

# RECLAMATION

*Managing Water in the West*

**Environmental Assessment**

## **Stockdale East Groundwater Recharge Project – Rosedale – Rio Bravo Water Storage District**

**17-12-MP**

## **Mission Statements**

The Department of the Interior protects and manages the Nation's natural resources and cultural heritage; provides scientific and other information about those resources; and honors its trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

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# List of Acronyms and Abbreviations

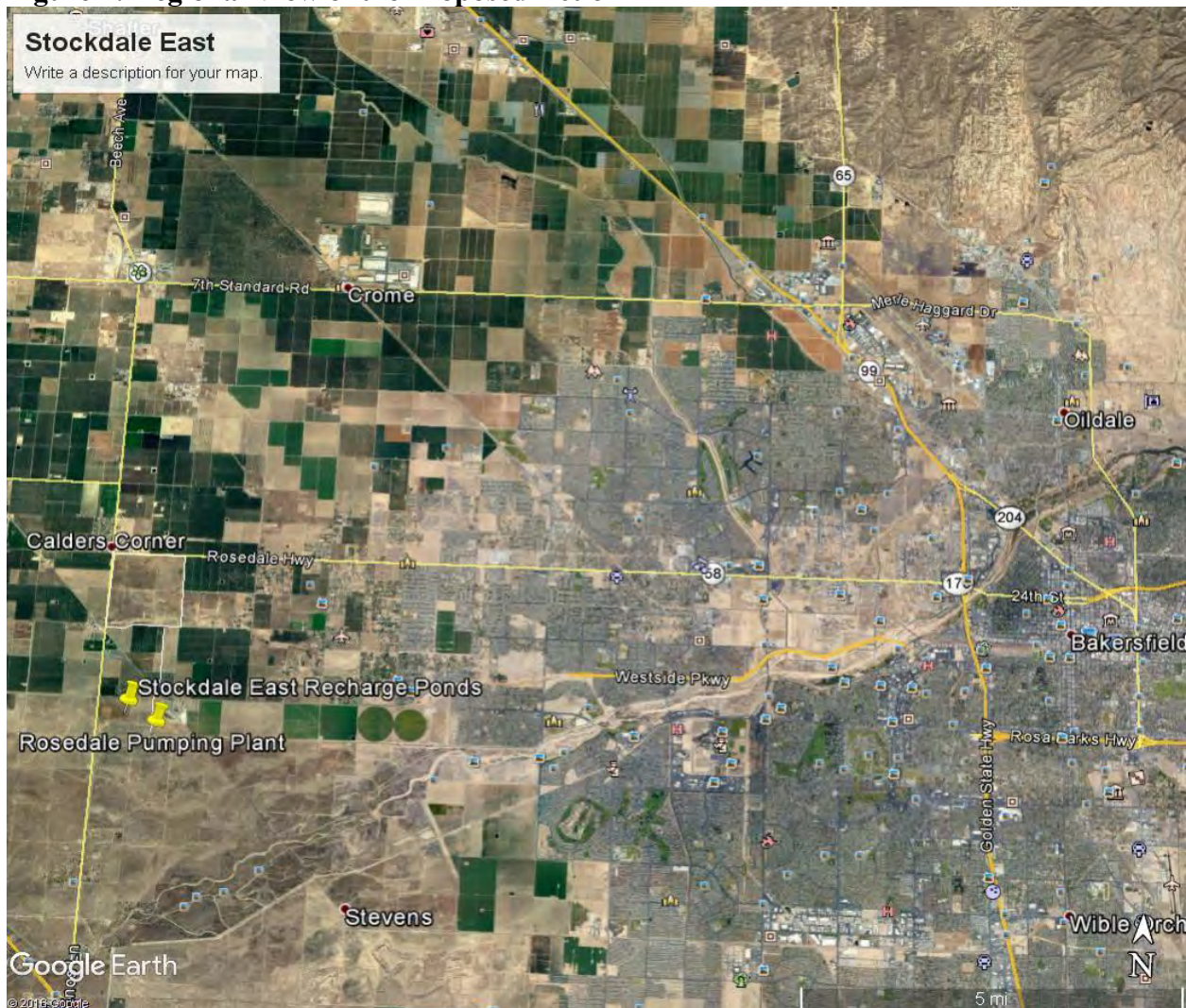
AFY	Acre-feet per year
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
DOI	Department of Interior
EA	Environmental Assessment
EIR	Environmental Impact Report
ESA	Endangered Species Act
ITAs	Indian Trust Assets
MOU	Memorandum of Understanding
MMRP	Mitigation Monitoring and Reporting Program
NEPA	National Environmental Protection Act
NHPA	National Historic Preservation Act
NRCS	Natural Resources Conservation Service
Reclamation	Bureau of Reclamation
SHPO	State Historic Preservation Officer
SWP	State Water Project
USFWS	U.S. Fish and Wildlife Service
VFD/SCADA	variable frequency drive and supervisory control and data acquisition

# Section 1 Introduction

In conformance with the National Environmental Policy Act of 1969 (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR 1500-1508), and Department of Interior (DOI) regulations (43 CFR Part 46), the Bureau of Reclamation (Reclamation) prepared this Environmental Assessment (EA) to disclose potential environmental effects associated with granting a WaterSMART Water Use Efficiency Grant to the Rosedale – Rio Bravo Water Storage District (Rosedale) for its Stockdale East Groundwater Recharge Project (Proposed Action).

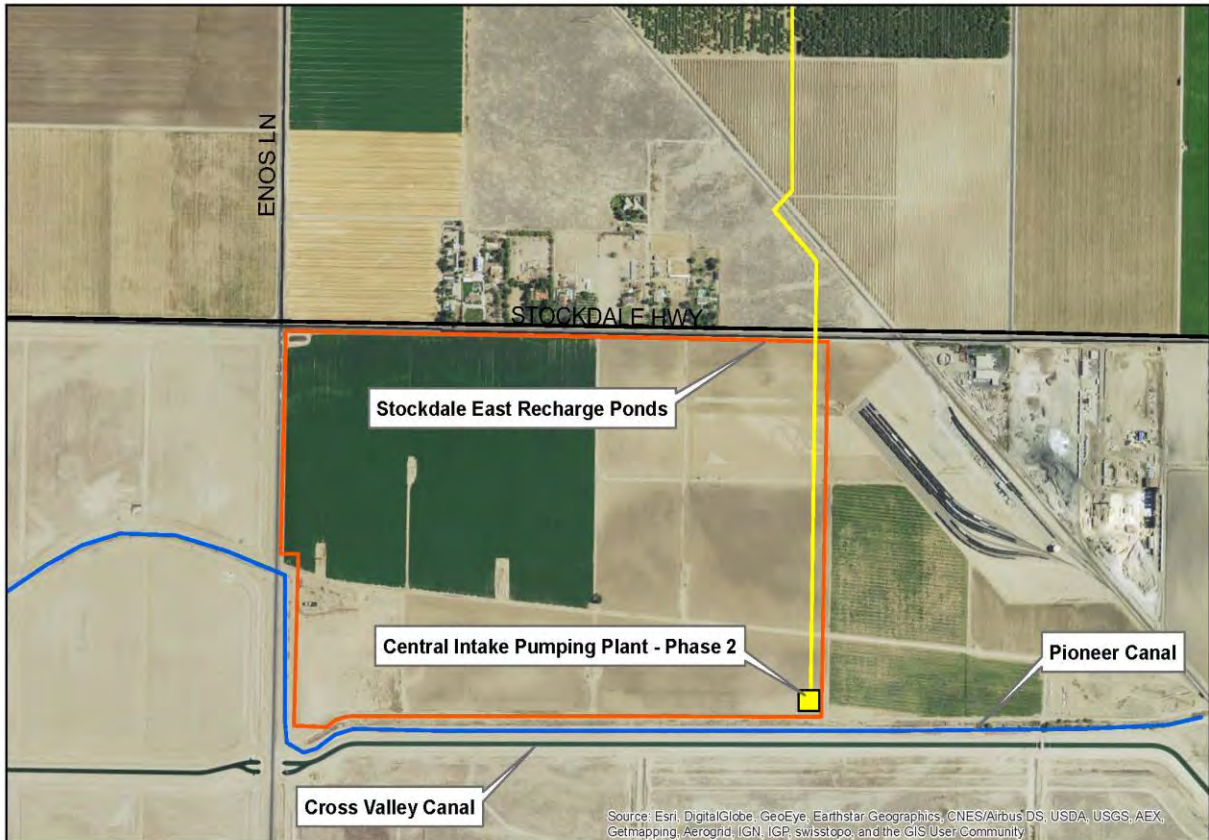
Rosedale is located in the southern San Joaquin Valley, west of the City of Bakersfield and has a gross area of approximately 44,000 acres. The Proposed Action would take place approximately 6 miles west of the City of Bakersfield (see Figure 1).

**Figure 1: Regional View of the Proposed Action**



The Proposed Action involves construction of the Stockdale East Recharge Ponds (Phase 1) and the Central Intake Pumping Plant (Phase 2). Figure 2 shows the 230 acre parcel that will be used for the Proposed Action. Of the 230 acres, approximately 200 acres will be used for the recharge ponds and the remaining area will be used for construction of the Central Intake Pumping Plant along with access roads and equipment staging.

**Figure 2: Proposed Action Stockdale East Recharge Ponds**



## **1.1 Need for the Proposed Action**

Although the 2016/2017 water year has seen record amounts of rain and snow, groundwater levels in the southern San Joaquin Valley remain in overdraft from drought, farming, and increased municipal demand. In some areas around Bakersfield, ground elevation has dropped more than 40 feet from overdraft of the groundwater (subsidence). As a result, there is a continued need to provide for additional groundwater recharge facilities in the district.

