Draft Initial Study & Proposed Mitigated Negative Declaration

Rosedale Ranch Improvement District

R-3 Groundwater Recharge and Banking Project

Prepared for:

Rosedale Ranch Improvement District

January 2024

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GEI Consultants

Consulting Engineers and Scientists

Draft Initial Study & Proposed Mitigated Negative Declaration

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R-3 Groundwater Recharge and Banking Project

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Project No. 2305132

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Table of Contents

List of Tables

List of Figures

List of Appendices

Abbreviations and Acronyms

AF	acre-feet
AFY	acre-feet per year
BMPs	best management practices
BPS	best performance standards
Caltrans	California Department of Transportation
CARB	California Air Resource Boards
CAAQS	California Ambient Air Quality Standards
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CGS	California Geological Survey
CH_4	methane
CDFW	California Department of Fish and Wildlife
CFGC	California Fish and Game Code
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	carbon monoxide
County	Kern County
CRHR	California Register of Historical Resources
CVRWQCB	Central Valley Regional Water Quality Control Board
CWA	Clean Water Act
dBA	a-weighted decibels
DTSC	Departement of Toxic Substances Control
District	Rosedale Ranch Improvement District
DOC	Department of Conservation
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
ESA	Federal Endangered Species Act
FKC	Friant-Kern Canal
GEI	GEI Consultants, Inc.
GHG	greenhouse gas
HCP	Habitat Conservation Plan
HFCs	Hydrofluorocarbons
IS/MND	Initial Study/Mitigated Negative Declaration

Ksat	saturated hydraulic conductivity
Leq	equivalent continuous sound level in decibels
LRA	Local Responsible Area
MCL	Maximum Contaminant Level
MLD	Most Likely Descendant
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NKWSD	North Kern Water Storge District
NO_2	nitrogen dioxide
N_2O	nitrous dioxide
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
O_3	ozone
PFCs	Perfluorocarbons
PG&E	Pacific Gas and Electric
PM	particulate matter
PM_{10}	particulate matter less than 10 microns in diameter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
PRC	Public Resources Code
proposed Project	R-3 Groundwater Recharge and Banking Project
Reclamation	U.S. Bureau of Reclamation
RRID	Rosedale Ranch Improvement District
RPA	registered professional archaeologist
SAGBI	Soil Agricultural Groundwater Banking Index
SF6	sulfur hexafluoride
SGMA	Sustainable Groundwater Management Act
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District
SSJVIC	South San Joaquin Valley Information Center
SO_2	sulfur dioxide
SMARA	Surface Mining and Reclamation Act of 1975
SPAL	Small Project Analysis Level
SR	State Route
State Water Board	State Water Resource Control Board
SSURGO	Soil Survey Geographic Database
SWP	State Water Project

SWPPP	Stormwater Pollution Prevention Plan
TCP	1,2,3-Trichloropropane
UCD	University of California, Davis
USFWS	U.S. Fish and Wildlife Service

1.0 Introduction

The Rosedale Ranch Improvement District (RRID, District, Rosedale Ranch) has prepared this Initial Study/proposed Mitigated Negative Declaration (IS/MND) in compliance with the California Environmental Quality Act (CEQA) (Public Resources Code 21000–21189) and CEQA Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000–15387) to address the potentially significant environmental impacts of the proposed R-3 Groundwater Recharge Project (proposed Project or Project) in Kern County, California (County). The District is the lead agency under CEQA.

After the required public review of this document is complete, the District's Board of Directors will consider all IS/MND comments received, the entirety of the administrative record for the Project, whether or not to adopt the proposed MND and a Mitigation Monitoring and Reporting Program, and whether or not to approve the proposed Project.

1.1 Summary of Findings

Chapter 3 of this document contains the analysis and discussion of potential environmental impacts of the proposed Project. Based on the issues evaluated in that chapter, it was determined that the proposed Project would result in no impacts on the following issue areas:

- Land Use and Planning
- Population and Housing
- Public Services
- Recreation
- Transportation
- Tribal Cultural Resources
- Wildfire

The proposed Project would result in less than significant impacts on the following issue areas:

- Aesthetics
- Agriculture and Forestry Resources
- Energy
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Mineral Resources
- Noise
- Utilities and Service System

The proposed Project would result in less than significant impacts *after* mitigation implementation on the following issue areas:

- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Hydrology and Water Quality

1.2 Other Key Public Agencies Relying on this IS/MND

CEQA requires that state and local governmental agencies consider the environmental effects of projects over which they have discretionary authority before taking action on those projects (Public Resources Code [PRC] Section 21000 et seq.). CEQA also requires that each lead agency avoid or mitigate to less than significant levels, wherever feasible, the significant environmental effects of projects it approves or implements. There are no other key public agencies relying on this IS/MND.

1.3 Document Organization

This document contains the information required under CEQA:

Chapter 1, Introduction. This chapter describes the purpose of the IS/MND, summarizes findings, and describes the organization of this IS/MND.

Chapter 2, Project Description. This chapter describes the Project location and background, Project need and objectives, Project characteristics, construction activities, Project operations, and discretionary actions and approvals that may be required.

Chapter 3, Environmental Checklist This chapter includes a proposed MND which briefly summarizes the proposed Project, summarizes the environmental conclusions, and identifies that mitigation measures would be implemented in conjunction with the proposed Project. Chapter 3 also presents an analysis of environmental issues identified in the CEQA environmental checklist and determines whether Project implementation would result in no impact, less than significant impact, less than significant impact with mitigation incorporated, potentially significant impact, or significant impact on the physical environment in each topic area. Should any impacts be determined to be potentially significant or significant, an Environmental Impact Report (EIR) would be required. For this proposed Project, however, mitigation measures have been incorporated as needed to reduce all potentially significant and significant impacts to a less than significant level.

Chapter 4, References. This chapter lists the references used to prepare this IS/MND.

Chapter 5, Report Preparers. This chapter identifies report preparers who contributed to the preparation of this document.

2.0 Project Description

2.1 Project Background

Rosedale Ranch Improvement District (RRID, Rosedale Ranch, District), located in the southern portion of California's San Joaquin Valley, proposes to construct and operate an approximately 110-acre groundwater recharge facility north of Kratzmeyer Road and east of Mendota Street (**Figures 2-1 and 2-2**). The R-3 Groundwater Recharge and Banking Project (proposed Project or Project) will provide the District with operational flexibility to utilize available surface water supplies for recharge during wet years for utilization in dry years. The facility will be connected to the District's existing conveyance system.

RRID consists of a total of 9,500 acres, with most of its area located south of 7th Standard Road. This area was originally annexed into North Kern Water Storage District (NKWSD) in 1966, but the annexation did not extend to lands within RRID any rights to NKWSD's surface water supplies. Groundwater is the principle source of water for meeting irrigation demands within RRID. Subsequently, an irrigation distribution system was built to serve all developed land. In 1980, these lands were organized as an Improvement District, with one of its purposes to contract for water supplies to be distributed to the lands within RRID for either irrigation or for groundwater recharge. The Improvement District acquired a system of a canal-based irrigation distribution system capable of serving the developed land (within the Improvement District) with supplemental surface water supplies from NKWSD when available, thereby facilitating occasional in-lieu recharge and conjunctive-use operations.

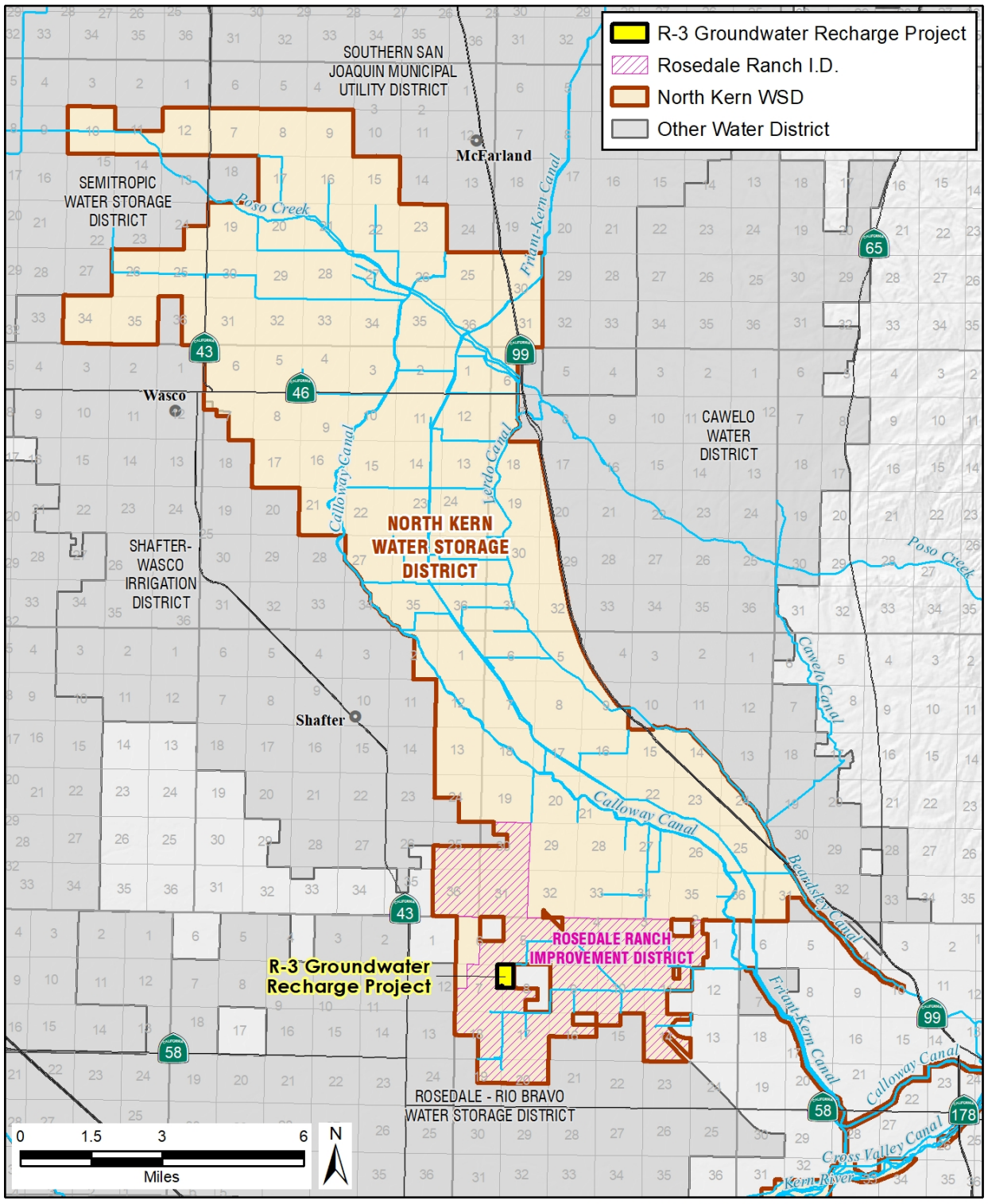
Lands currently included within the boundaries of RRID total approximately 9,500 assessable acres, most of which are developed to irrigated agriculture. Based on Department of Water Resources surveys, total irrigated acreage in RRID is approximately 7,600 acres in 2014, with a little more than 5,000 acres in permanent crops (mostly nuts). Based on the District's 2014 land use survey, cropped acreage was distributed among the following six general crop categories: 69 percent deciduous, 1 percent field, 4 percent grain, 16 percent truck crops (i.e., crops that are grown on small plots of land and sold directly to consumers), and 10 percent vineyard.

Irrigated agriculture in the Rosedale Ranch area relies on pumped groundwater, which has been supplemented from time to time with surface water including the Kern River, flood water conveyed from the Friant-Kern Canal (FKC), or other imported water. The District's average historical groundwater use is 20,700 acre-feet (AF) and the net use considering the importation of surface supplies is 15,400 AF.

2.2 Project Objectives

The Project's objective is to increase conjunctive management in north-central Kern County by expanding the area's ability to accept surface water for groundwater recharge during periods when surface water is available. The Project would benefit groundwater users by improving groundwater management and quality. Water supply and energy savings would result from a general increase in groundwater elevations in the project area. The Project would be operated to provide a long-term benefit to the basin and aid in regional compliance with the Sustainable Groundwater Management Act (SGMA).

Figure 2-1. Rosedale Ranch Improvement District and Proposed Project Location.



