particle velocity with respect to the prevention of structural damage for normal buildings (Caltrans 2002). The nearest structures to the project site are located to the south at approximately 40 feet. However, it is acknowledged that construction activities would occur throughout the Project site and would not be concentrated at the point closest to the sensitive receptors. Table 4.12-2 displays vibration levels for typical construction equipment.

Table 4.12-2. Typical Construction Equipment Vibration Levels

Equipment	Peak Particle Velocity at 40 Feet (inches/second)
Large Bulldozer	0.043
Caisson Drilling	0.043
Loaded Trucks	0.037
Rock Breaker	0.029
Jackhammer	0.017

Source: FTA 2006, Table 12-2; Caltrans (California Department of Transportation), Transportation- and Construction-Induced Vibration Guidance Manual, 2004.

Based on the vibration levels presented in Table 4.12-2, ground vibration generated by heavy-duty equipment would not be anticipated to exceed approximately 0.043 in/sec peak particle velocity at 40 feet. Therefore, the use of virtually any type of construction equipment would most likely not result in a groundborne vibration velocity level above 0.2 in/sec and predicted vibration levels at the nearest off-site

structures would not exceed recommended criteria. Additionally, this would be a temporary impact and would cease completely when construction ends. Once operational, the Proposed Project would not be a source of groundborne vibration. Impacts would be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒

Refer to the response to question 4.12(a). The Proposed Project would not introduce a new, permanent noise-generating source. The Proposed Project involves the improvement of flood protection facilities along a floodway in order to improve public safety and achieve FEMA certification of the East Side Dike. The Proposed Project would not include the provision of new permanent stationary or mobile noise sources, and therefore, by its very nature, would not result in an increase of existing noise levels from Proposed Project operations. No impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐

Refer to the response to question 4.12(a). Chapter 9 of the City of Indio Municipal Code regulates construction noise by limiting construction activities to the hours of 7 a.m. and 6 p.m. Monday through Friday, 8 a.m. and 6 p.m. on Saturdays, and 9 a.m. and 5 p.m. on Sundays and holidays (while the project site is adjacent to land under the jurisdiction of Riverside County, there are no affected sensitive receptors existing in the project vicinity). The Proposed Project would be required to adhere to this restriction per Mitigation Measure NOI-1. This impact is less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

The project site is not located within an existing airport land use plan or within two miles of a public airport. The nearest airports are the Bermuda Dunes Airport just over 2 miles to the south and the Jaqueline Cochran

Airport at approximately 5.2 miles to the south. There are also no private airstrips near the project site. Therefore, residents and construction workers would not be exposed to excessive airport noise levels. No impact would occur.

Would the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
f)	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Refer to the response to question 4.12(e). No impact would occur.

4.12.3 Mitigation Measures

NOI-1: Construction activities shall be restricted to the hours of to the hours of 7 a.m. and 6 p.m. Monday through Friday, 8 a.m. and 6 p.m. on Saturdays, and 9 a.m. and 5 p.m. on Sundays and holidays. The Project's improvement and building plans shall specify this requirement.

4.13 Population and Housing

4.13.1 Population and Housing (XIII) Environmental Checklist and Discussion

Would the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒

The Proposed Project would not induce population growth directly because it does not propose new homes or businesses in the project area. Furthermore, the Proposed Project would not indirectly induce population growth because improvements would occur to existing infrastructure. Although, as a result of the Proposed Project flood insurance rates be lowered and may indirectly provide incentive for planned housing growth, the area of benefit is currently developed, and no significant amount of vacant property occurs in the area of benefit. The proposed improvements would occur within the existing footprint of the East Side Dike and no extension of infrastructure is proposed. No impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

The Proposed Project is the improvement of existing infrastructure and would not displace housing. No impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

The Proposed Project would consist of improvements to the East Side Dike and would not include the removal of housing; therefore, it would not displace people. No impact would occur.

4.13.2 Mitigation Measures

No significant population and housing impacts were identified, and no mitigation measures are required.