The Proposed Action will allow the district to save approximately 8,700 acre-feet per year (AFY) through groundwater recharge and approximately 6,870 AFY of better managed water from the pumping facility and more efficient variable frequency drive and supervisory control and data acquisition (VFD/SCADA) equipped pumps.

## **1.2 Previous Environmental Documents**

The Proposed Action underwent previous environmental review and regulatory compliance under the California Environmental Quality Act (CEQA). The 2015 Stockdale Integrated Banking Project Environmental Impact Report (2015 Stockdale EIR) was certified by Rosedale on December 8, 2015. The EIR evaluated the following environmental issues: aesthetics, agriculture and forestry resources, air quality, biological resources, cultural resources, geology, soils, and seismicity, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use planning, mineral resources, noise, transportation and traffic, and utilities and energy. All of the resources analyzed in the 2015 Stockdale EIR were found to either be less than significant or less than significant with mitigation measures incorporated. The EIR found no significant and unavoidable impacts associated with the project. The Mitigation Monitoring and Reporting Program (MMRP), included in Chapter 12 of the Final 2015 Stockdale EIR, contains Table 12-1 which outlines mitigation measures, implementation, monitoring and reporting responsibility, and the monitoring schedule associated with project. Chapter 12 is attached to this EA as Appendix D. Reclamation reviewed the 2015 Stockdale EIR and incorporates that document, and all of the analysis of effects by reference.

As required by DOI regulations, Executive Orders, and Reclamation guidelines, this EA includes a discussion of Indian Trust Assets, Indian Sacred Sites, and Environmental Justice as those topics were not included in the 2015 Stockdale EIR.

# **Section 2 Proposed Action and Alternatives**

## **2.1 No Action Alternative**

Under the No Action Alternative, Reclamation would not award the district with a WaterSMART grant of \$1,000,000. Although it is possible the district may find alternate

sources of funding for the Proposed Action, for the purposes of this EA, the consequences of Reclamation not providing funding for the Proposed Action would result in no construction, which would result in no water savings of 8,700 AFY along with 6,870 AFY of better managed water.

## **2.2 Proposed Action**

The Proposed Action will be designed to improve the overall District system efficiency by increasing the District's ability to intercept high flow surface runoff for storage within the Kern Fan area groundwater basin. This will be accomplished by:

1. Construction of Stockdale East Recharge Ponds (Phase 1) (Approximately 200 of the 230-acre parcel);
2. Construction of the Central Intake Pumping Plant (Phase 2) (4 pump installations with approximately 140 cubic feet per second (cfs) pumping capacity); and
3. On-Farm Irrigation Improvements.

### **2.2.1 Stockdale East Recharge Ponds (Phase 1)**

The Stockdale East Recharge Ponds will be approximately 200 acres impounded by placement of approximately 203,000 cubic yards of compacted levees approximately 2 to 5 feet in height. The ponds would store approximately 19,000 AFY during wet water years (typically 3 out of every 10 years).

### **2.2.2 Central Intake Pumping Plant (Phase 2)**

The Central Intake Pumping Plant includes a 48 to 72-inch pipeline that will allow Rosedale the flexibility to recharge various ponds and facilities which will maximum use of available runoff water which would otherwise be lost. In order to deliver runoff water, and or state and federal water for recharge purposes to the Stockdale East Recharge Ponds and other existing recharge facilities, 4 low lift pumps (140 cfs capacity) along with high efficiency motors, VFDs, SCADA control units, flow meters, and discharge piping must be added to the Pumping Plant.

### **2.2.3 On-Farm Irrigation Improvements (Phase 2)**

In addition to the water supply shortages from the State Water Project (SWP), the Central Valley RWQCB has also been implementing waste discharge requirements, resulting in district growers considering additional irrigation system improvements to reduce over irrigation and leaching of nutrients and pesticides. Rosedale plans to work with the Natural Resources Conservation Service (NRCS) to facilitate on-farm cost-share programs and projects to better manage irrigation water and reduce deep percolation.



## **2.3 Environmental Commitments**

As part of the Project, Rosedale or its contractor will implement mitigation measures included in the MRRP (Appendix D). In addition, the USFWS required avoidance and minimization measures for the protection of Tipton kangaroo rat, giant kangaroo rat, and San Joaquin kit fox. These additional avoidance and minimization measures are included in Appendix C.

# **Section 3 Affected Environment and Environmental Consequences**

## **3.1 Required Resource Discussions**

DOI Regulations, Executive Orders, and Reclamation guidelines require a discussion of Indian sacred sites, Indian Trust Assets, (ITAs) and Environmental Justice when preparing environmental documentation. Impacts to these resources were considered and found to be absent, and brief explanations for their elimination from further consideration are provided below:

### **3.1.1 Indian Trust Assets**

ITAs are legal interests in property or rights held in trust by the United States for Indian Tribes or individual Indians. Indian reservations, Rancherias, and Public Domain Allotments are common ITAs in California. The nearest ITA is the Tule River Indian Tribe located approximately 52.88 miles northeast of the project location. The proposed action does not have a potential to affect ITAs (see Appendix A).

### **3.1.2 Indian Sacred Sites**

Executive Order 13007 (May 24, 1996) requires that federal agencies accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners, and avoids adversely affecting the physical integrity of such sacred sites that are on Federal lands. The proposed action would not be located on Federal lands and therefore would not affect access to or use of Indian sacred sites.

### **3.1.3 Environmental Justice**

Executive Order 12898 requires each Federal agency to identify and address disproportionately high and adverse human health or environmental effects, including social and economic effects of its program, policies, and activities on minority populations and low-income populations. No significant changes in agricultural communities or practices would result from the Proposed Action. The Proposed Action is not likely to have effects to any individual populations within the vicinity of the project.

Accordingly, the Proposed Action would not have disproportionately negative effects on low-income minority populations from implementation of the action.

### **3.2 Environmental Consequences of the No Action Alternative**

Under the No Action Alternative, Reclamation would not award Rosedale with a WaterSMART grant of \$1,000,000. Although it is possible that Rosedale may find alternate sources of funding for the project, for the purposes of this EA, the consequences of Reclamation not providing funding for the Proposed Action would result in no construction of the project, which may result in Rosedale not being able to construct the project and have future water savings of 15,570 AFY (8,700 AFY + 6,870 AFY). The property would likely continue to be used for agricultural purposes resulting in continued water use for irrigation, pesticide and herbicide application, and use of farming equipment to maintain and harvest crops.

### **3.3 Environmental Consequences of Funding the Proposed Action**

According to the 2015 Stockdale EIR, the impacts associated with the project would occur during both construction and operational phases. Most construction impacts would be short term and temporary. These construction related impacts were considered less than significant or are reduced to less than significant levels with appropriate mitigation measures (Appendix D). Operation of the project would primarily affect hydrology and groundwater, in particular changes in groundwater levels during recharge and recovery operations. However, these impacts would be made less than significant with the mitigation measures included in the MMRP (Appendix D), and committed to by the District.

### **3.5 Cumulative Effects**

According to CEQ regulations for implementing the procedural provisions of NEPA, a cumulative impact is defined as *the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time* (40 CFR 1508.7).

Chapter 4 of the 2015 Stockdale EIR analyzed cumulative effects. The analysis used multiple comparative projects to compare to the Proposed Action. The projects included, the Drought Relief Project, the James Groundwater Storage and Recovery Project, 2800 Acres Project and Pioneer Project, City of Bakersfield Kern River Flow and Municipal Water Program, and the Centennial Corridor Project. The analysis covered air quality and greenhouse gas emissions, biological resources, cultural resources, noise, traffic, and

water quality. All resources analyzed in the cumulative effects chapter were found to not have incremental cumulative considerable effects (ESA, 2015).

## **Section 4 Consultation and Coordination**

### **4.1 Agencies and Persons Consulted**

Reclamation consulted and coordinated with Rosedale, the State Historic Preservation Officer and the U.S Fish and Wildlife Service.

### **4.2 Endangered Species Act (16 USC § 1531 et seq.)**

Section 7 of the Endangered Species Act (ESA) requires Federal agencies, in consultation with the Secretary of the Interior, to ensure that their actions do not jeopardize the continued existence of endangered or threatened species, or result in the destruction or adverse modification of the critical habitat of these species.

A Biological Technical Report was prepared for the project by ESA in 2013. As part of the report, a resource reconnaissance was conducted to gather baseline biological resources data. The report found that the project is not expected to result in a substantial loss of habitat that would affect the ability of species to disperse throughout the site and surrounding habitats (ESA 2013).

Despite the conclusion of the Biological Technical Report, Reclamation initiated informal consultation under the ESA with the USFWS on the Tipton kangaroo rat, giant kangaroo rat, and the San Joaquin kit fox. Reclamation determined that the project may affect, but would not likely adversely affect these species. The USFWS concurred with Reclamation's determination on October 27, 2017 (Appendix C).

### **4.3 National Historic Preservation Act (Title 54 USC § 306108)**

The National Historic Preservation Act of 1966, as amended (Title 54 USC § 306108.), requires that federal agencies give the Advisory Council on Historic Preservation an opportunity to comment on the effects of an undertaking on historic properties, properties that are eligible for inclusion in the National Register. The 36 CFR Part 800 regulations implement Section 106 of the National Historic Preservation Act.

Section 106 of the National Historic Preservation Act requires federal agencies to consider the effects of federal undertakings on historic properties and properties determined eligible for inclusion in the National Register. Compliance with Section 106 follows a series of steps that are designed to identify interested parties, determine the area of potential effects, conduct cultural resource inventories, determine if historic properties

are present within the area of potential effects, and assess effects on any identified historic properties.