Source: GEI 2024

Figure 2-2. Project Area

Source: GEI 2024

2.3 Project Construction

2.3.1 Construction Methodology

Because the recharge facility was identified as a favorable location for groundwater recharge activities in wet periods for later recovery during drought, the District will acquire two parcels (Assessor Parcel Numbers 463-030-28 and 463-030-29) which total approximately 118 acres. The site selection is based a parcel assessment examined in a 2020 Recharge Feasibility Study. The parcels were identified as a favorable location for groundwater recharge activities due to high infiltration soil rates and close proximity to the District's existing conveyance system. Within these two parcels, the District will convert approximately 110 acres of land into recharge ponds; the remaining 8 acres, which include the R-3 Canal and structures along Kratzmeyer Road, will not be impacted.

The total Project area, including the construction footprint and equipment staging, will occur within the 110-acre site. The proposed groundwater recharge basin will consist of five ponds with earthen berms to direct the flow of water onto the site and facilitate even spreading. Interior ditches and channels will also be used to provide energy dissipation throughout the interior of the recharge basin. Earthen exterior levees will be constructed around the perimeter of the site. Earthwork will be designed so that the cut and fill quantities are balanced to minimize the importation of material and reduce the amount of soil stockpiled.

The ponds will be excavated to a depth of up to 5 feet below ground surface elevation and the earthen berms constructed to a height of up to 4 feet above original ground elevation. The exterior levees will be constructed to approximately 20 feet wide and 0.5 to 4 feet above natural grade, with interior slopes of 5:1 and outside slopes of 2:1. By using a balanced cut-and-fill approach, the District will not need to export soils. The total area of excavation is approximately 93.5 acre and volume of excavation is approximately 754,235 cubic yards. The District will not be required to import material. A fence surrounding the recharge ponds may be installed to protect the site from vandalism.

2.3.2 Construction Schedule and Staging Areas

The Project is expected to be constructed between June 2024 and June 2025, with the exact construction start date dependent on funding from U.S. Bureau of Reclamation (Reclamation)[1] and the District's operations and growers that are affected by the construction. Construction activities will require approximately 110 workdays. Project construction activities will occur between 7 AM and 5 PM, Monday through Friday, with no work scheduled on weekends or holidays. Equipment maintenance activities will be performed during normal working hours. All staging will occur within the 110-acre site.

[1] RRID applied for funding from Reclamation through the WaterSMART Drought Response Program which is pending. If approved, Reclamation will require compliance with federal environmental regulations, including the Endangered Species Act, National Historic Preservation Act, and National Environmental Policy Act.

2.3.3 Construction Equipment and Workers

Construction vehicles are anticipated to include excavators, a loader, a backhoe, three to four scrapers, a soil compactor tractor with sheepsfoot roller, one to two water trucks, a motor grader, a dozer, and material haul trucks. The Project will require approximately 6 workers for construction of the ditches/channel and approximately 8 workers for construction of the ponds and berms/levees.

2.4 Project Operation and Maintenance Activities

Maximum recharge estimates, based on a full-year operation schedule, would average 3,564 acre feet per year (AFY) [2]. In dry years, recharge will be less, or potentially zero. Water from existing District sources (i.e., FKC, Kern River and State Water Project [SWP] flood flows) would be delivered to the recharge ponds via existing conveyances. Project operations would be limited to recharge only. No recovery of recharged groundwater will take place onsite. The Project will operate by the "golden rule" – the Project will not create conditions that are worse than conditions in the absence of the Project. The timing of recharge will be dependent on the availability of water supplies.

2.5 Regulatory Requirements, Permits, and Approval

As the lead agency under CEQA, the District has the principal responsibility for approving and carrying out the proposed Project and for ensuring that CEQA requirements and all other applicable regulations are met. Other agencies that may have permitting approval or review authority over portions of the proposed Project are listed below:

- **Central Valley Regional Water Quality Control Board (CVRWQCB), Construction Activities General Permit.** Required for any Project that disturbs more than 1 acre of soil. The proposed Project would temporarily disturb 110 acres of land in Kern County. Under this permit, the District would need to develop a Stormwater Pollution Prevention Plan (SWPPP) and submit a Notice of Intent.

- **San Joaquin Valley Air Pollution Control Board (SJVAPCD), Dust Control Prevention Plan.** Required for any Project that disturbs more than 1 acre of soil.

[2] The total Project yield to the District is estimated to be 3,564 AFY of water recharged (110 acres * 90% effective acreage * 0.5 ft/day *30 days/month *6 months of recharge * 4/10 years frequency of wet years).

3.0 Environmental Checklist

Proposed Mitigated Negative Declaration

Project Information

Table 3-1. Project Information.

Title	Description
#1. Project title:	R-3 Groundwater Recharge Project
#2. Lead agency name and address:	Rosedale Ranch Improvement District
#3. Contact person and phone number:	Mr. David Hampton (661) 393-2696
#4. Project location:	33380 Cawelo Avenue, Bakersfield, CA 93308
#5. Project sponsor's name and address:	Same as lead agency
#6. General plan designation:	Exclusive Agriculture
#7. Zoning:	Exclusive Agriculture
#8. Description of Project: (Describe the whole action involved, including but not limited to later phases of the Project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)	The proposed Project consists of constructing and operating five groundwater recharge ponds on a 110-acre site along the R-3 Canal for a maximum recharge of 3,564 acre feet per year.
#9. Surrounding land uses and setting: Briefly describe the Project's surroundings:	The Project is located in an area of unincorporated Kern County which is dominated by agricultural production. The City of Bakersfield is located approximately 3.3 miles east of the Project site.
#10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.)	Central Valley Regional Water Quality Control Board and San Joaquin Valley Air Pollution Control District
#11. Have California Native American tribes traditionally and culturally affiliated with the Project area requested consultation pursuant to Public Resources Code (PRC) Section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?	No, Tribes have not requested to be notified by RRID for projects subject to CEQA.

Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and Project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (*See* PRC Section 21080.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per PRC Section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. **Please also note** that PRC Section 21082.3(c) contains provisions specific to confidentiality.

Environmental Factors Potentially Affected

No environmental resources were found to have "potentially significant impacts." The environmental factors listed as "Yes" in **Table 3-2** would be potentially affected by this Project, involving at least one impact that has "Less than Significant Impacts with Mitigation Incorporated" as indicated by the checklist on the following pages.

Table 3-2. Environmental Resources with Potentially Significant Impacts Prior to Mitigation.[3]

Environmental Resources	Yes or No?
Aesthetics	No
Agriculture and Forestry Resources	No
Air Quality	**Yes**
Biological Resources	**Yes**
Cultural Resources	**Yes**
Energy	No
Geology/Soils	**Yes**
Greenhouse Gas Emissions	No
Hazards and Hazardous Materials	No
Hydrology/Water Quality	**Yes**
Land Use/Planning	No
Mineral Resources	No
Noise	No
Population/Housing	No
Public Services	No
Recreation	No
Transportation	No
Tribal Cultural Resources	No
Utilities/Service Systems	No
Wildfire	No
Mandatory Findings of Significance	No

[3] Impacts to all resources are reduced to less than significant with the incorporation of mitigation measures.

Determination (To be completed by the Lead Agency)

On the basis of this initial evaluation:	**Yes or No?**
I find that the proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.	No
I find that although the proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the Project have been made by or agreed to by the Project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.	**Yes**
I find that the proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.	No
I find that the proposed 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.	No
I find that although the proposed Project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier Environmental Impact Report (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 proposed Project, nothing further is required.	No

Signature

1/23/2024
Date

Dave Hampton
Print Name

General Manager
Title

Rosedale Ranch Improvement District
Agency

3.1 Aesthetics

#1. AESTHETICS. Except as provided in PRC Section 21099. **Would the Project?**	**Have Potentially Significant Impact?**	**Have Less Than Significant Impact with Mitigation Incorporated?**	**Have Less Than Significant Impact?**	**Have No Impact?**	**Have Beneficial Impact?**
#1 -a. Have a substantial adverse effect on a scenic vista?	No.	No.	No.	Yes.	No.
#1 -b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	No.	No.	No.	Yes.	No.
#1 -c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point.) If the Project is in an urbanized area, would the Project conflict with applicable zoning and other regulations governing scenic quality?	No.	No.	Yes.	No.	No.
#1 -d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	No.	No.	No.	Yes.	No.

3.1.1 Environmental Setting

The Project is located east of Interstate 5, in Kern County. The landscape at the Project site is relatively flat, with open agricultural fields and orchards characteristic of Central Valley farmlands dominating the landscape (*see* **Appendix A** for photos of the Project area). Background views to the south consist of traffic along Kratzmeyer Road, which runs adjacent to the Project site. Additionally, agricultural production can be seen from the Project site as agriculture is the dominate land use in Kern County.

Elements of the built environment (e.g., dirt roads) and water management infrastructure, which are characteristic of many areas of the Central Valley, are present onsite. The R-3 Canal is located just east of the Project site.

There are no designated scenic vistas located in the vicinity of the proposed Project. Additionally, there are no state- or County-designated scenic highways in the Project vicinity (California Department of Transportation [Caltrans] 2019a, 2019b). The nearest designated scenic highways are State Route (SR) 58 (near Mojave) and SR 395 (near Little Lake), both of

which are located approximately 60 miles from the Project site. The Project site is zoned as letter "A" (signifying exclusive agriculture) (Kern County 2021).

3.1.2 Discussion

#1 -a and b. Have a substantial adverse effect on a scenic vista? Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?

There are no significant view-sheds, scenic vistas, or scenic highways located in the vicinity of the proposed Project (Caltrans 2019a, 2019b). There would be **no impact**.

#1 -c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point.) If the Project is in an urbanized area, would the Project conflict with applicable zoning and other regulations governing scenic quality?

During construction, several vehicles and equipment would be onsite which is similar to normal agricultural operations and water infrastructure equipment common to the area. The proposed Project would not impact the adjacent agricultural land. Although the berms would be constructed up to 4 feet above original grade, the proposed Project would not degrade the existing visual character or quality of public views as recharge ponds are commonplace in the Central Valley. All pipeline connections would either be buried underground or exposed for a few feet to allow for the tie-in to the existing water infrastructure. Therefore, the Project would result in a **less than significant** impact.

#1 -d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

The Project would not change the existing views, nor would it create new sources of light. There would be **no impact**.

3.2 Agriculture and Forestry Resources

#2. AGRICULTURE AND FORESTRY RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997, as updated) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the State's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. **Would the Project?**	**Have Potentially Significant Impact?**	**Have Less Than Significant Impact with Mitigation Incorporated?**	**Have Less Than Significant Impact?**	**Have No Impact?**	**Have Beneficial Impact?**
#2 -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?	No.	No.	**Yes.**	No.	No.
#2 -b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	No.	No.	**Yes.**	No.	No.
#2 -c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in PRC Section 12220(g)), timberland (as defined by PRC Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	No.	No.	No.	**Yes.**	No.
#2 -d. Result in the loss of forest land or conversion of forest land to non-forest use?	No.	No.	No.	**Yes.**	No.
#2 -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?	No.	No.	**Yes.**	No.	No.

3.2.1 Environmental Setting

The Project site is designated as exclusive agriculture (Kern County 2021). The Project site is designated as prime farmland (Department of Conservation [DOC] 2018). The Project site is not subject to a Williamson Act contract (Kern County 2010).

3.2.2 Discussion

#2 -a and b. 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? Conflict with existing zoning for agricultural use, or a Williamson Act contract?

RRID would construct and operate a groundwater recharge pond, pump station, and water storage tank on the parcel, which would not be farmed during project implementation. The purpose of the proposed project is to improve water supply for agricultural water users, which is a benefit to agriculture. Water storage or groundwater recharge facilities are permitted uses in Kern County's Code of Ordinances 19.12.020 Permitted Uses Exclusive Agriculture (A) District. During project implementation, the parcel would continue to be mapped as prime farmland. Therefore, this impact would be **less than significant**.

#2 -c and d. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by PRC Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))? Result in the loss of forest land or conversion of forest land to non-forest use?

The Project site is not zoned as forest land, timberland, or timberland zoned as timberland production, therefore, no loss or conversion of forest land to non-forest land would result from the proposed Project. There would be **no impact**.

#2 -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?

Kern County, like the rest of California, is subject to hydrological changes as a result of climate change, including short- and long-term droughts. The groundwater recharge pond would be supplied with water from existing RRID sources but only during "wet" years when surface water supplies are adequate. RRID anticipates years in which water would not be delivered to the groundwater recharge pond because of inadequate water supplies; however, these instances would not result in a conversion of farmland to non-agricultural uses. The Project site is not zoned as forest land. Therefore, this impact would be **less than significant**.