4.14 Public Services

4.14.1 Public Services (XIV) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire Protection?	☐	☐	☐	☒
Police Protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Parks?	☐	☐	☐	☒
Other Public Facilities?	☐	☐	☐	☒

The Proposed Project is the improvement of the East Side Dike and does not include improvements to other public facilities, such as fire, police, schools, or park facilities. As discussed in Section 4.13 of this Initial Study, the Proposed Project is not anticipated to result in population growth because it does not propose housing or the extension of infrastructure. Although, as a result of the Proposed Project flood insurance rates be lowered and may indirectly provide incentive for planned housing growth, the area of benefit is currently developed, and no significant amount of vacant property occurs in the area of benefit. Therefore, it is not anticipated that implementation of the Proposed Project would affect service ratios, response times or other performance objectives for fire protection, police services, schools, or parks. No impact would occur.

4.14.2 Mitigation Measures

No significant public service impacts were identified, and no mitigation measures are required.

4.15 Recreation

4.15.1 Recreation (XV) Materials Checklist

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒

The Conservation area adjacent to the Residential neighborhood nearby may be used recreationally by residents, However, no additional access points or road improvements to the public are included in the Proposed Project. The Proposed Project would not increase access to the conservation areas as the dike would function in a similar manner as currently in operation. As such, no impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	☐	☐	☐	☒

The Proposed Project is the improvement of the East Side Dike and does not include or would it require the construction of new or expansion of existing recreational facilities. No impact would occur.

4.15.2 Mitigation Measures

No significant recreation impacts were identified, and no mitigation measures are required.

4.16 Transportation/Traffic

4.16.1 Transportation/Traffic (XVI) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways, and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☒	☐

Construction Impacts

The Proposed Project would generate short-term construction related vehicle trips, including trips from the delivery of materials (concrete) and equipment and trips from construction workers. The slope lining would require approximately 2,700 CY of concrete and 22 CY of rebar to be placed. Due to the low quantity of concrete that is required it is anticipated that concrete would be supplied by ready mix plants in the vicinity of the project site (Thousand Palms and Indio). Both ready mix plants are approximately within 10-miles from the project site. It is anticipated that 80 CY of concrete would be placed a day, which would require an average of 8 concrete truck deliveries per day with a load of 10 CY of concrete. The placement of concrete would require approximately 35 workdays.

Traffic generated by construction of the Proposed Project would be temporary and impacts would be less than significant with the implementation of an approved Traffic Control Plan (Mitigation Measure T-1).

Operational Impacts

As with the existing East Side Dike, the Proposed Project would require intermittent maintenance to be conducted by District staff. However, such maintenance would be minimal and currently exists. Operational impacts are anticipated to be similar to existing conditions because the Proposed Project would continue an existing use. Impacts would be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒

The Proposed Project would generate traffic associated with maintenance activities, which would be similar to existing conditions. As such, the Proposed Project is not anticipated to conflict with the applicable congestion management program. No impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒

The Proposed Project would not include structures or operational conditions that would require a change of air traffic patterns or increase traffic levels or a change in location that would result in substantial safety risks. No impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒

The Proposed Project would improve the East Side Dike by adding a concrete liner to the waterside slope of the dike. Furthermore, repairs to the surface of the road on top of the dike would be performed as part of the Proposed Project to address locations with minor surficial erosion. All repairs would be within the dike's existing footprint. The Proposed Project would address the erosion potential of the dike and provide scour protection during 100-year flood events. The Proposed Project would no increase hazards. No impact would occur.

Would the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e)	Result in inadequate emergency access?	☐	☒	☐	☒

The Proposed Project would be located along the East Side Dike, which is not located on a designated evacuation route. Construction of the Proposed Project would result in construction access and haul routes to and from the project site which has the potential to interfere with emergency response access and traffic operations to areas near the project site. Impact to emergency access and traffic operations would be less than significant with the incorporation of Mitigation Measure T-1.

Would the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
f)	Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒

There is no public transit, bicycle, or pedestrian facilities in the project site. The Proposed Project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. No impact would occur.