A cultural resources report was completed for the undertaking, which Reclamation submitted to the State Historic Preservation Office (SHPO) on May 3, 2017, for SHPO's review. Reclamation asked for concurrence that the two resources within the APE were not eligible, and notified them that no historic properties would be affected pursuant to 36 CFR § 800.4(d)(1) for the proposed undertaking. SHPO responded on June 2, 2017, with no objection to Reclamation's findings (Appendix B).

## Section 1 Section 5 References

California Emissions Estimator Model (CalEEMOD). 2013. Windows Version 2013 2.1. October 28, 2013. Page 15.

Environmental Sciences Associates (ESA). 2015. Stockdale Integrated Banking Project Environmental Impact Report. Available: <http://www.rrbwsd.com/wp-content/uploads/2016/06/2015-04-Stockdale-DEIR-optimized.pdf>. Accessed: 6/20/2017. Pages 7, 12, 13, 14, 15, 16, and 20.

Environmental Sciences Associates (ESA). 2013. Stockdale Integrated Banking Project, Biological Technical Report. Page 15.

# Appendix A: ITA Concurrence

## Indian Trust Assets Request Form (MP Region)

Submit your request to your office's ITA designee or to MP-400, attention Kevin Clancy.

Date: 12/21/2016

Requested by (office/program)	Nathaniel Martin
Fund	16XR0680A1
WBS	RRBG
Fund Cost Center	RY30180006RBWCA0E
Region # (if other than MP)	
Project Name	Stockdale East Groundwater Recharge Project – Rosedale – Rio Bravo Water Storage District
CEC or EA Number	NA
Project Description (attach additional sheets if needed and include photos if appropriate)	<p>The Stockdale East Groundwater Recharge Project is designed to improve overall District system efficiency by increasing the District's ability to intercept high flow surface runoff for storage within the Kern area groundwater basin. This will be accomplished through three strategic project components:</p> <ol style="list-style-type: none"> <li>1. Stockdale East Recharge Ponds (Approx 200 acres of ponds);</li> <li>2. Central Intake Pumping Plant – Phase 2 (4 pump installations of approximately 140 cfs of pumping capacity to serve various recharge ponds); and</li> <li>3. On-Farm Irrigation Improvements – If NRCS funds are available, the District will facilitate a cost-share grant program with the Natural Resources Conservation Service (NRCS) and District water-users to incentivize investments in on-farm irrigation systems.</li> </ol>

*Project Location (Township, Range, Section, e.g., T12 R5E S10, or Lat/Long cords, DD-MM-SS or decimal degrees). Include map(s)	West of Bakersfield. See figure below.
--	--

2/24/2016 Nathaniel Martin Nathaniel Martin  
 Signature Printed name of preparer Date

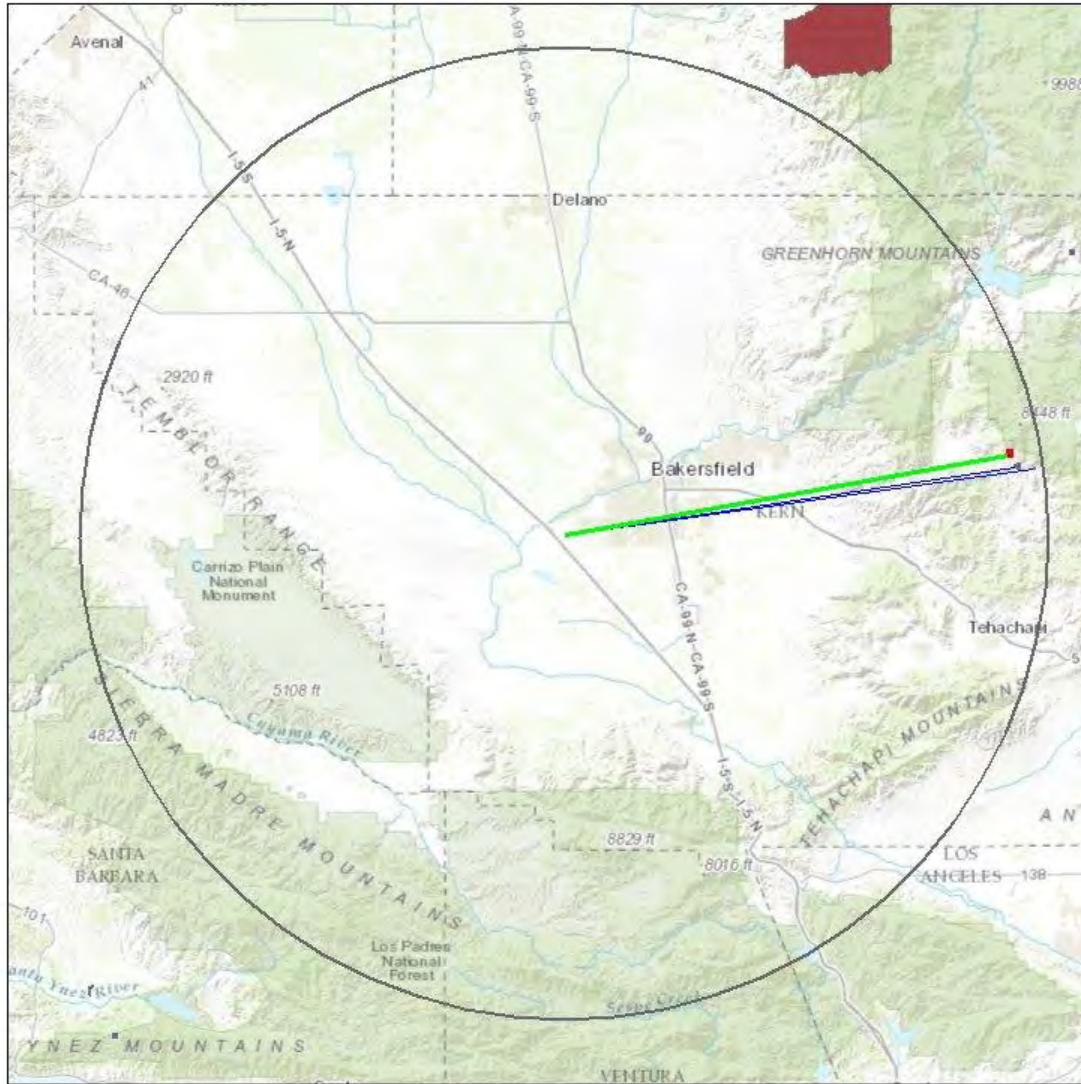
Stockdale East Groundwater Recharge Project – Rosedale – Rio Bravo Water Storage District  
 ITA Determination:

The closest ITA to the proposed **Stockdale East Groundwater Recharge Project – Rosedale – Rio Bravo Water Storage District** activity is the **Tule River Indian Tribe** about **52.88** miles to the **northeast**. (See attached image).

Based on the nature of the planned work it **does not** appear to be in an area that will impact Indian hunting or fishing resources or water rights nor is the proposed activity on actual Indian lands. It is reasonable to assume that the proposed action **will not** have any impacts on ITAs.

K. Clancy Kevin Clancy 2/27/2017  
 Signature Printed name of approver Date

# Rosedale - Rio Bravo Indian Trust Assets

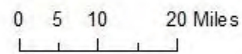


**Native American Lands FL**

- PDA
- Reservation

**Native American Lands**

- <all other values>
- Alaska Native Regional Corporation
- Alaska Native Village Statistical Area
- American Indian Reservation
- Colony



**RECLAMATION**  
Managing Water in the West



# Appendix B: NHPA, Section 106 Concurrence

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

EDMUND G.

**OFFICE OF HISTORIC PRESERVATION**  
**DEPARTMENT OF PARKS AND RECREATION**  
1725 23<sup>rd</sup> Street, Suite 100

SACRAMENTO, CA 95816-7100  
(916) 445-7000 Fax: (916) 445-7053  
calshpo@parks.ca.gov  
www.ohp.parks.ca.gov



June 02, 2017

Reply to:  
BUR\_2017\_0503\_001

Ms. Anastasia T. Leigh, Regional Environmental Officer  
U.S. Bureau of Reclamation, Mid-  
Pacific Regional Office 2800 Cottage  
Way, Sacramento, CA 95825-1898

Subject: Section 106 Consultation for the Proposed Rosedale-Rio Bravo Water Storage District (RRBWS) Stockdale East Groundwater Recharge Project, Kern County California (Project Number: 16-SCAO-173)

Dear Ms. Leigh:

Reclamation is initiating consultation in accordance with Section 106 as amended, and its implementing regulations that are found at 36 CFR Part 800. Reclamation proposes to provide funding through a WaterSMART Grant to RRBWS for construction of a groundwater recharge basin and pumping plant located in Kern County, California. RRBWS and the Irvine Ranch Water District (IRWD) are working together on the Stockdale Integrated Banking Project by developing groundwater-banking facilities designed to allow both agencies to utilize water storage in the local San Joaquin Valley Groundwater Basin. It is noted that portions of this project are already constructed or are currently under construction through non-Reclamation funding sources. Pursuant to 36 CFR 800.4(d)(1) Reclamation has determined a finding of no historic properties affected and requests concurrence. Documents included with the submittal are:

- *Enclosure 1: Figure 1: Project Location; Figure 2: Portions of the Stockdale Integrated Banking Project-Current undertaking includes*

*the Stockdale East Recharge Basin and New Pump Station; Figure 3: Area of Potential Effects*

- *Enclosure 2: Cultural Resources Study: IRWD Stockdale West Ranch Joint Banking Project: Phase I Cultural Resources Study; September, 2013 [By: C. Ehringer, C. Lockwood, B. Marks & M. Strauss, ESA Consultants, Los Angeles, CA][For: Irvine*
- *Ranch Water District, Irvine, CA & Rosedale-Rio Bravo Water Storage District, Bakersfield, CA] [ESA 2013]*

The current project integrates two properties, Stockdale West and Stockdale East, into RRBWSD's existing Conjunctive Use Program, a groundwater recharge, storage, and recovery program for landowners and other water districts. The Project will be in western Kern County on lands owned by RRBWSD and IRWD and will integrate existing banking facilities (Stockdale West) with new construction of groundwater banking facilities and a pumping plant at Stockdale East. A Central Intake Pipeline (CIP) is currently under construction with separate funding (Enclosure 1: Figure 2). The Stockdale East recharge basin and the pumping plant are the only activities currently being funded by Reclamation under this WaterSMART grant. Project scope includes grading of less than one foot of surface soils to create 2-5 feet high compacted soil levees for recharge ponds. In addition, a new pumping station will be constructed on the newly constructed pond levee, which will be located along the separately funded CIP. The area of potential effects (APE) includes the footprint for the groundwater recharge basin and pumping plant, plus staging areas. The area included is about 200 acres and is bounded to the west by Enos Lane, to the south by Cross Valley Canal, to the east by the CIP, and to the north by Stockdale Highway. The vertical APE will be restricted to 1 foot or less, including for the pump station, which will be placed on one of the constructed levees.