3.3 Air Quality

#3. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied on to make the following determinations. **Would the Project?**	**Have Potentially Significant Impact?**	**Have Less Than Significant Impact with Mitigation Incorporated?**	**Have Less Than Significant Impact?**	**Have No Impact?**	**Have Beneficial Impact?**
#3 -a. Conflict with or obstruct implementation of the applicable air quality plan?	No.	Yes.	No.	No.	No.
#3 -b. 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?	No.	Yes.	No.	No.	No.
#3 -c. Expose sensitive receptors to substantial pollutant concentrations?	No.	Yes.	No.	No.	No.
#3 -d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	No.	No.	Yes.	No.	No.

3.3.1 Environmental Setting

The proposed Project is located in the San Joaquin Valley Air Basin (SJVAB) within Kern County. The SJVAPCD is responsible for obtaining and maintaining air quality conditions in the County.

The federal Clean Air Act and California Clean Air Act required the U.S. Environmental Protection Agency (EPA) and California Air Resource Boards (CARB) to establish health-based air quality standards at the federal and state levels. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) were established for the following criteria pollutants: carbon monoxide (CO), ozone (O_3), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), particulate matter less than 10 microns in diameter (PM_{10}), particulate matter less than 2.5 microns in diameter ($PM_{2.5}$), and lead. Areas of the state are designated as attainment, nonattainment, maintenance, or unclassified for the various pollutant standards according to the federal Clean Air Act and California Clean Air Act.

An “attainment” designation for an area signifies that pollutant concentrations did not violate the NAAQS or CAAQS for that pollutant in that area. A “nonattainment” designation indicates that a pollutant concentration violated the standard at least once, excluding those occasions when a violation was caused by an exceptional event, as identified in the criteria. A “maintenance” designation indicated that the area previously categorized as nonattainment is currently categorized as attainment for the applicable pollutant; though the area must demonstrate continued attainment for a specific number of years before it can be re-designated as an

attainment area. An "unclassified" designation signifies that data does not support either an attainment or a nonattainment status. The EPA established NAAQS in 1971 for six air pollution constituents. States have the option to add other pollutants, to require more stringent compliance, or to include different exposure periods. CAAQS and NAAQS are listed in **Table 3-3**.

Table 3-3. Federal and California Ambient Air Quality Standards and Attainment Status.

Pollutant	Averaging Time	California Standards Concentration	Federal Primary Standards Concentration
Ozone (O_3)	8-hour	0.070 parts per million. (137 micrograms per cubic meter)	0.070 parts per million (137 micrograms per cubic meter) (*see* Note #1)
	1-hour	0.09 parts per million. (180 micrograms per cubic meter)	(None; *see* Note #2)
Respirable Particulate Matter (PM_{10})	24-hour	50 micrograms per cubic meter	150 micrograms per cubic meter
	Annual Arithmetic Mean	20 micrograms per cubic meter	(None)
Fine Particulate Matter ($PM_{2.5}$)	24-hour	(None)	35 micrograms per cubic meter
	Annual Average	12 micrograms per cubic meters	12 micrograms per cubic meter
Carbon Monoxide	8-hour	9 parts per million (10 milligrams per cubic meter)	9 parts per million (10 milligrams per cubic meter)
	1-hour	20 parts per million (23 milligrams per cubic meter)	35 parts per million (40 micrograms per cubic meter)
Nitrogen Dioxide	Annual Average	0.03 parts per million (57 micrograms per cubic meters)	0.053 parts per million (100 micrograms per cubic meters)
	1-hour	0.18 parts per million (339 micrograms per cubic meters)	0.100 parts per million (188 micrograms per cubic meters)
Lead	30-day Average	1.5 micrograms per cubic meters	(None)
	Rolling 3-Month Average	(None)	0.15 micrograms per cubic meter
	Quarterly Average	(None)	1.5 micrograms per cubic meter
Sulfur Dioxide	24-hour	0.04 parts per million (105 micrograms per cubic meter)	0.14 parts per million (for certain areas)
	3-hour	(None)	(None)
	1-hour	0.25 parts per million (655 micrograms per cubic meter)	0.075 parts per million (196 micrograms per cubic meter)
Sulfates	24-hour	25 micrograms per cubic meter	No federal standard

Pollutant	Averaging Time	California Standards Concentration	Federal Primary Standards Concentration
Hydrogen Sulfide	1-hour	0.03 parts per million (42 micrograms per cubic meter)	No federal standard
Vinyl Chloride	24-hour	0.01 parts per million (26 micrograms per cubic meter)	No federal standard

Notes:

#1. On October 1, 2015, the national 8-hour ozone (O_3) primary and secondary standards were lowered from 0.075 to 0.070 parts per million.

#2. 1-Hour ozone standard revoked effective June 15, 2005, although some areas have continuing obligations under that standard.

Source: C.A.R.B. 2016

Under the NAAQS, the County is designated as nonattainment for 8-hour O_3, and $PM_{2.5}$, and attainment/unclassified for PM_{10}, CO, NO_2, SO_2, lead, and sulfates (CARB 2018). Under CAAQS, the County is designated unclassified for all criteria pollutants (CARB 2018).

The area's air quality monitoring network provides information on ambient concentrations of air pollutants in the SJVAB. SJVAPCD operates several monitoring stations in Kern County, air quality data was obtained from the Bakersfield-California Avenue station. **Table 3-4** compares a 5-year summary of the highest annual criteria air pollutant emissions collected at this station with applicable CAAQS, which are more stringent than the corresponding NAAQS Due to the regional nature of these pollutants, O_3, $PM_{2.5}$, and PM_{10} are expected to be representative of the Project site. As indicated in Table 3-4, O_3, $PM_{2.5}$, and PM_{10} standards have been exceeded over the past 5 years.

Table 3-4. Ambient Air Quality Monitoring Data Measured at the Bakersfield-California Avenue Monitoring Station.

Pollutant Standards, 1-Hour Ozone (O_3)	2015	2016	2017	2018	2019
Maximum 1-hour concentration (parts per million)	0.104*	0.092*	0.122*	0.107*	0.097*
Days Exceeding[a] CAAQS 1-hour (>0.09 parts per million)	6	0	11	8	2
Pollutant Standards, 8-Hour Ozone (O_3)	**2015**	**2016**	**2017**	**2018**	**2019**
National maximum 8-hour concentration (parts per million).	0.096*	0.085*	0.104*	0.098*	0.088*
State max. 8-hour concentration (parts per million).	0.097*	0.086*	0.104*	0.098*	0.088*
Days Exceeding[a] NAAQS 8-hour. (>0.075 parts per million.) (See note #1.)	28	30	47	34	11
Days Exceeding[a] CAAQS 8-hour. (>0.070 parts per million.) (See note #1.)	54	63	87	64	28
Pollutant Standards, Particulate Matter (PM_{10})	**2015**	**2016**	**2017**	**2018**	**2019**
National max. 24-hour concentration (micrograms per cubic meter).	104.7	90.9	138.0	136.1	116.3
State max. 24-hour concentration (micrograms per cubic meter).	103.6*	92.2*	143.6*	142.0*	125.9*
State max. 3-year average concentration (micrograms per cubic meter).	44	44	44	43	43
State annual average concentration (micrograms per cubic meter).	44.1	40.9	42.6	-	39.0
Days Exceedinga NAAQS 24-hour (>150 micrograms per cubic meter).	0	0	0	0	0
Days Exceedinga CAAQS 24-hour (>50 micrograms per cubic meter).	121.4	121.4	98.7	-	108.1
Pollutant Standards, Particulate Matter ($PM_{2.5}$)	**2015**	**2016**	**2017**	**2018**	**2019**
National max. 24-hour concentration (micrograms per cubic meter).	107.9*	66.4*	101.8*	98.5*	59.1*
State max. 24-hour concentration (micrograms per cubic meter).	111.9	66.4	101.8	98.5	59.1
State annual average concentration (micrograms per cubic meter).	16.6*	15.9*	15.9*	15.6*	11.4
Days Exceeding NAAQS 24-hour (>35 micrograms per cubic meter).	32.3	25.5	30.2	40.3	12.3

Notes:

* = Values in excess of applicable standard.

- =There was insufficient (or no) data available to determine the value.

2018 is the latest year of data available as of preparation of this Chapter.

#1. An exceedance is not necessarily a violation.

Sources: CARB 2020.

3.3.2 Discussion

#3 -a and b. Conflict with or obstruct implementation of the applicable air quality plan? 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?

The proposed Project would generate criteria pollutants from the use of diesel-powered vehicles and equipment, and earthmoving activities. Construction of the proposed Project would require approximately 50 round trips to drop off all required material and equipment to the Project sites. Up to an additional 1,540 truck trips, or 14 trips per day, would be required for workers commuting to the Project site during construction. Therefore, up to a total of 1,590 trips would be required to construct the proposed Project. RRID assumes that one vehicle trip per week (2,600 total trips) would be required for operation of the groundwater storage pond, assuming a 50-year lifespan.

To streamline the process of assessing significance of criteria pollutant emissions from common construction projects, SJVAPCD has developed a screening tool, the Small Project Analysis Level (SPAL) to assist in determining if constructing a project in the County would exceed the construction significance threshold for criteria pollutants. The tool uses project type and size, and SJVAPCD. pre-quantified emissions to determine a size below which it is reasonable to conclude that a project would not exceed applicable thresholds of significance for criteria pollutants (SJVAPCD 2017). Construction of a project that does not exceed the screening level are considered to have a less than significant impact on air quality (**Table 3-5**). The proposed project would result in a *total* of 2,080 trips (construction and operation) and is significantly lower than the SPAL threshold, which is measured by *trips per day*.

Table 3-5. Small Project Analysis Level by Vehicle Trips.

Land Use Category	Project Size
Residential Housing	1,453 trips per day
Commercial	1,673 trips per day
Office	1,628 trips per day
Institutional	1,707 trips per day
Industrial	1,506 trips per day

Source: SJAPCD 2017

However, since the project would disturb more than 1 acre, the District would need to acquire the following permits: NPDES construction general permit (Order 2009-0009 DWQ as amended by Order 2012-0006-DWQ) and Dust Control Prevention Plan. The project would comply with all best management practices (BMPs) outlined in the above-mentioned permits. The project would also comply with all SJVAPCD rules and regulations. SJVAPCD Regulation VIII implements measures to reduce ambient concentrations of PM_{10} and oxides of nitrogen (NO_x).

However, since the Project would disturb more than 1 acre, RRID is required to prepare a SWPPP under the NPDES Construction General Permit (Order 2009-0009 DWQ as amended by Order 2012-0006-DWQ) and Dust Control Prevention Plan. The Project would comply with all BMPs outlined in the above-mentioned permits. The Project would also comply with all SJVAPCD rules and regulations. SJVAPCD Regulation VIII implements measures to reduce ambient concentrations of PM_{10} and oxides of nitrogen ($NO_{x)}$.

Therefore, this impact would be **potentially significant**. The following mitigation measures have been identified to address this impact:

Mitigation Measure AQ-1: District Regulation VIII Fugitive PM_{10} Prohibitions Best Management Practices

All projects are subject to SJVAPCD rules and regulations in effect at the time of construction. Control of fugitive dust is required by SJVAPCD Regulation VIII. RRID shall implement or require its contractor to implement all of the following measures as identified by SJVAPCD:

- Apply water to unpaved surfaces and areas
- Use non-toxic chemical or organic dust suppressants on unpaved roads and traffic areas
- Limit or reduce vehicle speed on unpaved roads and traffic areas
- Maintain areas in a stabilized condition by restricting vehicle access
- Install wind barriers
- During high winds, cease outdoor activities that disturb the soil
- Keep bulk materials sufficiently wet when handling
- Store and hand material in a three-sided structure
- When storing bulk material, apply water to the surface or cover the stage pile with a tarp
- Don’t overload haul trucks. Overlanded trucks are likely to spill bulk materials
- Cover haul trucks with a tarp or other suitable cover. Or, wet the top of the load enough to limit visible dust emissions
- Clean the interior of cargo compartments on emptied haul trucks prior to leaving the site
- Prevent track-out by installing a track-out control device
- Clean up track-out at least once a day. If along a busy road or highway, clean up track-out immediately
- Monitor dust-generating actives and implement appropriate measures for maximum dust control

With preparation and implementation of Mitigation Measure AQ-1, NPDES Construction General Permit and Dust Control Prevention Plan, this impact would be **less than significant after mitigation**.

#3 -c. Expose sensitive receptors to substantial pollutant concentrations?