4.16.2 Mitigation Measures

T-1: Prior to construction the CVWD (or its contractor) shall prepare a Traffic Control Plan to ensure proper access by emergency vehicles during construction and to maintain traffic flow. The plan shall include methods to minimize disruption to the neighboring uses to the fullest extent that is reasonable and practicable. The plan shall include construction parking and vehicle access and specifying staging areas and delivery and hauling truck routes. The plan should mitigate disruption during construction.

4.17 Tribal Cultural Resources

This section describes the affected environment and regulatory setting for Tribal Cultural Resources (TCRs) in the project area. Section 21074(a) of the Public Resource Code defines TCRs for the purpose of CEQA as:

1. Sites, features, places, cultural landscapes (geographically defined in terms of the size and scope), sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

    a. included or determined to be eligible for inclusion in the California Register of Historical Resources; and/or

b. included in a local register of historical resources as defined in subdivision (k) of Section 5020.1; and/or

c. a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

The following analysis of the potential environmental impacts related to TCRs is derived primarily from the following sources:

- ECORP's Cultural Resources Investigation (2017);
- CVWD's AB52 Consultation (2018); and
- California Native American Heritage Commission Sacred Lands File Search, dated October 2017.

4.17.1 Environmental Setting

Ethnographic Setting

The project site is located in the City of Indio, in the western margin of the Colorado Desert, in the area occupied by the Cahuilla Native American group. Cahuilla territory was bounded on the north by the San Bernardino Mountains, on the east by the Orocopia Mountains, on the west by the Santa Ana River, the San Jacinto Plain and the eastern slope of the Palomar Mountains, and on the south by Borrego Springs and the Chocolate Mountains.

The diversity of the territory provided the Cahuilla with a variety of foods. It has been estimated that the Cahuilla exploited more than 500 native and nonnative plants. Acorns, mesquite, screw beans, piñon nuts, and various types of cacti were used. A variety of seeds, wild fruits and berries, tubers, roots, and greens were also a part of the Cahuilla diet. A marginal agricultural existence provided corn, beans, squashes, and melons. Rabbits and small animals were also hunted to supplement the diet. During high stands of Ancient Lake Cahuilla, fish, migratory birds, and marshland vegetation were also taken for sustenance and utilitarian purposes.

Structures within permanent villages ranged from small brush shelters to dome-shaped or rectangular dwellings. Villages were situated near water sources, in the canyons near springs, or on alluvial fans at humanmade walk-in wells. The villages of Palm Springs, pánik, and wáquina were located along the Whitewater River. Mortuary practices entailed cremation of the dead. Upon a person's death, the body was bound or put inside a net and then taken to a place where the body would be cremated. Secondary interments also occurred. A mourning ceremony took place about a year after a person's death. During this ceremony, an image of the deceased was burned along with other goods.

Precontact Cahuilla population has been estimated as low as 2,500 to as high as 10,000. At the time of first contact with Europeans, around 1774, the Cahuilla numbered approximately 6,000. Although they were the first to come into contact with the Cahuilla, the Spanish had little to do with those of the desert region.

Some of the Cahuilla who lived in the plains and valleys west of the desert and mountains, however, were missionized through the asistencia located near present day San Bernardino. Cahuilla political, economic, and religious autonomy was maintained until 1877 when the United States government established Indian reservations in the region. Protestant missionaries came into the area to convert and civilize the Native American population. During this era, traditional cultural practices, such as cremation of the dead, were prohibited. Today, the Cahuilla reside on eight separate reservations in southern California, located from Banning in the north to Warner Springs in the south and from Hemet in the west to Thermal in the east (ECORP 2017).

Regulatory Setting

Effective July 1, 2015, Assembly Bill 52 (AB 52) amended CEQA to require that: 1) a lead agency provide notice to any California Native American tribes that have requested notice of projects proposed by the lead agency; and 2) for any tribe that responded to the notice within 30 days of receipt with a request for consultation, the lead agency must consult with the tribe. Topics that may be addressed during consultation include TCRs, the potential significance of project impacts, type of environmental document that should be prepared, and possible mitigation measures and project alternatives. Pursuant to AB 52, Section 21073 of the Public Resources Code defines California Native American tribes as "a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of the Statutes of 2004." This includes both federally and non-federally recognized tribes.