In an effort to identify historic properties, RRBWSD contracted for a Phase 1 cultural resources study in 2013 (ESA 2013), which includes a records search, cultural resources field survey, a geoarchaeological review, recordation of observed cultural resources, and California Register of Historical Resources (CRHR) evaluation recommendations. No new archaeological resources were identified in the APE during the field survey conducted on July 11-12, 2012. The geoarchaeological assessment indicates a moderate potential for the presence of buried cultural resources. However, given the negative results of pedestrian survey and limited vertical extent for the Project construction elements, the potential for encountering buried historic properties within the APE is considered negligible.

Two built environment resources were identified and recorded during the survey within the Stockdale East recharge basin and consist of an abandoned portion of the Pioneer Canal (IRWD-KRM-003-H) and a complex of oil production related features from the 1960s (IRWD- KRM-004-H). ESA recommended both resources as not eligible for California Register of Historical Resources listing (ESA 2013: 28-34). Reclamation, utilizing the background and historic context provided by ESA, has determined that the Pioneer Canal and the complex of oil production features on the Stockdale East parcel are also not eligible for inclusion in the National Register of Historic Places (NRHP) under any evaluation criteria. In addition, and as ESA noted, the Pioneer Canal segment on the Stockdale East property lacks integrity, because part of it has been realigned and the remainder filled in and used as a road.

Reclamation has identified the Tachi-Yokut Tribe of the Santa Rosa Rancheria, the Tejon Indian Tribe, and the Tule River Indian Tribe as Indian tribes likely to attach religious or cultural significance to any historic properties that may be located within the project APE.

Reclamation contacted the tribes on October 21, 2016, notifying them of the undertaking and inviting their participation in the Section 106 process. To date, no response has been received. Reclamation will consider all tribal comments and make notifications as required should there be any future concerns.

Based on the above discussion, the record reviews, the pedestrian survey, and tribal consultation, Reclamation has determined a finding of No Historic Properties Affected for this proposed undertaking. Reclamation has requested review of the delineation of the APE and efforts to identify historic properties and is also requesting concurrence with the NRHP evaluation of the two recorded resources and with the above finding.

After OHP staff review of the documentation submitted for the Proposed Rosedale-Rio Bravo Water Storage District (RRBWSD) Stockdale East Groundwater Recharge Project, Kern County California (Project No: 16-SCAO-173), the following comments are offered:

- Pursuant to 36 CFR 800.4(a)(1), there are no objections to the APE as defined;
- Pursuant to 36 CFR 800.4(b), Reclamation has documented a reasonable and good faith effort to identify historic properties within the area of potential effects.
- Pursuant to 36 CFR 800.4(c)(2), **I agree** that the abandoned segment of the Pioneer Canal (IRWD-KRM-003-H), located within the Stockdale East parcel, lacks sufficient historical context and has lost integrity through realignment and being dirt-filled for use as a road and therefore is not eligible for listing in the NRHP.
- Pursuant to 36 CFR 800.4(c)(2), **I agree** that the circa 1960s, small complex of oil

production related elements (IRWD-KRM-004-H), a locally built oil extraction feature associated with minor production in the Strand Oil field, are standard, common-type oil extraction and storage structures lacking sufficient historical context, and are therefore also not eligible for listing in the NRHP.

- Reclamation has determined that the proposed undertaking will result in no historic properties affected. Pursuant to 36 CFR 800.4(d)(1), **I do not object**.

Please be advised that under certain circumstances, such as unanticipated discovery or a change in project description, Reclamation may have additional future responsibilities for this undertaking under 36 CFR Part 800 (as amended). Should you require further information, please contact Jeanette Schulz at [Jeanette.Schulz@parks.ca.gov](mailto:Jeanette.Schulz@parks.ca.gov) or (916) 445-7031.

Sincerely,

A handwritten signature in blue ink, consisting of a stylized 'J' followed by a horizontal line that tapers to the right.

Julianne Polanco

State Historic Preservation Officer

# Appendix C: Letter of Concurrence from the USFWS



In Reply Refer to:  
08ESMF00-  
2018-I-0132

## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
Sacramento Fish and Wildlife Office  
2800 Cottage Way, Suite W-2605  
Sacramento, California 95825-1846



OCT 27 2017

### Memorandum

To: Anastasia T. Leigh, Regional Environmental Officer, Mid-Pacific Regional Office  
Bureau of Reclamation, Sacramento, California

From: Patricia Cole, Chief, San Joaquin Valley Division, Sacramento Fish and Wildlife  
Office, Sacramento, California *Patricia Cole*

Subject: Informal Consultation on the Stockdale East Groundwater Recharge Project –  
Rosedale-Rio Bravo Water Storage District, Kern County, California

This memorandum is in response to your August 10, 2017, request for initiation of informal consultation with the U.S. Fish and Wildlife Service (Service) on the Stockdale East Groundwater Recharge Project (Project) in Kern County, California. At issue are the potential effects of the proposed project on the federally-listed as endangered Tipton kangaroo rat (*Dipodomys nitratoides nitratoides*), giant kangaroo rat (*Dipodomys ingens*), and San Joaquin kit fox (*Vulpes macrotis mutica*). This response is provided under the authority of the Endangered Species Act of 1973, as amended (16 U.S.C. § 1531 *et seq.*)(Act), and in accordance with the implementing regulations pertaining to interagency cooperation (50 CFR 402).

The federal action on which we are consulting is the proposed Project that includes development of a 200 acre recharge facility, a central intake pumping plant, and a 300 foot pipeline. The Bureau of Reclamation (Reclamation) has requested concurrence with the conclusion the proposed Project may affect, but is not likely to adversely affect (NLAA) the Tipton kangaroo rat, giant kangaroo rat, and San Joaquin kit fox.

Reclamation has requested initiation of informal consultation under the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*)(Act). Our response is based on the following information: (1) an initial biological assessment (BA); (2) a consultation request letter dated August 9, 2017; (3) a phone conversation on September 25, 2017; (4) email exchanges in September and October 2017; and (5) other information available to the Service.

### Project Description

The proposed Project area is located 6 miles west of the City of Bakersfield in Kern County, California (Figure 1). The Stockdale East Recharge Ponds will impound approximately 200 acres through the construction of compacted levees approximately 2 to 5 feet in height. The proposed Project area covers 230 acres of which approximately 200 acres will be used for the recharge ponds and the remaining area will be used for construction of the central intake pumping plant along with access roads and equipment staging. Vehicles will access the site via Stockdale highway. The central

intake pumping plant includes the installation of a 48 to 72 inch pipeline that will allow Rosedale the flexibility to use various recharge ponds which will maximum use of available runoff water. The pipeline will be approximately 300 feet-long and will connect the intake facility to the Cross Valley Canal (CVC). In order to deliver runoff water, and or state and federal water for recharge purposes to the Stockdale East Recharge Ponds and other existing recharge facilities, 4 low lift pumps (140 cfs capacity) and infrastructure will be installed. Upon completion of the Project, it is expected that the entire area within the levees would be periodically inundated. The ponds would recharge approximately 19,000 acre-feet during wet water years (typically 3 out of every 10 years). During dry years, vegetation in the ponds will be allowed to regenerate naturally. Vegetation on the levee banks and tops will be managed through a combination of mechanical (mowing and hand tools) and chemical treatment. The levee top will be routinely graded and maintained free of vegetation. Fencing may be installed as part of the Project. If installed, the fencing may be either barbed wire strand or chain link. All fence installation will adhere to the conservation measure for fencing detailed in the *Conservation Measures* section.

The entire proposed Project area is level and largely composed of irrigated row crops. No natural communities are found within the proposed Project area, but some ruderal vegetation is found along the field and road edges. This habitat includes saltbush (*Atriplex* sp.), Russian thistle (*Salsola tragus*), and non-native grasses (*Bromus* sp.). The proposed Project area is surrounded by irrigated row crops and bounded by the CVC (with year round water) to the south and southwest. No San Joaquin kit fox or sign were observed within the proposed Project area during reconnaissance surveys, but a single potential den was observed along the Pioneer Canal just outside of the proposed Project area. However, only one entrance to the burrow was observed indicating the den is unlikely to be used as a natal den. There are no records of San Joaquin kit fox on the property in the California Natural Diversity Database (CNDDDB). There are numerous records of San Joaquin kit fox in the vicinity of the proposed Project. Most are to the south of the Project area, closer to the Kern River where there is more suitable habitat. The closest of these records is approximately 1 mile south of the proposed Project area. Ruderal habitats within the proposed Project area could provide limited foraging and movement habitat for the San Joaquin kit fox. Row crop agricultural allows San Joaquin kit fox to move through the area, and when fallowed can provide limited foraging habitat. Based on the number of records in CNDDDB and suitable habitat adjacent to the Project, San Joaquin kit fox are likely to occur in the proposed Project area. However, their presence on within the proposed Project area is likely to be transitory and infrequent because of the lack of suitable habitat and as evidenced by the lack of sign. As such, the proposed Project will have insignificant effects on the San Joaquin kit fox.