Some members of the population are especially sensitive to emissions of air pollutants and should be given special consideration during the evaluation of the Project air quality impacts. These people include children, senior citizens, and persons with pre-existing respiratory or cardiovascular illnesses, and athletes and other who engage in frequent exercise, especially outdoors. Sensitive receptors include schools, residences, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. The Project sites are in a predominately agricultural area. The Project site is not located in the vicinity of any sensitive receptors. The closest sensitive receptors would be the residences located on the north side of SR 58, approximately 0.80 miles east of the Project on Kratzmeyer Road.

During construction, most of the particulate matter (PM) emissions would be released in the form of fugitive dust during ground disturbance activities. PM emissions would also be generated in the form of equipment exhaust and re-entrained road dust from vehicle travel. Construction impacts from PM emissions would be temporary. Operation of the groundwater recharge pond would suppress PM emissions. Given the short-term emissions, distance from sensitive receptors, and incorporation of Mitigation Measure AQ-1, impacts would be **less than significant**.

#3 -d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Human response to odors is subjective, and sensitivity to odor varies from person to person. Typically, odors are considered an annoyance rather than a health hazard; however, a person's response to odor can range from psychological (e.g., irrigation, anger, anxiety) to physiological (e.g., circulatory and respiration reaction, nausea, headaches). During construction, the project would generate odor from the use of diesel fuels, though this would be short-term and nearly a mile to the nearest sensitive receptors. During operations, the project would not produce odors. Potential odor effects would be **less than significant**.

3.4 Biological Resources

#4. BIOLOGICAL RESOURCES. Would the Project?	Have Potentially Significant Impact?	Have Less Than Significant Impact with Mitigation Incorporated?	Have Less Than Significant Impact?	Have No Impact?	Have Beneficial Impact?
#4 -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 (CDFW) or U.S. Fish and Wildlife Service (USFWS)?	No.	Yes.	No.	No.	No.
#4 -b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the CDFW or USFWS?	No.	No.	No.	Yes.	No.
#4 -c. Have a substantial adverse effect on State or Federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	No..	No.	Yes.	No.	No.
#4 -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?	No.	No.	Yes.	No.	No.
#4 -e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	No.	No.	No.	Yes.	No.
#4 -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?	No.	No.	No.	Yes.	No.

3.4.1 Environmental Setting

Information presented in this environmental setting is based on review of biological resource databases and publications, observations made during a field survey conducted by a GEI Consultants, Inc. biologist on October 27, 2023, and information gathered for previous District projects in the vicinity of the proposed Project.

Habitat and Land Cover Types

The Project site is entirely composed of agricultural fields that were most recently cultivated in field/row crops. The fields were fallow at the time of the field survey but most of the site had been recently tilled. The adjacent parcels are also agricultural land (row/field crops and almond orchard) and associated infrastructure, including an equipment shed, roadways, and irrigation canals/ditches and tailwater basins. The adjacent agricultural lands are actively cultivated or maintained, and the road shoulders and equipment area are compacted and barren. The equipment area supports one tall Eucalyptus tree and one smaller ornamental tree. Natural habitat is absent from the Project site and vicinity.

Vegetation is generally absent from the Project site, but occasional scattered ruderal grasses and forbs occur at low density in the western portion of uncultivated field, such as tumbleweed (*Amaranthus albus*), common purslane (*Portulaca oleracea*), and Russian thistle (*Salsola tragus*). Ruderal vegetation also occurs along the R-3 Canal immediately east of the site, including variable flatsedge (*Cyperus difformis*), barnyard grass (*Echinochloa crus-galli*), common spikerush (*Eleocharis palustris*), horseweed (*Erigeron bonariensis*), and sprangletop (*Leptochloa panicea*). Water was absent from the R-3 Canal and the larger parallel agricultural canal east of the Project site during the October 2023 survey.

Sensitive Biological Resources

Sensitive biological resources addressed in this section include those that are afforded consideration or protection under CEQA, California Fish and Game Code (CFGC), California Endangered Species Act (CESA), Federal Endangered Species Act (ESA), the Clean Water Act (CWA), and Porter-Cologne Water Quality Control Act (Porter-Cologne Act).

Special-status Species

For purposes of this analysis, special-status species include plants and animals in one or more of the following categories:

- taxa (i.e., taxonomic categories or groups) officially listed, candidates for listing, or proposed for listing under ESA or CESA as endangered, threatened, or rare
- taxa that meet the criteria for listing, even if not currently included on any list, as described in State CEQA Guidelines California Code of Regulations Section 15380
- wildlife identified by CDFW as species of special concern
- species listed as Fully Protected under the CFGC

- plant taxa considered by CDFW to be "rare, threatened, or endangered in California (i.e., List 1B and 2B plants)

The California Natural Diversity Database (CNDDB) (CDFW 2023) and online Inventory of Rare and Endangered Vascular Plants of California (California Native Plant Society [CNPS] 2023) were reviewed for information on special-status plants and animals that have been documented in the project vicinity. These reviews included the Rosedale, Famosa, Gosford, North of Oildale, Oildale, Rio Bravo, Stevens, Tupman, and Wasco U.S. Geologic Survey 7.5-minute quadrangles. A list of resources under USFWS jurisdiction that could occur in the project vicinity was obtained from the Information for Planning and Conservation website (USFWS 2023). Database search results and the USFWS species list are provided in Appendix B, "Biological Database Information."

Plants

Special-status plants included in the USFWS species list, CNDDB, and/or online Inventory of Rare and Endangered Vascular Plants of California search results were evaluated for their potential to occur on the Project. All these species are restricted to scrub, grassland, or wetland habitat types that do not occur on the Project site. Therefore, based on observations made during the field surveys, no special-status plants have potential to occur on or adjacent to the Project, because no suitable habitat for them is present.

Wildlife

Special-status wildlife taxa included in the CNDDB search results and/or on the USFWS species list were evaluated for potential to occur on or adjacent to the Project site. As with the special-status plants, most of these species were determined to have no potential to occur because of restricted distribution and/or lack of suitable habitat. For example, the Project is outside the current distribution of giant garter snake (*Thamnophis gigas*), LeConte's thrasher (*Toxostoma lecontei*), least bell's vireo (*Vireo belli pusillus*), giant kangaroo rat (*Dipodomys ingens*), and Buena Vista Lake ornate shrew (*Sorex ornatus relictus*). In addition, seasonal wetland habitat required by vernal pool fairy shrimp (*Branchinecta lynchi*) and western spadefoot (*Spea hammondii*) and native scrub and grassland habitats required by Bakersfield legless lizard (*Anniella grinnelli*), California glossy snake (*Arizona elegans occidentalis*), blunt-nosed leopard lizard (*Gambelia silus*), San Joaquin coachwhip (*Masticophis flagellum ruddocki*), Coast horned lizard (*Phrynosoma blainvillii*), Nelson's antelope squirrel (*Ammospermophilus nelson*), Tipton kangaroo rat (*Dipodomys nitratoides nitratoides*), Tulare grasshopper mouse (*Onychomys torridus tularensis*), and American badger (*Taxidea taxus*) do not occur on or adjacent to the Project. Therefore, these species have no potential to occur on the Project site. Although northwestern pond turtle (*Actinemys marmorata*) can occur in a variety of aquatic habitats, the R-3 Canal and other agricultural canals adjacent to the Project site do not provide suitable habitat for this species.

The remaining special-status wildlife taxa were evaluated further to determine their potential to occur on or adjacent to the Project site and be affected by Project implementation. These species are discussed below.

Invertebrates

Monarch butterfly (*Danaus plexxipus*) is a candidate for federal listing as threatened or endangered, and Crotch's bumble bee (*Bombus crotchii*) is a candidate for state listing as endangered. These species can travel extended distances and be documented in unexpected locations. However, they require suitable food plants and larval host plants/nest sites. The Project site does not provide suitable nest sites for Crotch's bumble bee and is extremely unlikely to provide larval host plants (*Asclepias* spp.) for monarch butterfly. On-site vegetation is also of very low foraging value for both species. No monarchs or host plants are known from the project vicinity (Western Monarch and Milkweed Occurrence Database 2023), and the nearest known monarch and Crotch's bumble bee occurrences are from the Kern River corridor, more than 8 miles southeast of the Project site (iNaturalist 2023). Habitat suitability for these species is also greatly diminished by herbicide and pesticide use and regular vegetation maintenance in agricultural areas and along canals and roadways on and adjacent to the Project site. Therefore, potential for either species to occur on or adjacent to the Project is extremely low.

Birds

Five special-status bird species have low or very low potential to occur on or adjacent to the Project site: burrowing owl (*Athene cunicularia)*, Swainson's hawk (*Buteo swainsonii)*, mountain plover (*Charadrius montanus*), white-tailed kite (*Elanus leucurus*), and tricolored blackbird (*Agelaius tricolor)*. Swainson's hawk and tricolored blackbird are state-listed as threatened, white-tailed kite is fully protected under the CFGC, and burrowing owl and mountain plover are California species of special concern. Marginally suitable foraging habitat for mountain plover occurs in uncultivated fields on and adjacent to the Project, but this species does not breed in California and is very rarely documented in the San Joaquin Valley; therefore, it has extremely low potential to occur on the Project site. Potentially suitable habitat for burrowing owl includes uncultivated fields and ruderal habitat on and adjacent to the Project; burrows suitable for burrowing owl were absent from the Project site at the time of the field survey but could become established if conditions are amenable in the future. No suitable nesting habitat for tricolored blackbird was present on or adjacent to the Project during the field survey. However, if grain crops or extensive areas of tall ruderal vegetation (e.g., in the fallow fields) are present on or near the Project during project activities, there is some potential for this species to nest in such habitat. The large Eucalyptus tree immediately adjacent to the Project site provides a marginally suitable nest site for Swainson's hawk and white-tailed kite (as well as common tree-nesting raptor species). None of these species is known to nest near the Project site (CDFW 2023) but all have potential to nest on or adjacent to the site. The Project site also provides potentially suitable foraging habitat for tricolored blackbird, burrowing owl, Swainson's hawk, and white-tailed kite. However, the foraging quality is very low because of the regular ground disturbance and barren to very sparse on-site vegetation cover that limits insect and mammalian prey populations.

Mammals

San Joaquin kit fox (*Vulpes macrotis mutica*) is federally listed as endangered; this species occurs primarily in grasslands and sparsely vegetated shrublands with loose-textured soils. Although San Joaquin kit fox can occur in agricultural habitats, documented use of such habitat is variable, and kit fox appear to be unable to occupy agricultural habitat on a long-term basis (USFWS 2010). Prey abundance and diversity are reduced in agricultural habitats and favored prey species such as kangaroo rats are not present in row crops or orchards (USFWS 2010). Therefore, agricultural habitats such as those on and surrounding the Project site are unlikely to support prolonged use by San Joaquin kit fox. The CNDDB includes several occurrences of San Joaquin kit fox in the project vicinity. Most occurrences in the region are from many decades ago, and more recent occurrences are primarily from the urban Bakersfield area, which supports a stable kit fox population (USFWS 2020). The nearest recent San Joaquin kit fox occurrence was a roadkill individual approximately 3.4 miles southeast of the Project site. Because this species can occur in agricultural areas and the Project site is within potential dispersal distance of the Bakersfield population, San Joaquin kit fox could occasionally disperse through the Project site.

Western mastiff bat (*Eumops perotis californicus*) is a California species of special concern that roosts in crevices in cliffs, tall buildings, tunnels, and trees (typically large cottonwoods, sycamores, walnuts, and willows). CNDDB occurrences of this species are generally from the valley floor margins, adjacent to hills that likely provide suitable natural roost sites. The agricultural shed and Eucalyptus tree adjacent to the Project site are very unlikely to provide suitable roosting habitat for western mastiff bat and individuals from more distant roost sites are unlikely to forage over the Project site; therefore, this bat has very low potential to occur on the Project site.

Sensitive Habitats

No critical habitat for federally listed species or state-designated natural communities of special concern are present on or adjacent to the Project. Because the R-3 Canal is used solely for irrigation delivery and does not have a significant nexus to traditionally navigable waters, it does not qualify as potentially jurisdictional waters of the United States and is not protected under the CWA. The canal is also not considered to be a river or stream and therefore not protected under FGC Section 1600. It may, however, qualify as a state-protected water under the Porter-Cologne Water Quality Control Act.

3.4.2 Discussion

#4 -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 the U.S. Fish and Wildlife Service?