Recognizing that California tribes are experts in their TCRs and heritage, AB 52 requires that CEQA lead agencies initiate consultation with tribes at the commencement of the CEQA process to identify TCRs. Furthermore, because a significant effect on a TCR is considered a significant impact on the environment under CEQA, consultation is required to develop appropriate avoidance, impact minimization, and mitigation measures.

On April 12, 2018, CVWD distributed AB 52 consultation letters for the proposed project, including project information, a map, and contact information to each of the eight (8) Native American tribes previously requesting to formally consult on CVWD projects. A copy of CVWD's AB 52 consultation letter is included in **Appendix D**. The tribal governments that received an AB 52 consultation letter include the following list of recipients below:

- Agua Caliente Band of Cahuilla Indians
- Augustine Band of Cahuilla Indians
- Cabazon Band of Mission Indians
- La Posta Band of Mission Indians
- Morongo Band of Mission Indians
- Soboba Band of Luiseno Indians
- Torres Martinez Desert Cahuilla Indians
- Twenty-Nine Band of Mission Indians

To date, two (2) Native American tribes responded to the AB 52 letter: the Agua Caliente Band of Cahuilla Indians (May 07, 2018), and the Augustine Band of Cahuilla Indians (May 2, 2018). In summary, the Agua Caliente Band of Cahuilla Indians referenced State law regarding the discovery and disturbance of human remains or Tribal burial law, should they be discovered during construction of the proposed project. The Augustine Band of Cahuilla Indians encourages contact other Native American Tribes and individuals within the immediate vicinity of the project site that may have specific information concerning cultural resources that may be located in the area, as well as, encourages working with a monitor who is qualified in Native American cultural resources identification and who is able to be present onsite full-time during the pre-construction and construction phase of the project. No specific tribal cultural resource concern was identified in either correspondence.

Additional information about potential impacts to TCRs was drawn from the ethnographic context (summarized above), the results of the cultural resources records search and field survey conducted by ECORP, and the results of a search of the Sacred Lands File of the NAHC, which were obtained by ECORP in October 2017. The cultural resources records search and field survey conducted failed to identify any prehistoric or Native American archaeological sites. In addition, the Sacred Lands File failed to identify any sacred lands or tribal resources in or near the project area.

4.17.2 Tribal Cultural Resources (XVII) Environmental Checklist and Discussion

AB 52 established that a substantial adverse change to a TCR has a significant effect on the environment. In assessing substantial adverse change, the CVWD must determine whether or not the project would adversely affect the qualities of the resource that convey its significance. The qualities are expressed through integrity. Integrity of a resource is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association [CCR Title 14, Section 4852(c)]. Impacts are significant if the resource is demolished or destroyed or if the characteristics that made the resource eligible are materially impaired [CCR Title 14, Section 15064.5(a)]. Accordingly, impacts to a TCR would likely be significant if the project negatively affects the qualities of integrity that made it significant in the first place. In making this determination, the CVWD needs to address the aspects of integrity that are important to the TCR's significance.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local	☐	☐	☐	☒

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
register of historical resources as defined in Public Resources Code Section 5020.1(k), or				
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe.	☐	☐	☐	☒

i) No tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources were identified during the Sacred Lands File search or the records search completed at the Eastern Information Center as part of the cultural resources investigation completed for the Proposed Project (ECORP 2017). No impact would occur.

ii) No specific or known tribal cultural resources were identified through AB52 consultation. In addition, the results of the search of the Sacred Lands File by the NAHC did not indicate the presence of any Native American cultural resources within the vicinity of the project area (ECORP 2017). With this information, no additional research or management is warranted, nor were recommendations made as a result of the cultural resources investigation (ECORP 2017). No impact would occur.

Further, the cultural resources section of this IS/MND identified mitigation measures to offset or avoid potential impacts to unanticipated cultural resources. These measures are included in Section 4.5 of this Initial Study.