There are no records in CNDDDB of either Tipton or giant kangaroo rat within the proposed Project area. The closest record of a Tipton kangaroo rat in CNDDDB is less than 1 mile south east of the proposed Project area. Tipton kangaroo rats were documented multiple times in this area during protocol surveys for the species. The closest record of giant kangaroo rat is approximately 7 miles southwest of the proposed Project area. This species has not been recorded to the east of the California Aqueduct and is unlikely to occur within the vicinity of the Project. No sign of either kangaroo rat species was observed within the proposed Project area. Suitable habitat within the proposed Project is limited to small areas of ruderal habitat along the margins of the agricultural fields. The Cross Valley Canal holds water year round and may limit dispersal into the proposed Project area by kangaroo rats. Because of the lack of kangaroo rat observations, limited amount of suitable habitat, barriers to dispersal, and the Conservation Measures that Reclamation has committed to implement, the proposed Project will have discountable effects on both the Tipton kangaroo rat and the giant kangaroo rat.

### Environmental Commitments

As part of the Project, Caltrans staff and its contractors will implement Avoidance and Minimization Measures (AMM) and Best Management Practices prior to and during construction activities to minimize and avoid effects to sensitive species. The AMM's include the following:

1. All contractors, their employees, and agency personnel involved in the Project will receive formal training prior to working on the Project. The training will be conducted by a qualified biologist who is knowledgeable in the biology of the federally-listed species found in the area and their legislative protection. The program will include the following: a description of the natural history of the species and their habitat with the potential to be affected by the Project, the general measures that are being implemented to conserve these species as they relate to the Project, the penalties for non-compliance, and the boundaries of the work area within which the Project must be accomplished.
2. All personnel will comply with the U.S. Fish and Wildlife Service's 2011 *Standardized Recommendation for Protection of the Endangered San Joaquin Kit Fox Prior to or During Construction Disturbance* (Standardized Recommendations).
3. A preconstruction/pre-activity survey(s) will be conducted by a Service-approved biological monitor no less than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities for the levee creation. Any potential burrows for San Joaquin kit fox, Tipton kangaroo rat, or giant kangaroo rat should be recorded, clearly marked, and avoided by the appropriate buffers until it is determined that the burrows are not in use by the federally-listed species. Activities will avoid kangaroo rat burrows by a minimum of 50 feet and San Joaquin kit fox burrows by the buffer distances given in the Standardized Recommendations. If the buffers cannot be maintained or, if any federally-listed species is observed, Reclamation should contact the Service and obtain an Incidental Take Statement.
4. Prior to construction, project plans shall clearly delineate that: "*Speed signs of 25 mph maximum (or lower) shall be posted for all construction traffic, to minimize the probability of road mortality of the San Joaquin kit fox, Giant kangaroo rat, and the Tipton kangaroo rat.*" Speed limit signs will be installed on the project site within 30 days prior to initiation of site disturbance or construction.
5. Project activities will be restricted to daylight hours (30 minutes prior to sunrise and 30 minutes after sunset).
6. During the construction phase, to prevent entrapment of federally-listed species, all steep-walled holes or trenches in excess of two feet in depth will be covered at the close of each working day by plywood or similar materials, or incorporate one or more escape ramps constructed of earth fill or wooden planks. Trenches will also be inspected for entrapped species each morning prior to onset of field activities and immediately prior to covering with plywood at the end of each working day. Before such holes or trenches are filled, they will be thoroughly inspected for entrapped species. Any species discovered will be allowed to escape before field activities resume. If San Joaquin kit fox or kangaroo rats are discovered entrapped and do not leave the work area on their own, work activities near the animal will stop and the Service will be contacted immediately to discuss options to proceed.
7. During the site-disturbance or construction phase, any pipes, culverts, or similar structures with a diameter of four inches or greater, stored overnight at the project site will be thoroughly inspected for trapped species before the subject pipe is subsequently buried, capped, or otherwise used or

moved in any way. If during the construction phase a San Joaquin kit fox or kangaroo rat is discovered inside a pipe, that section of pipe will not be moved, work in the immediate area will stop, and the Service will be contacted immediately to discuss options to proceed.

8. All food-related trash items such as wrappers, cans, bottles, and food scraps generated will be disposed of in closed containers only and regularly removed from the site. Food items may attract species onto the project site, consequently exposing such animals to increased risk of injury or mortality. No deliberate feeding of wildlife will be allowed.

9. Use of pesticides or herbicides shall be in compliance with all local, state and federal regulations. This is necessary to minimize the probability of primary or secondary poisoning of endangered species utilizing adjacent habitats, and the depletion of prey upon which the species depend.

10. Any contractor or employee that inadvertently kills or injures a San Joaquin kit fox, giant kangaroo rat, Tipton kangaroo rat, or who finds any such animal either dead, injured, or entrapped will be required to report the incident immediately to the applicant and District. In the event that any observations are made of injured or killed, the applicant will immediately notify the Service by telephone, formal notification will be provided in writing within three working days of the finding of any such animal(s), and Reclamation will obtain an Incidental Take Statement. Notification shall include the date, time, location and circumstances of the incident. Any threatened or endangered species found dead or injured shall be turned over immediately to a Service-approved facility for care, analysis, or disposition.

11. Prior to any weed control or levee maintenance work, the area will be inspected for burrows that could be suitable for San Joaquin kit fox or kangaroo rats. If a suitable burrow is located, a Service-approved biologist will be called to inspect the burrow for signs of occupancy or use. Any burrows that cannot be avoided by the maintenance or weed control work should be monitored following the protocols in the Standardized Recommendations. If a burrow is found to be occupied, the burrow will be avoided and Reclamation will contact the Service and obtain an Incidental Take Statement.

12. If fences are installed around the Project area, the following will be followed in order to allow for continued species movement through the site:

- a. If a wire strand/pole design is used, the lowest strand will be no closer to the ground than 12 inches
- b. If a more solid wire mesh fence is used, 8 inch by 12 inch openings near the ground will be provided every 100 yards.

### **Conclusion**

The Service concurs with your determination that the Project may affect, but is not likely to adversely affect the San Joaquin kit fox. Our concurrence with NLAA for this Project is based on the small area of permanent impacts, lack of suitable habitat within the action area, and environmental commitments in Caltrans' November 2016 consultation request letter and their November 2016 biological assessment and included above. This concludes the Service's review of the Project. No further coordination with the Service under the Act is necessary at this time. Please note, however, this letter does not authorize take of listed species. As provided in 50 CFR §402.14, initiation of formal consultation is required where there is discretionary federal involvement or



control over the action (or is authorized by law) and if: (1) new information reveals the effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this review; (2) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this review; or (3) a new species is listed or critical habitat designated that may be affected by the action.

If you have questions regarding this action, please contact Tim Ludwick, Fish and Wildlife Biologist, at (timothy\_ludwick@fws.gov) or (916) 414-6551 or Patricia Cole (patricia\_cole@fws.gov) at the letterhead address.

cc:

Craig Bailey, California Department of Fish and Wildlife

# Appendix D: Mitigation Monitoring and Reporting Program

## CHAPTER 12

### Mitigation Monitoring and Reporting Program

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#### CEQA Requirements

Section 15091(d) and Section 15097 of the CEQA Guidelines require a public agency to adopt a program for monitoring or reporting on the changes it has required in the project or conditions of approval to substantially lessen significant environmental effects. This MMRP summarizes the mitigation commitments identified in the Stockdale Integrated Banking Project Final EIR (State Clearinghouse No. 2013091076). Mitigation measures are presented in the same order as they occur in the Final EIR.

The columns in the MMRP table provide the following information:

- **Mitigation Measure(s):** The action(s) that will be taken to reduce the impact to a less-than-significant level.
- **Implementation, Monitoring, and Reporting Action:** The appropriate steps to implement and document compliance with the mitigation measures.
- **Responsibility:** The agency or private entity responsible for ensuring implementation of the mitigation measure. However, until the mitigation measures are completed, Rosedale, as the CEQA Lead Agency, remains responsible for ensuring that implementation of the mitigation measures occur in accordance with the MMRP (CEQA Guidelines, Section 15097(a)).
- **Monitoring Schedule:** The general schedule for conducting each task, either prior to construction, during construction and/or after construction.