Based on the review of existing documentation, current distributions and habitat requirements of each species, and habitat evaluations made during the field survey, all the special-status plants and most the special-status wildlife species considered in this evaluation were determined to have no potential or very low potential to occur on or adjacent to the Project site. Therefore, these species have no potential or are very unlikely to be adversely affected by project implementation and are not discussed further. Wildlife species with at least low potential to occur on or near the Project and be adversely affected by project implementation is discussed further below.

Special-status birds. No suitable nesting habitat for tricolored blackbird was present on or adjacent to the Project during the field survey. However, if grain crops or extensive areas of tall ruderal vegetation (e.g., fallow fields) are present on or near the Project site during Project activities, there is some potential for tricolored blackbird to nest in such habitat. The large Eucalyptus tree immediately adjacent to the Project provides marginally suitable nesting for Swainson's hawk and white-tailed kite. No other potential nest trees are present on or near the Project site. Ruderal habitat on and adjacent to the Project site provides potentially suitable habitat for burrowing owl. However no concentrations of ground squirrel burrows or other burrows suitable for burrowing owl were observed during the field survey.

Although no nests or burrows were identified on or adjacent to the Project site during the field survey and no nearby occurrences are known, tricolored blackbird, burrowing owl, Swainson's hawk, and white-tailed kite could nest on or adjacent to the Project site if conditions are suitable when Project-related disturbance occurs. If an active nest or occupied burrow is present on or near the Project site, Project activities could result in burrow or nest abandonment. Depending on the species and number of individuals that are affected, burrow abandonment or nest failure could have a substantial adverse effect on the local population. Because the current foraging and nesting habitat quality of the Project site is low for these species and similar habitat is abundant in the region, conversion of the site to a recharge basin would not have a substantial adverse effect on habitat availability for these species.

Mitigation Measures BIO-1, BIO-2a, BIO 2b, and BIO-2c described below, have been identified to reduce potentially significant impacts on tricolored blackbird, burrowing owl, Swainson's hawk, and white-tailed kite to a less than significant level and minimize potential for violation of state and federal regulations protecting birds and their nests. This impact would be **less than significant with mitigation incorporated**.

San Joaquin kit fox. Despite the poor quality of habitat on the project site, San Joaquin kit fox has potential to occur onsite because the species is known to occur in agricultural habitat and the site is within dispersal distance of the Bakersfield population. Therefore, although potential for occupied dens to occur on or adjacent to the project site is low due to the poor habitat quality, individuals could travel through the Project site. If a kit fox is present during Project activities, it could be injured or killed if struck by a Project vehicle or Project equipment or become trapped in pipes or trenches. In the very unlikely event that an occupied den is present adjacent to the

Project site, Project-related disturbance could result in den abandonment. Very few individuals if any would be affected. However, because of the endangered status of San Joaquin kit fox, potential to injure or kill even one individual could be considered a substantial adverse effect. Mitigation Measures BIO-1 and BIO-3, described below, have been identified to reduce this impact to a less than significant level. This impact would be **less than significant with mitigation incorporated**.

Mitigation Measure BIO-1: Conduct Worker Environmental Awareness Training.

To minimize potential effects of Project construction on special-status wildlife, the District will ensure that the following measure is implemented:

- An Environmental Awareness Program will be presented to all Project personnel working in the field before Project activities begin. The program will be presented by a qualified biologist with knowledge of special-status wildlife that could occur on the Project sites. The program will address each species biology and habitat needs; status of each species and their regulatory protections; and measures required to reduce impacts to the species during Project construction.

Mitigation Measure BIO-2a: Conduct Focused Surveys for Burrowing Owls and Avoid Loss of Occupied Burrows.

To minimize potential effects of Project construction on burrowing owl, the District will ensure that the following measures are implemented, consistent with the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012).

- A qualified biologist will assess burrowing owl habitat suitability in the area subject to direct impact and adjacent areas within 500 feet.
- If suitable habitat or sign of burrowing owl presence is observed, a take avoidance survey will be conducted within 10 days before construction activities begin near areas of suitable habitat.
- If any occupied burrows are observed, protective buffers will be established and implemented. A qualified biologist will monitor the occupied burrows during construction activities to confirm effectiveness of the buffers. The size of the buffer will depend on type and intensity of disturbance, presence of visual buffers, and other variables that could affect susceptibility of the owls to disturbance.
- If destruction of an occupied burrow cannot be avoided and it is determined, in consultation with CDFW, that passive exclusion of owls from the construction footprint is an appropriate means of minimizing direct impacts, an exclusion and relocation plan will be developed and implemented in coordination with CDFW. Passive exclusion will not be conducted during the breeding season (February 1 through August 31), unless a qualified biologist verifies through noninvasive means that either (1) the birds have not begun egg laying or (2)

juveniles from the occupied burrows are foraging independently and are capable of independent survival.

- If passive exclusion is conducted, each occupied burrow that is destroyed will be replaced with at least one artificial burrow on a suitable portion of the recharge site that would not be subject to inundation or ground disturbance.

Mitigation Measure BIO-2b: Conduct Focused Surveys for Nesting Swainson's Hawks and White-tailed Kites and Implement Take Avoidance Plan for Active Nests.

To minimize potential effects of project construction on active Swainson's hawk and white-tailed kite nests, the District will ensure that the following measures are implemented:

- If construction activities would occur during the Swainson's hawk nesting season (April-August), a qualified biologist will conduct surveys of potential Swainson's hawk nesting trees within 0.5 mile of the project site. To the extent practicable, depending on timing of construction initiation, surveys will be conducted in accordance with the *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (Swainson's Hawk Technical Advisory Committee 2000). At a minimum, at least one survey will be conducted within 10 days before construction activities begin during the nesting season. If a lapse in construction activities of 10 days or longer occurs, another focused survey will be conducted before activities resume during the nesting season.
- If construction would begin during the white-tailed kite nesting season (March 1-August 31), a qualified biologist will conduct surveys of potential white-tailed kite nesting trees within 0.5 mile of the project site. The survey will be conducted no more than 10 days before construction activities begin during the nesting season. If a lapse in construction activities of 10 days or longer occurs, another focused survey will be conducted before activities resume during the nesting season.
- If an active Swainson's hawk or white-tailed kite nest is found, a qualified biologist will prepare a site-specific take avoidance plan to comply with CESA and the FGC. Measures may include but are not limited to nest-specific no disturbance buffers, biological monitoring, rescheduling construction activities around sensitive periods for the species (e.g., nest establishment), and/or implementing construction best practices, such as staging equipment out of the species' line of sight from the nest tree. The avoidance/protection measures will be established before construction activities begin and continue until the adult and young birds are no longer reliant on the nest site.

Mitigation Measure BIO-2c: Conduct Focused Surveys for Other Nesting Birds and Implement Buffers Around Active Nests.

To minimize potential effects of project construction on active nests of other special-status birds and common birds protected by state and federal regulations, the District will ensure that the following measures are implemented:

- If construction would occur during the bird nesting season (February-August), a qualified biologist will conduct surveys of 1) suitable nesting habitat for common birds within 100 feet of construction activities, 2) suitable nesting habitat for non-raptor special-status birds within 300 feet of construction activities, and 3) suitable nesting habitat for raptors other than those addressed in BIO-2a and BIO-2b within 500 feet of construction activities. Surveys will be conducted within 10 days before construction activities begin during the nesting season. If a lapse in construction activities of 10 days or longer occurs, another focused survey will be conducted before activities resume during the nesting season.
- If any active bird nests are observed, a qualified biologist will prepare a site-specific take avoidance plan to comply with applicable state and federal regulations. If an active tricolored blackbird nesting colony is found during preconstruction surveys, a minimum 300-foot no-disturbance buffer will be implemented in accordance with CDFW's Staff Guidance Regarding Avoidance of Impacts to Tricolored Blackbird Breeding Colonies on Agricultural Fields in 2015 (CDFW 2015), or more recent guidance if issued, until the breeding season has ended or until a qualified biologist has determined that nesting has ceased and the young have fledged and are no longer reliant upon the colony or parental care for survival. Measures for other species may include but are not limited to nest-specific no disturbance buffers, biological monitoring, rescheduling construction activities around sensitive periods for the species (e.g., nest establishment), and/or implementing construction best practices, such as staging equipment out of the species' line of sight from the nest tree. The avoidance/protection measures will be established before construction activities begin and continue until the adult and young birds are no longer reliant on the nest site.

Mitigation Measure BIO-3: Conduct Focused Surveys and Implement Measures to Minimize Potential for Impacts on San Joaquin Kit Fox.

To minimize potential effects of Project construction on San Joaquin kit fox, the District will ensure that the following measures are implemented:

- No more than 30 days before construction activities begin, a qualified biologist will conduct a pre-construction survey to determine the potential for a San Joaquin kit fox den to occur in the area. If potential or known den for San Joaquin kit fox is found, an exclusion zone will be established and maintained, in accordance with the *Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox* (USFWS 2011).
- If construction activity would occur within 50 feet of a potential den (i.e., a den that is not known to be occupied), monitoring will be conducted at the potential den for 3 consecutive days. If no San Joaquin kit fox activity is documented, construction activities can proceed. If San Joaquin kit fox activity is documented, the appropriate exclusion zone will be established and maintained, in accordance with the *Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox* (USFWS 2011).

- To prevent kit fox entrapment during construction, all excavated, steep-walled holes or trenches more than 2-feet-deep will be covered with plywood or similar material at the end of each workday. If the trenches cannot be closed, one or more escape ramps of no more than a 45-degree slope will be constructed of earthen fill or created with wooden planks. All covered or uncovered excavations will be inspected at the beginning, middle, and end of each day. Before trenches are filled, they will be inspected for trapped animals. If a trapped kit fox is discovered, construction activities in and near the excavation will stop, and escape ramps or structures will be installed immediately to allow the animal to leave voluntarily. Construction activities will not resume until the animal has left the area.
- All construction pipes or similar structures with a diameter of 4 inches or greater that are stored on the ground at a construction site for one or more overnight periods will be thoroughly inspected for wildlife before the pipe is buried, capped, or otherwise used or moved in any way. Pipes laid in trenches overnight will be capped. If a potential San Joaquin kit fox is discovered inside a pipe, all construction activities near the pipe will stop, and the animal will be allowed to leave the pipe voluntarily. Construction activities will not resume until the animal has left the area.
- All food-related trash items such as wrappers, cans, bottles, or food scraps generated during construction activities will be disposed of in closed containers and removed daily from the recharge site. No deliberate feeding of wildlife will be allowed, and no pets associated with construction personnel will be permitted on the recharge site.

#4 -b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

The Project sites do not support any riparian habitat, designated critical habitat, or other sensitive natural community identified in local or regional plans, policies, or regulations; there would be **no impact** on these resources.

#4 -c. Have a substantial adverse effect on state- or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

The R-3 Canal is not federally protected but may qualify as a state-protected water under the Porter-Cologne Water Quality Control Act. This canal would be affected by installing connections to the recharge basin but the effect would be localized and very minor. The connections would be installed when the canal is dry and would not result in a substantial adverse effect on the canal. Therefore, this impact would be **less than significant**.

#4 -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 part of a much larger extent of agricultural lands and does not serve as a corridor or other primary route for wildlife movement. Project activities would only occur during the day, while most wildlife movement would likely be at night. The Project site also is not known or anticipated to serve as a nursery site for any wildlife species. Therefore, implementing the Proposed Project would not substantially interfere 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; this impact would be **less than significant.**

#4 -e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The 2004 Kern County General Plan, which is currently being updated, includes several policies and implementation measures designed to protect and conserve threatened and endangered species and oak trees (Kern County 2004). No oak trees are present on the Project site, and the Project has no potential to conflict with Kern County's General Plan oak retention policy. The Plan requires discretionary Projects to consider effects to biological resources and wildlife agency comments during the CEQA process; this is consistent with the CEQA process being implemented by the District for the Proposed Project. Therefore, implementing the Proposed Project would not conflict with any local policies or ordinances protecting biological resources and this impact would be **no impact**.

#4 -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 in the northwestern portion of the Metropolitan Bakersfield Habitat Conservation Plan (HCP) area and within the proposed plan area for the potential Bakersfield HCP and Kern Valley Floor HCP. However, the Metropolitan Bakersfield HCP expired in January 2023 and a draft of the more comprehensive Bakersfield HCP has not been released. In addition, the draft of the Kern Valley Floor HCP was issued many years ago (Kern County Planning Department 2006) and a final plan has not been released. There is no indication either of these planned HCPs will be finalized and adopted before the proposed Project is implemented. In addition, converting the Project site from agricultural production to a recharge basin would not have an adverse effect on habitat quality for the species that may be covered by the future HCPs. Implementing the proposed Project would not conflict with any provisions of an adopted HCP or other conservation plan and there would be **no impact.**

3.5 Cultural Resources

#5. CULTURAL RESOURCES. Would the Project?	Have Potentially Significant Impact?	Have Less Than Significant Impact with Mitigation Incorporated?	Have Less Than Significant Impact?	Have No Impact?	Have Beneficial Impact?
#5 -a. Cause a substantial adverse change in the significance of a historical resource pursuant to California Code of Regulations (CCR) Section 15064.5?	No.	Yes.	No.	No.	No.
#5 -b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CCR Section 15064.5?	No.	Yes.	No.	No.	No.
#5 -c. Disturb any human remains, including remains interred outside of dedicated cemeteries?	No.	Yes.	No.	No.	No.