4.17.3 Mitigation Measures

No tribal cultural resource was identified and therefore no significant impact to a tribal cultural resource would occur, and no mitigation measures are required.

4.18 Utilities and Service Systems

4.18.1 Utilities and Service Systems (XVIII) Environmental Checklist and Discussion

Would the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒

The Proposed Project would complete improvements to the East Side Dike. The East Side Dike is a flood control facility that does not produce wastewater. Therefore, no impact would occur.

Would the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b)	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒

As stated in the response to question 4.18 a), the Proposed Project would improve the East Side Dike, which does not produce wastewater. Furthermore, operation of the East Side Dike does not require water. Therefore, no new water or wastewater treatment facilities or expansion of existing facilities would be required. No impact would occur.

Would the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c)	Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒

The Proposed Project would improve the East Side Dike by adding approximately 3,420 lineal feet of concrete slope lining along the north facing slope of the dike beginning at the dike's intersection with Dune Palms Road and continuing in a southeasterly direction ending adjacent to the Talavera development. The concrete liner would then be backfilled with existing material from the dike. Aggregate base would also be applied to the 20-foot access road on top of dike to address surficial erosion. Proposed improvements would be within the Dike's existing footprint and would not expand the dike. The Proposed Project does not propose new stormwater drainage facilities. No impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒

The Proposed Project is the improvement of the East Side Dike. The Proposed Project would not create any new water supply need. No impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒

The Proposed Project is the improvement of the East Side Dike and would not increase the wastewater treatment needs in the project area. No impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐

The Proposed Project would generate a limited amount of waste during project construction, such as construction material packaging. Construction waste is anticipated to be minimal and would be taken to the Edom Hill Transfer Station. At the transfer station waste enters the Riverside County Waste Management waste stream, which is sorted and sent to either the Lambs Canyon landfill in Beaumont, the Badlands landfill in Moreno Valley, or the El Sobrante landfill in Corona. Lambs Canyon Landfill has a remaining capacity of 19,242,950 cubic yards (as of January 8, 2015) and can process up to 5,500 tons per day (CalRecycle 2017). Badlands Landfill has a remaining capacity of 15,748,799 cubic yards (as of January 1, 2015) and can process up to 4,800 tons per day (CalRecycle 2017). El Sobrante Landfill has a remaining capacity of 145,530,000 tons (as of April 6, 2009) and can process up to 16,054 tons per day (Cal Recycle 2017). Based on the capacity rates identified above, there is adequate capacity to provide for the minimal waste generated during construction of the Proposed Project. Operation of the Proposed Project would not generate solid waste. Impacts would be less than significant.

Would the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
g)	Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

Waste generated by the Proposed Project would comply with solid waste statues and regulations. No impact would occur.

4.18.2 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.19 Mandatory Findings of Significance

4.19.1 Mandatory Findings of Significance (XIX.) Environmental Checklist and Discussion

Does the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐

Impacts to biological resources and cultural resources are discussed in the respective sections of this Initial Study. Impacts would be less than significant with **Mitigation Measures BIO-1 through BIO-6** and **CUL-1 through CUL-3**.

Does the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b)	Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☒	☐	☐

The Proposed Project would not result in any impacts that would be significant, after mitigation. Therefore, impacts from the Proposed Project would not be cumulatively considerable with the implementation of the Mitigation Measures listed in this Initial Study.

Does the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒

The construction of the Proposed Project would not cause a substantial adverse effect on human beings. The proposed improvements would protect life and property by protecting the East Side Dike from scour during the 100-year flood event, which ultimately protects people living and working south and southeast of the dike. A beneficial impact would occur.

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SECTION 7.0 LIST OF APPENDICES

Appendix A – Construction Model Outputs

Appendix B – Biological Technical Report

Appendix C – Cultural Resources Investigation

Appendix D – AB 52 Consultation Letters

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APPENDIX A

Construction Model Outputs

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APPENDIX B

Biological Technical Report

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APPENDIX C

Cultural Resources Investigation

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APPENDIX D

AB 52 Consultation Letters

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