TABLE 12-1 – MITIGATION MONITORING AND REPORTING PROGRAM FOR THE STOCKDALE INTEGRATED BANKING PROJECT

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
<b>Aesthetics</b>			
<b>AES-1:</b> All nighttime construction lighting and security lighting installed on new facilities shall be shielded and directed downward to avoid light spill onto neighboring properties.	<ul style="list-style-type: none"> <li>Include mitigation measure in construction contractor specifications.</li> <li>Perform site inspections to ensure mitigation is being implemented during construction.</li> </ul>	Rosedale/IRWD; Construction Contractor	During Construction
<b>Agriculture and Forestry Resources</b>			
<b>AGR-1:</b> If the third Stockdale project site is under a Williamson Act contract, then the use of the property would be managed as applicable in accordance with Kern County's <i>Agricultural Preserve Standard Uniform Rules</i> , which identify land uses that are compatible within agricultural preserves established under the Williamson Act.	<ul style="list-style-type: none"> <li>Include mitigation measure in project design specifications.</li> <li>Perform site inspections as appropriate based on the Uniform Rules to ensure property is being managed as defined.</li> </ul>	Rosedale/IRWD	Before Construction
<b>Biological Resources</b>			
<p><b>BIO-1:</b> The following measures would reduce potential impacts to nesting and migratory birds and raptors to less than significant levels:</p> <ul style="list-style-type: none"> <li>Within 15 days of site clearing, a qualified biologist shall conduct a pre-construction, migratory bird and raptor nesting survey. The biologist must be qualified to determine the status and stage of nesting by migratory birds and all locally breeding raptor species without causing intrusive disturbance. This survey shall include species protected under the Migratory Bird Treaty Act including the tricolored blackbird. The survey shall cover all reasonably potential nesting locations for the relevant species on or closely adjacent to the proposed project site.</li> <li>Nesting habitat should be removed prior to the bird breeding season (February 1 – September 30).</li> <li>If an active nest is confirmed by the biologist, no construction activities shall occur within 250 feet of the nesting site for migratory birds and within 500 feet of the nesting site for raptors. The buffer zones around any nest within which project-related construction activities would be avoided can be reduced as determined acceptable by a qualified biologist. Construction activities may resume once the breeding season ends (February 1 – September 30), or the nest has either failed or the birds have fledged.</li> </ul>	<ul style="list-style-type: none"> <li>Include mitigation measure in construction contractor specifications.</li> <li>A qualified biologist will conduct pre-construction nesting survey as defined.</li> <li>Prepare documentation to record results of the pre-construction survey.</li> <li>If an active nest is detected, then implement measures as appropriate. Perform construction site inspections to ensure measures are implemented properly. An inspection log will be maintained to document results of site inspections.</li> <li>Retain copies of pre-construction survey documentation and construction site inspection logs in the project file.</li> </ul>	Rosedale/IRWD; Construction Contractor	Before and During Construction

TABLE 12-1 – MITIGATION MONITORING AND REPORTING PROGRAM  
FOR THE STOCKDALE INTEGRATED BANKING PROJECT

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
<p><b>BIO-2:</b> If construction activities are scheduled to take place outside of the Swainson's hawk nesting season (which runs from March 1 – September 15), then no preconstruction clearance surveys or subsequent avoidance buffers are required. If construction activities are initiated within the nesting season then preconstruction nesting surveys shall be conducted by a qualified biologist prior to ground disturbance, in accordance with the guidance provided in the <i>Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley</i> (Swainson's Hawk Technical Advisory Committee, 2000). The required windshield surveys shall cover a one-half mile radius around the project sites. If a nest site is found, the qualified biologist shall determine the appropriate buffer zone around the nest within which project-related construction activities would be avoided. In addition, the qualified biologist shall consult with Rosedale and/or IRWD to determine whether consultation with CDFW is necessary.</p>	<ul style="list-style-type: none"> <li>• Include mitigation measure in construction contractor specifications.</li> <li>• A qualified biologist will conduct pre-construction surveys for Swainson's hawk as defined.</li> <li>• Prepare documentation to record results of the pre-construction survey.</li> <li>• If a Swainson's hawk nest is detected, then implement measures as appropriate. Perform construction site inspections to ensure measures are implemented properly. An inspection log will be maintained to document results of site inspections.</li> <li>• Retain copies of pre-construction survey documentation and construction site inspection logs in the project file.</li> </ul>	Rosedale/IRWD, Construction Contractor	Before and During Construction
<p><b>BIO-3:</b> A pre-construction survey shall be conducted for burrowing owls 14 to 30 days prior to cleaning of the site by a qualified biologist in accordance with the most recent CDFW protocol, currently the <i>Staff Report on Burrowing Owl Mitigation</i> (CDFW 2012). Surveys shall cover suitable burrowing owl habitat disturbed by construction including a 500-foot buffer. The survey would identify adult and juvenile burrowing owls and signs of burrowing owl occupation. This survey shall include two early morning surveys and two evening surveys to ensure that all owl pairs have been located. If occupied burrowing owl habitat is detected on the proposed project site, measures to avoid, minimize, or mitigate impacts shall be incorporated into the proposed project and shall include, but not be limited to, the following:</p> <ul style="list-style-type: none"> <li>• If owls are identified on or adjacent to the site, a qualified biologist shall provide a pre-construction Worker's Environmental Awareness Program to contractors and their employees that describes the life history and species protection measures that are in effect to avoid impacts to burrowing owls. Construction monitoring will also occur throughout the duration of ground-disturbing construction activities to ensure no impacts occur to burrowing owl.</li> <li>• Construction exclusion areas shall be established around the occupied burrows in which no disturbance shall be allowed to occur while the burrows are occupied. Buffer areas shall be determined by a qualified biologist based on the recommendations outlined in the most recent <i>Staff Report on Burrowing Owl Mitigation</i> (CDFW 2012).</li> <li>• If occupied burrows cannot be avoided, a qualified biologist shall develop and implement a Burrowing Owl Management Plan. The biologist shall develop the Plan in consultation with Rosedale and/or IRWD and shall coordinate with CDFW as necessary.</li> </ul>	<ul style="list-style-type: none"> <li>• Include mitigation measure in construction contractor specifications.</li> <li>• A qualified biologist will conduct preconstruction surveys as defined, covering suitable burrowing owl habitat.</li> <li>• Prepare documentation to record results of the pre-construction survey.</li> <li>• If occupied burrowing owl habitat is found, then implement construction limitations and programs as defined. Perform construction site inspections to ensure measures are implemented properly and the construction contractor is complying with construction limitations. An inspection log will be maintained to document results of site inspections.</li> <li>• Retain copies of pre-construction survey documentation and construction site inspection logs in the project file.</li> </ul>	Rosedale, Construction Contractor	Before and During Construction

**TABLE 12-1 – MITIGATION MONITORING AND REPORTING PROGRAM FOR THE STOCKDALE INTEGRATED BANKING PROJECT**

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
<p><b>BIO-4:</b> IRWD and Rosedale shall conduct a USFWS-approved "early evaluation" of the project area to determine if the project sites represent San Joaquin kit fox habitat. If the evaluation shows that the San Joaquin kit fox does not utilize the project sites, and the project will not result in take, then no further mitigation shall be required for this endangered species. If the "early evaluation" finds potential for the presence of kit fox, USFWS may require a San Joaquin kit fox survey to be conducted by a qualified biologist, in accordance with the most recent USFWS <i>San Joaquin Kit Fox Survey Protocol</i>. If it is determined that the San Joaquin kit fox has the potential to utilize the property then the following measures are required to avoid potential adverse effects to this species:</p> <ul style="list-style-type: none"> <li>Rosedale and/or IRWD shall initiate discussions with the USFWS to determine appropriate project modifications to protect kit fox, including avoidance, minimization, restoration, preservation, or compensation.</li> <li>If evidence of active or potentially active San Joaquin kit fox dens is found within the area to be impacted by the proposed project, compensation for the habitat loss shall be determined and provided in consultation with USFWS and CDFW.</li> </ul>	<ul style="list-style-type: none"> <li>Conduct evaluation of project area for San Joaquin kit fox habitat prior to construction. If kit fox are determined to use project property, then implement measures as defined.</li> <li>Perform construction site inspections to ensure any measures decided upon are implemented properly.</li> <li>Retain copies of survey documentation and construction site inspection logs in the project file.</li> </ul>	Rosedale/IRWD;	Before and During Construction
<p><b>BIO-5:</b> Prior to ground disturbing activities at the Goose Lake Slough and third Stockdale site, a qualified biologist shall conduct a pre-construction floristic survey and, if deemed necessary, focused rare plant survey of project areas to determine and map the location and extent of special-status plant species populations and natural communities of special concern within disturbance areas. Focused rare plant surveys shall occur during the typical blooming periods of special-status plants with the potential to occur. The plant surveys shall follow the CDFW Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (November 24, 2009). If a special-status plant species is found to be present, and avoidance of the species and/or habitat is not feasible, the implementing agency shall retain a qualified botanist to prepare and implement a Revegetation/Restoration Mitigation Plan.</p>	<ul style="list-style-type: none"> <li>Include mitigation measure in construction contractor specifications.</li> <li>A qualified biologist will conduct pre-construction surveys for special status plants as defined.</li> <li>Prepare documentation to record results of the pre-construction survey.</li> <li>If special-status plant species are detected, then implement measures as appropriate. Perform construction site inspections to ensure measures are implemented properly. An inspection log will be maintained to document results of site inspections.</li> <li>Retain copies of pre-construction survey documentation and construction site inspection logs in the project file.</li> </ul>	Rosedale/IRWD; Construction Contractor	Before and During Construction