3.5.1 Environmental Setting

Cultural resources are defined as buildings, sites, structures, or objects, each of which may have historic, architectural, archaeological, cultural, or scientific importance.

Methods

The cultural resources investigations carried out for the proposed Project included a records search at the South San Joaquin Valley Information Center (SSJVIC), archival research, Native American consultation, and archaeological and built environment field surveys of the Project area.

Record Search

GEI archaeologist, Amy Wolpert, M.A., requested a records search at the SSJVIC, covering the Project area and a 0.5-mile buffer; the buffer was included to determine what types of resources might be within the Project area. A response was received on November 16, 2023 (Records Search File No.: 23-453). In the response, the SSJVIC records search concluded no cultural resources were identified within the Project footprint or within the 0.5-mile buffer. Additionally, no previous investigations have been conducted within the 0.5-mile buffer. One previous investigation (November 1985) was conducted within the Project area in support of the proposed, at the time, Rosedale Wastewater Treatment Plant. The investigation was conducted by the Cultural Resource Facility of the California State University, Bakersfield.

Field Survey

Access to the Project area is currently restricted and so no pedestrian survey was possible; however, GEI archaeologist William R. Gillean visited the Project area on November 26, 2023, to make observations from publicly accessible locations. No archeological resources were

observed during the visit. Neither were any built environment resources observed during the visit; given the much more visible nature of built environment resources both from on the ground as well as satellite images it is very likely that no built environment resources are within the Project area.

3.5.2 Discussion

a, b) Cause a substantial adverse change in the significance of a historical resource pursuant to in CCR Section 15064.5? Cause a substantial adverse change in the significance of an archaeological resource pursuant to CCR Section 15064.5?

Under CEQA, public agencies must consider the effects of their actions on "historical resources." CEQA defines an "historical resource" as any resource listed in or determined to be eligible for listing in the California Register of Historical Resources (CRHR). The CRHR includes resources listed in or formally determined eligible for listing in the National Register of Historic Places (NRHP), as well as some California Historical Landmarks and Points of Historical Interest. Properties of local significance that have been designated under a local preservation ordinance (local landmarks or landmark districts) or that have been identified in a local historical resources inventory may be eligible for listing in the CRHR and are presumed to be significant resources for purposes of CEQA unless a preponderance of evidence indicates otherwise (California PRC Section 5024.1, 14 CCR Section 4850). The eligibility criteria for listing in the CRHR are similar to those for NRHP listing but focus on importance of the resources to California history and heritage.

A cultural resource may be eligible for listing in the CRHR if it:

1. is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage
2. is associated with the lives of persons important in our past
3. embodies the distinctive characteristics of a type, period, region, or method of construction or represents the work of an important creative individual or possesses high artistic values
4. or has yielded, or may be likely to yield, information important in prehistory or history

In addition to meeting one or more of the above criteria, resources eligible for listing in the CRHR must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association (California Office of Historic Preservation 1999).

Impacts would be deemed significant if there is substantial adverse change by means of physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the resource would be materially impaired. Per Section 15064.5

(b)(2) of the CEQA Guidelines the significance of a historical resource is materially impaired when a Project:

- Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or

- Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the Project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or

- Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its eligibility for inclusion in the CRHR as determined by a lead agency for the purposes of CEQA.

No previously recorded archaeological resources are present within the Project footprint or within 0.5 mile of the Project footprint, and no built environment resources were discovered during the pedestrian survey.

Given the lack of identified resources during a past investigation that included the Project area, sensitivity for cultural resources appears to be low. The possibility remains, however, that a resource meeting CRHR significance criterion for a historical resource may be discovered during Project-related ground-disturbing activities. If this were to occur, then it would be a **potentially significant impact**. The following mitigation measure has been identified to address this impact:

> **Mitigation Measure CR-1: Address Previously Undiscovered Historic Properties, Archaeological Resources, and Tribal Cultural Resources.**
>
> If cultural resources are identified during Project-related ground-disturbing activities, all potentially destructive work in the immediate vicinity of the find should cease immediately and the District should be notified. In the event of an inadvertent discovery, additional CEQA review might be necessary to make a determination on a properties' eligibility for listing in the CRHR and any actions that would be necessary to avoid adverse effects. A qualified archaeologist should assess the significance of the find, make a preliminary determination, and if appropriate, provide recommendations for treatment. Any treatment plan should be reviewed by the District prior to implementation. Ground-disturbing activities should not resume near the find until treatment, if any is recommended, the find is complete or if the qualified archaeologist determines the find is not significant.

Implementing Mitigation Measure CR-1 would reduce the potential impact related to discovery of unknown historical resources to a less than significant level because the find would be assessed by an archaeologist and the treatment or investigation would be conducted in

accordance with CEQA and its implementing guidelines. Therefore, the proposed Project would have a **less than significant impact with mitigation**.

c) Disturb any human remains, including remains interred outside of dedicated cemeteries?

No human remains have been discovered in the Project area and it is not anticipated that human remains, including those interred outside of dedicated cemeteries, would be discovered during Project-related ground-disturbance activities. There is no indication from the records search or surrounding areas that human remains might be present within the Project area. However, in the event that human remains, including those interred outside of formal cemeteries and including associated items and materials, are discovered during subsurface activities, the human remains, and associated items and materials could be inadvertently damaged. Therefore, a **potentially significant impact** would occur. The following mitigation measure has been identified to address this impact:

> **Mitigation Measure CR-2: Avoid Potential Effects on Undiscovered Burials.**
>
> If human remains are found, the District should be immediately notified. The California Health and Safety Code requires that excavation be halted in the immediate area and that the County coroner be notified to determine the nature of the remains. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or state lands (Health and Safety Code, Section 7050.5[b]). If the coroner determines that the remains are those of a Native American, the coroner must contact the Native American Heritage Commission (NAHC) by telephone within 24 hours of making that determination (Health and Safety Code, Section 7050.5[c]).
>
> Once notified by the coroner, the NAHC shall identify the person determined to be the Most Likely Descendant (MLD) of the Native American remains. With permission of the legal landowner(s), the MLD may visit the site and make recommendations regarding the treatment and disposition of the human remains and any associated grave goods. This visit should be conducted within 24 hours of the MLD's notification by the NAHC (PRC Section 5097.98[a]). If a satisfactory agreement for treatment of the remains cannot be reached, any of the parties may request mediation by the NAHC (PRC, Section 5097.94[k]). Should mediation fail, the landowner or the landowner's representative must reinter the remains and associated items with appropriate dignity on the property in a location not subject to further subsurface disturbance (PRC, Section 5097.98[b]).

Implementing Mitigation Measure CR-2 would reduce the potentially significant impact related to discovery of human remains to a less than significant level because the find would be assessed by an archaeologist and treated or investigated in accordance with state and federal laws. Therefore, the proposed Project would have a **less than significant impact with mitigation**.

3.6 Energy

#6. ENERGY. Would the Project?	Have Potentially Significant Impact?	Have Less Than Significant Impact with Mitigation Incorporated?	Have Less Than Significant Impact?	Have No Impact?	Have Beneficial Impact?
#6 -a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	No.	No.	Yes.	No.	No.
#6 -b. Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?	No.	No.	No.	Yes.	No.

3.6.1 Environmental Setting

Electricity and natural gas are supplied to Kern County by Pacific Gas and Electric (PG&E), Southern California Edison, and Southern California Gas (Kern County 2004a). In 2018, the total electricity consumption for Kern County was approximately 15,942 million kilowatts per hour (California Energy Commission [CEC] 2022). Water movement to the groundwater recharge ponds will be primarily through gravity flow in existing facilities.

3.6.2 Discussion

#6 -a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation?

The proposed Project would not result in significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources because the Project would only consume enough energy required to construct and operate the Project. The proposed Project would involve the use of diesel-fueled vehicles during constructions; however, use of these vehicles would be short-term and temporary. Water would be delivered to the site via the existing R-3 Canal, which would not result in an increase in energy consumption. The proposed Project will raise groundwater levels, thus reducing energy use for pumping from groundwater wells in the Project area. Therefore, impacts would be **less than significant**.

#6 -b. Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?

Kern County does not have a local plan for renewable energy or energy efficiency. The proposed Project would comply with the state's Climate Commitment to reduce the reliance on non-renewable energy sources by half by 2030 (CEC 2015). There would be **no impact**.

3.7 Geology and Soils

#7. GEOLOGY AND SOILS. Would the Project?	Potentially Significant Impact.	Have Less Than Significant Impact with Mitigation Incorporated?	Have Less Than Significant Impact?	Have No Impact?	Have Beneficial Impact?
#7 -a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:	No.	No.	Yes.	No.	No.
#7 -a. 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 California Geological Survey Special Publication 42.)	No.	No.	Yes.	No.	No.
#7 -a. ii. Strong seismic ground shaking?	No.	No.	Yes.	No.	No.
#7 -a. iii. Seismic-related ground failure, including liquefaction?	No.	No.	No.	Yes.	No.
#7 -a. iv. Landslides?	No.	No.	Yes.	No.	No.
#7 -b. Result in substantial soil erosion or the loss of topsoil?	No.	No.	Yes.	No.	No.
#7 -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?	No.	Yes.	No.	No.	No.
#7 -d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated),), creating substantial direct or indirect risks to life or property?	No.	No.	Yes.	No.	No.
#7 -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?	No.	No.	No.	Yes.	No.
#7 -f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	No.	Yes.	No.	No.	No.

3.7.1 Environmental Setting

The Project site is located on the following soil types: Kimberline Fine Sandy Loam (0 to 2 percent slopes) and Wasco Sandy Loam (Natural Resources Conservation Service [NRCS] 2023). The proposed Project is located approximately 1.2 miles east of an unnamed quaternary fault (age undifferentiated) (California Geological Survey [CGS] 2010a). A quaternary fault is an

active fault that has been recognized at the surface and which has evidence of movement in the past 1.6 million years. The project is not located in or near a fault zone, landslide zone, or liquefaction zone (CGS 2023). The project site is located on marine and non-marine sedimentary rock (CGS 2010b). No recovery of recharged groundwater will take place onsite.

3.7.2 Discussion

#7 -a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

#7 -a. 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 California Geological Survey Special Publication 42.)

The proposed Project is not located within a fault zone (CGS 2023). The proposed Project is located approximately 1.2 miles east of an unnamed quaternary fault (CGS 2010a). Surface fault rupture is most likely to occur on active faults (i.e., faults showing evidence of displacement within the last 11,700 years). Damage from surface fault rupture is generally limited to a linear zone a few yards wide. Since the proposed Project is not located on an active fault line and is at least 1 mile away from a quaternary fault line, impacts would be **less than significant**.

#7 -a. ii. Strong seismic ground shaking?

The groundwater recharge pond would not pose a direct risk to people during seismic activity. A seismic event is unlikely to cause the berms (which hold the pond in place) to collapse. If the berms were to fail, the water would not be dispersed into nearby canals and agricultural fields because the pond would be excavated to a depth of 5 feet below ground surface elevation. Therefore, there would be no significant impact to people or structures from any seismic-related activity as a result of implementation of the proposed project. This impact would be **less than significant**.

#7 -a. iii. Seismic-related ground failure, including liquefaction?

The project site is not located within a known liquefaction zone (CGS 2023). Therefore, there would be **no impact**.

#7 -a. iv. Landsides?

The Project site is located in topographically flat areas and thus there would be no harm from landslides. Additionally, CGS does not identify the Project site as susceptible to landslides (CGS 2015b). Therefore, this impact would be **less than significant**.

#7 -b, c, and d. Result in substantial soil erosion or the loss of topsoil? 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? Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial direct or indirect risks to life or property?