**TABLE 12-1 – MITIGATION MONITORING AND REPORTING PROGRAM  
FOR THE STOCKDALE INTEGRATED BANKING PROJECT**

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
<p><b>BIO-6:</b> Prior to ground disturbing activities at the third Stockdale site, a habitat assessment shall be conducted by a qualified biologist to determine the potential for special-status wildlife species to occur within affected areas. If the habitat assessment determines that a special-status species has the potential to be present within a minimum of 500 feet of the construction zone, a qualified biologist shall determine whether subsequent focused surveys are required prior to project implementation to determine presence or absence.</p> <p>If a special-status wildlife species is found to be present, and avoidance of the species and/or habitat is not feasible, then Mitigation Measures BIO-1 through BIO-4 shall be implemented as appropriate, or Rosedale and/or IRWD shall consult with a qualified biologist to prepare a species-specific mitigation plan and determine whether consultation with wildlife agencies are recommended.</p>	<ul style="list-style-type: none"> <li>• Include mitigation measure in construction contractor specifications.</li> <li>• A qualified biologist will conduct pre-construction surveys for special-status wildlife species as defined.</li> <li>• Prepare documentation to record results of the pre-construction survey.</li> <li>• If special-status wildlife species are detected, then implement measures as appropriate. Perform construction site inspections to ensure measures are implemented properly and the construction contractor is complying with construction limitations. An inspection log will be maintained to document results of site inspections.</li> <li>• Retain copies of preconstruction survey documentation and construction site inspection logs in the project file.</li> </ul>	Rosedale/IRWD, Construction Contractor	Before and During Construction
<p><b>BIO-7:</b> For project components that have potential to impact jurisdictional features, prior to ground disturbing activities, a qualified biologist shall be retained to conduct a jurisdictional delineation in areas that may be affected by the project. If jurisdictional resources are identified, the qualified biologist shall prepare a jurisdictional delineation report outlining the potential acreage of jurisdictional features that may be impacted. The jurisdictional delineation report will be submitted to USACE for a jurisdictional determination. If the delineation report determines that jurisdictional waters and/or wetlands are present within the project site, regulatory permits may be required prior to project impacts which include mitigation and/or compensation to reduce impacts to jurisdictional features to a less than significant level. Based on the results of the delineation report, permits required may include a 404 or Nationwide Permit from USACE, a 401 Certification from RWQCB and/or a Streambed Alteration Agreement from CDFW. Project impacts under 0.10 acre may not require a permit from USACE but only a notification of impact. The appropriate permits required to reduce impacts to jurisdictional features will be determined through initial consultation with the resource agencies.</p>	<ul style="list-style-type: none"> <li>• Include mitigation measure in construction contractor specifications.</li> <li>• A qualified biologist shall conduct a jurisdictional delineation as defined, if necessary.</li> <li>• A jurisdictional delineation report shall be prepared, if necessary. This report shall be submitted to USACE and kept in the project file on-site.</li> </ul>	Rosedale/IRWD	Before and During construction

TABLE 12-1 – MITIGATION MONITORING AND REPORTING PROGRAM FOR THE STOCKDALE INTEGRATED BANKING PROJECT

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
<b>Cultural Resources</b>			
<p><b>CUL-1:</b> In the event that prehistoric or historic subsurface cultural resources are discovered during ground-disturbing activities, all work within 50 feet of the resources will be halted and Rosedale or IRWD (as applicable) will consult with a qualified archaeologist to assess the significance of the find according to CEQA <i>Guidelines</i> Section 15064.5. If any find is determined to be significant, then Rosedale or IRWD and the archaeologist will meet to determine the appropriate avoidance measures or other appropriate mitigation. Rosedale or IRWD (as applicable) will make the final determination. All significant cultural materials recovered will be, as necessary and at the discretion of the consulting archaeologist, subject to scientific analysis, professional museum curation, and documentation according to current professional standards.</p> <p>In considering any suggested mitigation proposed by the consulting archaeologist in order to mitigate impacts to historical resources or unique archaeological resources, Rosedale or IRWD will determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is infeasible, other appropriate measures (e.g., data recovery) will be instituted. Work may proceed on other parts of the project site while mitigation for historical resources or unique archaeological resources is being carried out.</p>	<ul style="list-style-type: none"> <li>• Include mitigation measure in construction contractor specifications.</li> <li>• In the event that subsurface cultural resources are discovered, documentation of the assessment of the significance of the find will be prepared and retained in the project file.</li> <li>• Perform site inspections to ensure compliance with cultural sensitivity requirements. Retain inspection forms in the project file.</li> </ul>	Rosedale/IRWD, Construction Contractor	During Construction
<p><b>CUL-2:</b> For any project components not previously subject to archaeological survey (e.g., the third Stockdale site), prior to the initiation of ground disturbance, a qualified archaeologist shall be retained to carry out a Phase I Cultural Resources Survey of the project component. The Phase I Survey shall identify and evaluate the significance of any resources that may be directly or indirectly impacted by the proposed project. The Phase I Survey effort shall be documented in a Phase I Report. If as a result of the additional Phase I Survey any resource is found to be a historical or unique archaeological resource as defined in PRC Section 21084.1 and 21083.2(g), respectively, then <b>Mitigation Measure CUL-1</b> shall be implemented.</p>	<ul style="list-style-type: none"> <li>• Include mitigation measure in construction contractor specifications.</li> <li>• A Phase I Cultural Resources Survey shall be completed when the third Stockdale site is identified.</li> <li>• Perform site inspections to ensure construction contractor is in compliance with any avoidance measures or other mitigation requirements.</li> <li>• Retain copies of construction site inspection logs in the project file.</li> </ul>	Rosedale/IRWD, construction contractor	Before and During Construction
<p><b>CUL-3:</b> In the event that paleontological resources are discovered, Rosedale or IRWD (depending upon the project component) will notify a qualified paleontologist. The paleontologist will document the discovery as needed, evaluate the potential resource, and assess the significance of the find under the criteria set forth in CEQA <i>Guidelines</i> Section 15064.5. If fossil or fossil bearing deposits are discovered during construction, excavations within 50 feet of the find will be temporarily halted or diverted until the discovery is examined by a qualified paleontologist. The paleontologist will notify the appropriate agencies to determine procedures that would be followed before construction is allowed to resume at the location of the find. If Rosedale or IRWD determines that avoidance is not feasible, the paleontologist will prepare an excavation plan for mitigating the effect of the project on the qualities that make the resource important. The plan will be submitted to Rosedale or IRWD for review and approval prior to implementation.</p>	<ul style="list-style-type: none"> <li>• Include mitigation measure in construction contractor specifications.</li> <li>• In the event that paleontological resources are discovered, documentation of the assessment of the significance of the find will be prepared and retained in the project file.</li> <li>• Paleontological monitoring reports and logs will be retained in project file.</li> </ul>	Rosedale/IRWD, Construction Contractor	Before and During Construction

TABLE 12-1 – MITIGATION MONITORING AND REPORTING PROGRAM  
FOR THE STOCKDALE INTEGRATED BANKING PROJECT

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
<b>CUL-4:</b> Once the location of the third Stockdale site is determined (or any additional project components), prior to the initiation of ground disturbance, a paleontological literature, map, and museum locality review shall be conducted in order to assess the paleontological sensitivity of the project component. If the literature, map, and museum locality review identifies potentially sensitive paleontological resources, then a qualified paleontologist shall be retained to conduct a pedestrian survey and assessment of the project component. A report shall be prepared which summarizes the results of the survey and assessment and provides recommendations regarding implementation of mitigation, such as <b>Mitigation Measure CUL-3</b> .	<ul style="list-style-type: none"> <li>Include mitigation measure in construction contractor specifications.</li> <li>Perform evaluation of paleontological sensitivity of the third Stockdale site, as described.</li> <li>Retain copies of the paleontological report and recommendations in the project file.</li> </ul>	Rosedale/RWD	Before Construction
<b>CUL-5:</b> If human remains are uncovered during project construction, Rosedale or IRWD (as applicable) shall immediately halt work, contact the Kern County Coroner to evaluate the remains, and follow the procedures and protocols set forth in Section 15064.4 (e)(1) of the <i>California Environmental Quality Act Guidelines</i> . If the Coroner determines the remains are Native American in origin, the Coroner shall contact the Native American Heritage Commission (NAHC). As provided in Public Resources Code Section 5097.98, the NAHC shall identify the person or persons believed to be most likely descended from the deceased Native American. The most likely descendent shall be afforded the opportunity to provide recommendations concerning the future disposition of the remains and any associated grave goods as provided in PRC 5097.98.	<ul style="list-style-type: none"> <li>Include mitigation measure in construction contractor specifications.</li> <li>Perform site inspections to ensure contractor is following procedures outlined in this measure.</li> </ul>	Rosedale/RWD; Construction Contractor	During Construction
<b>Hazards and Hazardous Materials</b>			
<b>HAZ-1:</b> Prior to construction at Stockdale East, Rosedale shall collect representative samples of soils remaining in place near the oilfield as identified in the Phase 1 Environmental Site Assessment. The samples shall be analyzed for total petroleum hydrocarbons and pesticides. Rosedale shall avoid if feasible or otherwise remove from the site soils identified as containing hazardous quantities of contaminants and dispose of such soils in accordance with applicable hazardous waste regulations.	<ul style="list-style-type: none"> <li>Include mitigation measure in construction contractor specifications.</li> <li>In the event of identification of hazardous site soils, documentation of the assessment and removal or avoidance shall be prepared and retained in the project file.</li> </ul>	Rosedale; Construction Contractor	Before and During Construction
<b>HAZ-2:</b> In the event that asbestos-containing materials are uncovered during project construction, work at the project sites shall immediately halt and a qualified hazardous materials professional shall be contacted and brought to the project sites to make a proper assessment of the suspect materials. All potentially friable asbestos-containing materials shall be removed in accordance with Federal, State, and local laws and the National Emissions Standards for Hazardous Air Pollutants guidelines prior to ground disturbance that may disturb such materials. All demolition activities shall be undertaken in accordance with California Occupational Safety and Health Administration standards, as contained in Title 8 of the CCR, Section 1529, to protect workers from exposure to asbestos. Materials containing more than one percent asbestos shall also be subject to San Joaquin Valley Air Pollution Control District regulations. Demolition shall be performed in conformance with Federal, state, and local laws and regulations so that construction workers and/or the public avoid significant exposure to asbestos-containing materials.	<ul style="list-style-type: none"> <li>Include mitigation measure in construction contractor specifications.</li> <li>In the event of identification of asbestos-containing materials on site, documentation of the assessment and removal shall be prepared and retained in the project file.</li> </ul>	Rosedale/RWD; Construction Contractor	During Construction