Because the excavated soil will be used to construct berms to contain the groundwater recharge ponds, the proposed Project will result in the reuse, but not loss, of topsoil. Operating the groundwater recharge ponds will increase groundwater in the subbasin and prevent subsidence. The berms will be constructed in such a manner as to prevent landslides and collapse. Soils present at the Project site consists of Kimberlina Fine Sandy Loam and Wasco Sandy Loam, both of which are considered to be expansive soils (NRCS 2023); however, the proposed Project would not create a direct or indirect risk to life or property because of the limited size and scope of the Project and rural/agricultural nature of the Project area.

Because construction activities would disturb an area larger than 1 acre, RRID is required to obtain coverage under the NPDES Construction General Permit, which includes preparation and implementation of a SWPPP. The SWPPP shall describe the construction activities to be conducted, BMPs that would be implemented to prevent soil erosion and contaminated stormwater discharges into waterways, and inspection and monitoring activities that would be conducted.

With the preparation and implementation of a Dust Control Prevention Plan, loss of topsoil would be minimized during construction. Operation of the pond would reduce the potential for loss of topsoil and wind-borne erosion. Therefore, there would be **less than significant** impacts.

#7 -e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

The Project would not require the use of septic tanks or alternative wastewater disposal systems. Temporary portable restrooms would likely be provided for construction workers. Therefore, there would be **no impact**.

#7 -f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The Project is located on marine and non-marine sedimentary rock that consist of alluvium, lake, playa, and terrace deposits, and is from the Pleistocene-Holocene ages (CGS 2015c). Since paleontological resources are found almost exclusively in sedimentary rock, there is a chance of discovering unknown paleontological resources within the Project sites. Therefore, a **potentially significant impact** would occur. The following mitigation measure has been identified to address this impact:

Mitigation Measure GEO-1: Avoid Potential Effects on Paleontological Resources.

In the event that a paleontological resource is uncovered during Project implementation, all ground-disturbing work within 165 feet (50 meters) of the discovery shall be halted. A qualified paleontologist shall inspect the discovery and determine whether further investigation is required. If the discovery can be avoided and no further impacts will occur, no further effort shall be required. If the resource cannot be avoided and may be subject to further impact, a qualified paleontologist shall evaluate the resource and determine whether it is "unique" under CEQA, Appendix G, part VII. The determination and associated plan for protection of the resource shall be provided to the District for review and approval. If the resource is determined not to be unique, work may commence in the area. If the resource is determined to be a unique paleontological resource, work shall remain halted, and the paleontologist shall consult with the District staff regarding methods to ensure that no substantial adverse change would occur to the significance of the resource pursuant to CEQA. Preservation in place (i.e., avoidance) is the preferred method of mitigation for impacts to paleontological resources and shall be required unless there are other equally effective methods. Other methods may be used but must ensure that the fossils are recovered, prepared, identified, catalogued, and analyzed according to current professional standards under the direction of a qualified paleontologist. All recovered fossils shall be curated at an accredited and permanent scientific institution according to Society of Vertebrate Paleontology standard guidelines; typically, the Natural History Museum of Los Angeles County and University of California, Berkeley accept paleontological collections at no cost to the donor. Work may commence upon completion of treatment, as approved by the District.

Implementing Mitigation Measure GEO-4 would reduce the potential impact related to discovery of unknown paleontological resources to a less than significant level because the fossil would be preserved. Therefore, the proposed Project would have a **less than significant impact with mitigation**.

3.8 Greenhouse Gas Emissions

#8. GREENHOUSE GAS EMISSIONS. Would the Project?	Have Potentially Significant Impact?	Have Less Than Significant Impact with Mitigation Incorporated?	Have Less Than Significant Impact?	Have No Impact?	Have Beneficial Impact?
#8 -a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	No.	No.	**Yes.**	No.	No.
#8 -b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	No.	No.	**Yes.**	No.	No.

3.8.1 Environmental Setting

On June 1, 2005, Governor Schwarzenegger announced Executive Order S-3-05, which established the following greenhouse gas (GHG) emission reduction targets:

- By 2010, California shall reduce GHG emissions to 2000 levels
- By 2020, California shall reduce GHG emissions to 1990 levels
- By 2050, California shall reduce GHG emissions to 80 percent below 1990 levels

California's statewide reduction goals were subsequently revised by legislation (Assembly Bill 32 Health & Safety Code § 38500 et seq.) requiring California to reduce its overall GHG emissions to 1990 levels by 2020 and 40% below 1990 levels by 2030. GHGs were defined as carbon dioxide (CO_2), Methane (CH_4), Nitrous Oxide (N_2O), Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), and Sulfur Hexafluoride (SF_6).

CARB was appointed to develop policies to achieve this goal. Subsequently, Senate Bill 32 (Health & Safety Code § 38566) increased and extended the emission reduction mandate to 40 percent below 1990 levels by 2030. Executive Order B-55-18 set a target of statewide carbon neutrality by 2045. In 2017, CARB published an updated *Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target* (Scoping Plan).

Kern County has not adopted a local plan for reducing GHG emissions. The SJVAPCD has adopted the *Guidance for Valley Land-use Agencies Addressing GHG Emissions Impacts for New Projects under CEQA* (Guidance) (SJVAPCD 2009). Although the Guidance addresses stationary source and development projects, RRID has adopted it for construction-related projects.

3.8.2 Discussion

#8 -a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

GHG emissions would be generated during the construction phase of the proposed Project from the use of diesel-powered vehicles. Project operations, which includes water conveyance, will not result in GHG emissions. During operations, vehicle usage, and therefore GHG emissions, would be minimal. Therefore, GHG emissions related to vehicle engine exhaust would be **less than significant**.

#8 -b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

California has issued numerous Executive Orders directing state agencies to implement programs to reduce GHG emissions to meet 2030 target of 40 percent below 1990 levels (California 2018). CARB is the primary state agency responsible implementing GHG reduction programs. The Scoping Plan (CARB 2017) describes agriculture's role in emissions reductions and carbon sequestration. Natural and working lands are a key sector in the state's climate change strategy. Storing carbon in trees, other vegetation, soils, and aquatic sediment is an effective way to remove carbon dioxide from the atmosphere (CARB 2017).

The Scoping Plan states that, "In 2030 and 2050, the agricultural sector must remain vibrant and strong. California's agricultural production is critical to global food security. It is also vulnerable to climate change." The Scoping Plan points out that "Resilient natural and working lands provide habitat for species and functions to store water, recharge groundwater, naturally purify water, and moderate flooding." "California's natural and working lands make the state a global leader in agriculture, a U.S. leader in forest products, and a global biodiversity hotspot. These lands support clean air, wildlife and pollinator habitat, rural economies, and are critical components of California's water infrastructure. Keeping these lands and waters intact and at high levels of ecological function (including resilient carbon sequestration) is necessary for the well-being and security of Californians in 2030, 2050, and beyond. Forests, rangelands, farms, wetlands, riparian areas, deserts, coastal areas, and the ocean store substantial carbon in biomass and soils."

State policy is clear that preservation of agriculture is a critical goal, and a benefit to GHG reduction. The proposed Project is designed to recharge groundwater, making water supplies available to irrigated agriculture during times of drought. For these reasons, the proposed Project is compatible with the state's climate change policy.

Kern County does not have an adopted local GHG reduction plan. The SJVAPCD provides guidance for addressing GHG emissions from land use development projects. The SJVAPCD considers development projects to be less than significant if the Project achieves 29 percent GHG emission reductions target by using approved Best Performance Standards (BPS), which includes Project design elements and technologies, such as the use of energy efficient equipment, that reduce GHG emissions (SJVAPCD 2009). The Guidance does not require quantification of

Project specific GHG emissions for projects that implement BPS. Consistent with CEQA Guidelines, such projects would be determined to have a less than significant individual and cumulative impact for GHG emissions (SJVAPCD 2009). Because the District would comply with state policy regarding climate change and the SJVAPCD Guidance, the impact would be **less than significant**.

3.9 Hazards and Hazardous Materials

#9. HAZARDS AND HAZARDOUS MATERIALS. Would the Project?	Have Potentially Significant Impact?	Have Less Than Significant Impact with Mitigation Incorporated?	Have Less Than Significant Impact?	Have No Impact?	Have Beneficial Impact?
#9 -a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	No.	No.	Yes.	No.	No.
#9 -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?	No.	No.	Yes.	No.	No.
#9 -c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	No.	No.	No.	Yes.	No.
#9 -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?	No.	No.	No.	Yes.	No.
#9 -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 or excessive noise for people residing or working in the project area?	No.	No.	Yes.	No.	No.
#9 -f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	No.	No.	No.	Yes.	No.
#9 -g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	No.	No.	No.	Yes.	No.

3.9.1 Environmental Setting

The database search included all data sources included in the Cortese List (enumerated in PRC Section 65962.5). These sources include the GeoTracker database, a groundwater information management system that is maintained by the State Water Resources Control Board (State Water Board); the Hazardous Waste and Substances Site List (i.e., the EnviroStor database), maintained by the California Department of Toxic Substances Control (DTSC); and EPA's Superfund Site database (DTSC 2023a and 2023b, State Water Board 2023a and 2023b, CalEPA 2023). There were no hazardous materials sites identified within 0.25 mile of the Project site. The Project site

is not in an area identified as more likely to contain asbestos by the California Department of Conservation (DOC 2000). This issue is not discussed further in this IS/MND.

There are no schools within 0.25 mile of the Project site. The nearest school to the Project site is Rio Bravo Elementary School located approximately 1.9 miles to the west.

The Project site is not located in a high severity fire hazard zone (California Department of Forestry and Fire Department [CALFIRE] 2007a and 2007b).

3.9.2 Discussion

#9 -a, b. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? 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?

The Project consists of temporary construction activities and would not result in new or different long-term activities that would include the use, transport, or disposal of hazardous materials; however, Project construction would involve the storage, transport, and use of small amounts of hazardous substances necessary to operate and maintain construction vehicles and equipment such as oils, lubricants, and fuel. The Project would not involve routine or long-term transport or disposal of such materials. None of the proposed Project activities would involve the use of acutely hazardous materials.

The transport and use of hazardous materials are strictly regulated by local, state, and federal agencies to minimize adverse hazards from accidental release. EPA, California Highway Patrol, Caltrans, and DTSC implement and enforce state and federal laws regarding hazardous material transportation. Contractors would be required to use, store, and dispose of any hazardous materials in accordance with all applicable regulations. Additionally, RRID would prepare and implement a SWPPP to prevent and control pollution and to minimize and control runoff and erosion in compliance with state and local laws. The SWPPP would include construction techniques and BMPs, as appropriate to reduce the potential for runoff and exposure to hazardous materials.

Compliance with state and federal laws as well as implementation of a SWPPP would reduce the potential impact from accidental spill of or exposure to hazardous materials during routine use, transport, or disposal. The SWPPP would include a spill prevention, control, and countermeasure plan, and would identify the types of materials used for equipment operation (including fuel and hydraulic fluids), along with measures to prevent and materials available to clean up hazardous material and waste spills. The SWPPP would also identify emergency procedures for responding to spills. Therefore, the proposed Project would have a **less than significant** impact.

#9 -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 0.25 mile of the Project site. There would be **no impact**.

#9 -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?

The Project site is not identified on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. There would be **no impact**.

#9 -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 or excessive noise for people residing or working in the Project area?

Kern County has established an Airport Land Use Compatibility Plan which has been incorporated into the General Plan (Kern County 2012). The purpose of the Airport Land Use Compatibility Plan is to establish procedures and criteria by which Kern County and affected incorporated cities can address compatibility issues when making planning decisions. The Project is located approximately 5.5 miles southwest of Minter Field. The Project site is not located within an Airport Influence Area and as such would not need to be reviewed to insure compatibility with the Airport Land Use Compatibility Plan. There would be **no impact**.

#9 -f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Kern County does not have an adopted emergency response plan or emergency evacuation plan; however, the Project would not affect emergency response or evacuation activities as the construction of the groundwater recharge ponds are minimal in scope and size when compared to other facilities in the Central Valley. Additionally, the Project would not require any road closures for Project implementation and therefore the Project would not interfere with traffic routes or response vehicle transport. There would be **no impact**.

#9 -g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

The Project site is not located in a very high fire hazard severity zone (CAL FIRE 2007a, 2007b). Construction activities would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. There would be **no impact**.