**TABLE 12-1 – MITIGATION MONITORING AND REPORTING PROGRAM  
FOR THE STOCKDALE INTEGRATED BANKING PROJECT**

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
<b>HAZ-3:</b> A Phase I Environmental Site Assessment shall be prepared for the Central Intake Pipeline and third Stockdale project site to identify potential hazards and hazardous materials located within a one-mile radius. The construction contractor shall be informed of potential hazards and shall develop appropriate plans to avoid or remediate hazards.	<ul style="list-style-type: none"> <li>• Include mitigation measure in construction contractor specification.</li> <li>• Results of the assessment shall be documented and retained in the project file.</li> <li>• Construction site inspections shall be performed to ensure contractor compliance with identified plans to avoid or remediate hazards.</li> </ul>	Rosedale/RWD, Construction Contractor	Before and During Construction
<b>HAZ-4:</b> In the event the third Stockdale project site is located within a quarter mile of any school facilities, prior to construction, the contractors shall coordinate the proposed project construction route with the impacted school district and school facility to avoid school safety routes.	<ul style="list-style-type: none"> <li>• Include mitigation measure in construction contractor specification.</li> <li>• Documentation of the agreed upon construction route shall be retained in the project file.</li> <li>• Construction site inspections shall be performed to ensure contractor compliance with identified construction route.</li> </ul>	Rosedale/RWD, Construction Contractor	Before and During Construction
<b>HAZ-5:</b> IRWD and Rosedale shall coordinate with the Kern County Department of Public Health Services and the Kern Mosquito and Vector Control District prior to project operations to develop and implement, if necessary, appropriate insect abatement methods. Such methods shall not utilize any substances that may contaminate groundwater.	<ul style="list-style-type: none"> <li>• Include mitigation measure in project design specifications.</li> <li>• Coordinate with appropriate Kern County agencies and retain documentation of correspondence with such agencies in the project file.</li> <li>• Implementation of appropriate insect abatement methods shall be documented and retained in the project file.</li> </ul>	Rosedale/RWD	Before and After Construction
<b>Hydrology and Water Quality</b>			
<b>HYDRO-1:</b> The SWPPP for the proposed project shall include the following BMPs: <ul style="list-style-type: none"> <li>• Establish an erosion control perimeter around active construction and contractor layout areas, using methods such as silt fencing, jute netting, straw wattles, or other appropriate measures to control sediment from leaving the construction area.</li> <li>• Stockpiled soils shall be watered, covered, or otherwise managed to prevent loss due to water and wind erosion.</li> <li>• Install containment measures at fueling stations and at fuel and chemical storage sites.</li> <li>• Employ good house-keeping measures including clearing construction debris and waste materials at the end of each day.</li> </ul>	<ul style="list-style-type: none"> <li>• Prepare the SWPPP prior to project implementation.</li> <li>• Retain copies of the SWPPP in the project file.</li> <li>• Retain copies of sampling and analyses conducted in accordance with the SWPPP in the project file.</li> <li>• Conduct construction site inspections in accordance with the SWPPP to ensure proper implementation of BMPs.</li> </ul>	Rosedale/RWD, Construction Contractor	Before and During Construction

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<p><b>HYDRO-2:</b> Prior to operation of the project, Rosedale shall develop and implement a shallow groundwater monitoring plan for purposes of protecting subsurface structures of the Cross Valley Canal (CVC). Piezometers shall be installed adjacent to the CVC at Stockdale East and the third Stockdale project site if applicable. Piezometers have already been installed at Stockdale West. The location and design of the new piezometers shall be approved by the Kern County Water Agency (KCWA). Piezometers at the Stockdale Properties shall be used to monitor groundwater levels beneath the CVC. Prior to initiating the project, a California state licensed geotechnical engineer shall conduct an analysis to determine the critical depth at which shallow groundwater would pose a threat to the stability of CVC structures. Based on this analysis, the monitoring plan shall identify depths at which monitoring frequency shall change, such as from monthly to weekly to daily, as shallow groundwater levels approach the critical depth. The monitoring plan also shall identify the depth at which project operation would cease such that the critical depth would not be reached and the conditions under which project operation could resume. The monitoring plan shall be approved by KCWA.</p>	<ul style="list-style-type: none"> <li>Retain a licensed geotechnical engineer to conduct the analysis as described and prepare the shallow groundwater monitoring plan.</li> <li>Initiate consultation with KCWA regarding the plan. Retain copies of correspondence with KCWA in the project file.</li> <li>Retain copies of the plan and KCWA approvals in the project file.</li> <li>During plan implementation, retain copies of the monitoring reports in the project file.</li> </ul>	Rosedale/RWD	Before and During Construction
<p><b>HYDRO-3:</b> If the third Stockdale project site includes a flood hazard area, then associated project facilities would be designed either: (1) to avoid development within the flood hazard area, or (2) to ensure that flood hazards or flood elevations on neighboring parcels are not significantly altered.</p>	<ul style="list-style-type: none"> <li>Include mitigation measure in project design specifications.</li> <li>Retain specifications related to flood hazards in the project file.</li> </ul>	Rosedale/RWD	Before Construction
<b>Land Use and Planning</b>			
<p><b>LU-1:</b> A General Plan Amendment may be requested from Kern County to eliminate the mid-section line setback requirements from the Stockdale properties.</p>	<ul style="list-style-type: none"> <li>Documentation of any necessary amendments shall be retained in the project file.</li> </ul>	Rosedale	Before Construction
<b>Noise</b>			
<p><b>NOISE-1:</b> To reduce temporary construction related noise impacts at the third Stockdale site, the following shall be implemented by the construction contractor:</p> <ol style="list-style-type: none"> <li>Place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site.</li> <li>Locate equipment staging in areas that will create the greatest possible distance between construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction.</li> <li>Ensure proper maintenance and working order of equipment and vehicles, and that all construction equipment is equipped with manufacturers approved mufflers and baffles.</li> <li>Install sound-control devices in all construction and impact equipment, no less effective than those provided on the original equipment.</li> </ol>	<ul style="list-style-type: none"> <li>Include mitigation measure in construction contractor specifications.</li> <li>Perform site inspections to ensure contractor is in compliance with noise mitigation measures.</li> <li>Retain copies of inspection logs in the project file.</li> </ul>	Rosedale/RWD, Construction Contractor	During Construction

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Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
<b>Traffic and Transportation</b>			
<b>TR-1:</b> For project features that require open-trench construction across roadways, the Construction Traffic Control Plan for the proposed project shall include measures that ensure Rosedale provides signage and flagging to alert motorists of pending and actual lane or road closures and detours. Such measures shall conform to the requirements of the Kern County Roads Department and any requirements of related encroachments permits.	<ul style="list-style-type: none"> <li>• Include mitigation measure in construction contractor specifications.</li> <li>• Verify that the Construction Traffic Control Plan has been prepared and approved by the applicable local jurisdiction(s).</li> <li>• Perform site inspections to routinely verify proper implementation of the approved Plan.</li> <li>• Retain copies of the Plan and inspection records in the project file.</li> </ul>	Rosedale/RWD; Construction Contractor	Before and During Construction
<b>TR-2:</b> IRWD and Rosedale shall require the construction contractor to prepare and implement a Construction Traffic Control Plan that conforms to requirements of the Kern County Roads Department, California Department of Transportation District 5, and the California Department of Transportation Manual on Uniform Traffic Control Devices and Work Area Traffic Control Handbook. The construction contractor shall obtain all necessary permits for the work within the road right-of-way or use of oversized/overweight vehicles that will utilize county maintained roads, which may require California Highway Patrol or a pilot car escort.	<ul style="list-style-type: none"> <li>• Include mitigation measure in construction contractor specifications.</li> <li>• Verify that the Construction Traffic Control Plan has been prepared and approved by the applicable local jurisdiction(s).</li> <li>• Perform site inspections to ensure contractor is in compliance with plan.</li> <li>• Retain copies of inspection logs in the project file.</li> <li>• Retain copies of necessary permits obtained for the work within the road right-of-way.</li> </ul>	Rosedale/RWD; Construction Contractor	Before and During Construction
<b>Utilities and Energy</b>			
<b>UTIL:</b> IRWD and Rosedale shall install energy efficient equipment, including pumps and motors, for operation of the proposed project.	<ul style="list-style-type: none"> <li>• Include mitigation measure in project design specifications and construction contractor specifications.</li> </ul>	Rosedale/RWD; Construction Contractor	During Construction
<b>Cumulative Impacts</b>			
<b>CUM-1:</b> The construction contractor shall consult with appropriate local agencies and jurisdictions prior to initiating ground-disturbing activities, to determine if other construction projects will occur coincidentally at the same time and in the vicinity of the proposed project, depending on project schedule. Coordination of construction activities for coincident projects shall occur to ensure impacts to noise and traffic do not compound to be cumulatively significant and to ensure compatibility of activities within construction zones. Adjustments to construction schedules and plans shall be made accordingly as necessary.	<ul style="list-style-type: none"> <li>• Include mitigation measure in construction contractor specifications.</li> <li>• Retain copies of correspondence and coordination with other agencies and jurisdictions in the project file.</li> </ul>	Construction Contractor	Before Construction

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<p><b>CUM-2:</b> Operation of the proposed project shall be conducted in accordance with the <i>Long Term Project Recovery Operations Plan Regarding Rosedale-Rio Bravo Water Storage District Projects</i> (Long Term Operations Plan). The Long Term Operations Plan requires monitoring of groundwater conditions; annual predictions of project-related groundwater declines in the area; definition of negative project impact (NPI) to neighboring wells relative to no-project conditions; triggers for implementation of mitigation measures based on NPI that affects neighboring well operation, and mitigation measures to be implemented for different categories of wells. Mitigation measures include, but are not limited to, providing compensation to lower well pumps; reducing or adjusting pumping to prevent, avoid, or eliminate the NPI, or drilling a new well.</p>	<ul style="list-style-type: none"> <li>Copies of monitoring reports and annual groundwater modeling runs shall be maintained in the project file.</li> <li>Document implementation of mitigation measures and retain in the project file.</li> </ul>	Rosedale	After Construction