3.10 Hydrology and Water Quality

#10. HYDROLOGY AND WATER QUALITY. Would the Project?	Have Potentially Significant Impact?	Have Less Than Significant Impact with Mitigation Incorporated?	Have Less Than Significant Impact?	Have No Impact?	Have Beneficial Impact?
#10 -a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	No.	**Yes.**	No.	No.	No.
#10 -b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	No.	No.	**Yes.**	No.	No.
#10 -c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	No.	No.	No.	**Yes.**	No.
#10 -c. i. result in substantial erosion or siltation on- or off-site;	No.	No.	**Yes.**	No.	No.
#10 -c. ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	No.	No.	No.	**Yes.**	No.
#10 -c. iii. 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; or	No.	No.	No.	**Yes.**	No.
#10 -c. iv. impede or redirect flood flows?	No.	No.	No.	**Yes.**	No.
#10 -d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	No.	No.	No.	**Yes.**	No.
#10 -e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	No.	No.	No.	**Yes.**	No.

3.10.1 Environmental Setting

RRID has a distribution system with the capacity to meet the irrigation water requirements of all irrigated lands. Even though serviced by NKWSD, RRID does not benefit from the same water rights that are available to the NKWSD; accordingly, groundwater remains the principal source

of water within RRID, with surface water being purchased and delivered by NKWSD on an "as-available" basis, which is relatively infrequent.

Where farmlands in RRID are proximate to urban areas, there has been pressure to convert these lands to urban uses. Urbanization is occurring throughout the Kern County Subbasin and other water districts are also facing this issue. To date, RRID area has been the primary target for urbanization as the City of Bakersfield expands to the north. Approximately 1,000 acres have been annexed to the City of Bakersfield since formation of RRID in 1980.

3.10.2 Discussion

#10 -a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Potential impacts to groundwater quality were determined by comparing water quality data near the proposed Project to Kern River. **Table 3-6** compares water quality from Kern River (untreated) and FKC to be used for groundwater recharge (column number 3) against groundwater quality observations recorded by the Vaugh Water Company (column number 4), which is immediately adjacent to RRID. The data also shows the drinking water standards, which may include Maximum Contaminant Levels (MCLs), Secondary Maximum Contaminant Levels, or Notification Levels for applicable constituents.

Table 3-6. Comparison of Water Quality Data from Kern River and Nearby Groundwater.

Constituent	Drinking Water Standard	Kern River[1]	Friant-Kern Canal[1]	Groundwater[2]	Units
Arsenic	10	6	ND	3.13	µg/L
Fluoride	2	0.27	ND	0.30	mg/L
Iron	300	120	ND	7.7	µg/L
Turbidity	5	1.78	1.31	0.08	Units
Total Dissolved Solids	1000	118	73	234.60	mg/L
Specific Conductance	1600	213	133	405.90	uS/cm
Chloride	500	7.34	6.61	57.70	mg/L
Sulfate	500	20.1	7.67	24.50	mg/L
Total Hardness (as $CaCO_3$)	N/A	58.2	41.2	45.00	mg/L
Sodium	N/A	23.4	11.8	52.80	mg/L
Boron	1	0.18	ND	0.08	mg/L
Gross Alpha	15	4.74	ND	2.14	pCi/L
Aluminum	1	ND	0.055	0.002	mg/L
Barium	1	ND	ND	0.008	mg/L
Chromium (Total)	0.05	ND	ND	0.3	mg/L
Nitrate (as N)	10	ND	0.31	1.76	mg/L
Vanadium	0.05	ND	0.004	2.90	mg/L
Radon	N/A	--	--	0.299	mg/L
1,2,3 – Trichloropropane (TCP)	5	ND	ND	0.24	ng/L
Manganese	50	233	ND	--	µg/L

Constituent	Drinking Water Standard	Kern River[1]	Friant-Kern Canal[1]	Groundwater[2]	Units
Total Alkalinity (as $CaCO_3$)	N/A	76	82	--	mg/L
Bicarbonate	N/A	92.7	56.1	--	mg/L
Calcium	N/A	18.0	14.6	--	mg/L
Magnesium	N/A	3.23	1.15	--	mg/L
Potassium	N/A	2.40	1.48	--	mg/L
pH	N/A	8.30	9.00	--	Units
Bromide	N/A	0.02	0.02	--	mg/L
Silica	N/A	7.8	15.4	--	mg/L
Total Organic Carbon	N/A	2.8	2.3	--	mg/L

Notes:
N/A = no applicable drinking water standard
the constituent that is greater is bolded
ND = the constituent was not detected
-- = water quality data was not available or considered not detected from Consumer Confidence Report
mg/L = milligrams per liter
ng/L = nanograms per liter
µg/L = micrograms per liter
pCi/L = picocuries per liter
Sources: [1] Kern County Water 2022, [2] Vaughn Water Company 2022

The recharge of surface water with groundwater through recharge operations will result in blended water quality. The actual aquifer water quality resulting from the mixing of surface and groundwater will depend on the volume of water recharged, the duration of recharge, and the distance away from the Project. No adverse geochemical reactions are predicted based on the mixing of surface and groundwater quality for the proposed Project. Because surface water has levels of arsenic, iron, and boron that are higher than those found in groundwater, the blended mix that results from recharge will lead to lower levels of those constituents in the mixing zone within the aquifer. Manganese in surface water, which is the only constituent that exceeded a drinking water standard, will also be blended to a lower level.

Based on database searches (*see* Section 3.9 "Hazards and Hazardous Materials"), use of hazardous material has not been recorded on-site; however, undiscovered pollutants (if present), such as nitrogen and other fertilizers during farming production, may migrate from the soil into the groundwater system during recharge. Therefore, a **potentially significant impact** could occur. The following mitigation measure has been identified to address this impact:

Mitigation Measure HYDRO-1: Monitor Groundwater Quality.

To minimize potential effects of project construction and operation on groundwater quality, the District will ensure that the following measures are implemented:

- The District will use an existing groundwater extraction well on or near the Project site to monitor groundwater levels and quality during and after recharge operations. The purpose of monitoring is to verify groundwater recharge is not detrimentally affecting groundwater quality in the Project area.
- During construction of the recharge basins, up to 5 feet of fine ground soils (silts and clays) will be excavated from each recharge basin to expose the

underlying fine to medium grained sand in the base of each recharge basin. During soil excavation and removal, the contractor and inspecting engineer will monitor for evidence of soil contamination (color, odor, buried tanks, pipelines). If contaminated soils are encountered during excavation, these soils will be analyzed to identify the type and extent (vertically and horizontally) of contamination present. Contaminated soils will either be treated on site or disposed of at a hazardous waste landfill.

- If contaminated soils are encountered during construction, additional groundwater monitoring wells may be installed to verify that groundwater has not been impacted. As an added measure of protection, the District will cease the construction of the pond in and adjacent to contaminated soils. During the operational phase of the proposed project, the District will conduct annual monitoring to verify that groundwater quality is not being adversely impacted by the recharge operation.

Implementing Mitigation Measure HYDRO-1 would reduce the potential effects related to groundwater resources to a less than significant level because monitoring and corrective action. Therefore, the proposed project would have a **less than significant impact with mitigation**.

#10 -b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Changes to groundwater levels are expected to be beneficial to existing and potential users of the groundwater resource by raising groundwater levels in the vicinity of the recharge site, resulting in lower energy costs to lift water from nearby wells. The proposed site is suitable for groundwater recharge because of the favorable topography and soils (NKWSD 2014 and 2019).

Based on the Soil Survey Geographic Database (SSURGO), soils in the Project area belong to Hydrologic Group A (NRCS 2024). Soils in this group have low runoff potential when thoroughly wet and water is transmitted freely. Group A soils have high infiltration rates as they are composed of well drained sands or gravelly sands giving the group the highest potential for contributing to groundwater recharge of any hydrologic soils group.

The Project area is also mapped as being of the Nitisol taxonomic soil order. These soils are characterized by the absence of soil horizons due to recent deposition or active erosion under extreme wet or dry conditions. The recent formation and absence of soil horizons suggests the lack of confining layers would obstruct the percolation of recharged water to the area's principal aquifer.

Both the hydrologic soils group classification and the taxonomic soil order support the inference that water diverted to the Project will infiltrate through the soil surface and that the infiltrated water will not be impeded by clay lenses or other obstructions as it percolates to the principal aquifer. Further, no horizontal restrictions are noted that would preclude formation of a groundwater mound that would extend from the recharge site.

The suitability of the Project site for groundwater recharge is also supported by the Soil Agricultural Groundwater Banking Index (SAGBI). SAGBI is a tool developed by the University of California, Davis (UCD) that is widely used to rate the suitability of lands for groundwater banking. The index is largely based on soil and agronomic data and examines the following five evaluation factors:

- Deep percolation: This factor is derived from the soil horizon with the lowest saturated hydraulic conductivity (Ksat). Saturated hydraulic conductivity is a measure of soil permeability when soil is saturated.

- Root zone residence time: The root zone residence time factor estimates the likelihood of maintaining good drainage within the root zone shortly after water is applied. This rating is based on the harmonic mean of the Ksat of all horizons in the soil profile, soil drainage class and shrink-swell properties.

- Chemical limitations: The chemical limitations factor is quantified using the electrical conductivity of the soil.

- Topographic limitations: Flat topography is better suited for holding water on the landscape, thereby allowing for infiltration across large areas, reducing ponding and minimizing erosion by runoff. Ranges in slope percent are used to categorize soils according to the suitability of their slopes.

- Surface conditions: Depending on water quality and depth, standing water can impair a soil's suitability for recharge by damaging soil aggregates, forming soil crusts, and compaction. The sodium adsorption ratio and the soil erosion factor are used to estimate soil susceptibility to erosion, disaggregation, and crust formation.

SAGBI applies these evaluation factors to assign a SAGBI Rating Class to prospective recharge sites. Of SAGBI's six Rating Classes, the Project site and its vicinity receive a Rating Class of "excellent", the highest possible outcomes (UCD 2024). This rating is consistent with inferences drawn from the hydrologic soils group classification and the taxonomic soil order.

Based on the characteristics of the soils found in the Project area and the SAGBI rating, the proposed Project will raise groundwater levels in the vicinity of the recharge site. Thus, recharge from the Project will have the beneficial results of lowering energy costs to lift water from nearby wells, improving water quality through introduction of high-quality surface water and contributing to the Kern County Subbasin's efforts to comply with SGMA by raising groundwater elevations. The District will confirm these benefits by monitoring groundwater levels in Mitigation Measure HYDRO-1. Therefore, the proposed project would have a **less than significant impact with mitigation**.

#10 -c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

#10 -i, ii, iii, and iv) Result in substantial erosion or siltation on- or off-site; Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; 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; or Impede or redirect flood flows?

The District would create a 110-acre groundwater recharge facility which would alter the existing drainage pattern of the site; however, the purpose of the proposed Project is to retain water. RRID would prepare and implement a SWPPP, which will describe the construction activities to be conducted, BMPs that would be implemented to prevent soil erosion and contaminated stormwater discharges into waterways, and inspection and monitoring activities that would be conducted. As part of ongoing maintenance, RRID would maintain the ponds so that substantial erosion and siltation do not occur. Because surface water would be held within the ponds, the facility would not result in off-site runoff or redirection any flood flows. The Project does not increase impervious surfaces. The proposed Project is located in an agricultural area that does not contain a stormwater drainage system. Therefore, impacts are **less than significant**.

#10 -d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

The Project is not located in a flood hazard, tsunami, or seiche zone, therefore there will be **no impact.**

#10 -e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The Project purpose is to enhance groundwater management by increasing RRID's ability to recharge groundwater in wet years. Therefore, the impact is **less than significant**.

3.11 Land Use and Planning

#11. LAND USE AND PLANNING. Would the Project?	Have Potentially Significant Impact?	Have Less Than Significant Impact with Mitigation Incorporated?	Have Less Than Significant Impact?	Have No Impact?	Have Beneficial Impact?
#11 -a. Physically divide an established community?	No.	No.	No.	**Yes.**	No.
#11 -b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	No.	No.	No.	**Yes.**	No.

3.11.1 Environmental Setting

The Project site is zoned as letter "A" (signifying exclusive agriculture) (Kern County 2023). The Project site is located in a rural area surrounded by various agricultural crops, orchards, and water conveyance canals.

3.11.2 Discussion

#11 -a and b. Physically divide an established the community, and cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

The proposed Project is located within a historically active agricultural field, in an area zoned exclusively for agriculture (Kern County 2023). The proposed Project is also located outside of existing communities and are consistent with existing zoning. The proposed Project is located within the Metropolitan Bakersfield HCP area and the proposed plan area for the potential Bakersfield HCP and Kern Valley Floor HCP; however, the Metropolitan Bakersfield HCP expired in January 2023 and a draft of the more comprehensive Bakersfield HCP has not been released. There is no indication either of these planned HCPs will be finalized and adopted before the proposed Project is implemented. Therefore, there would be **no impact**.

3.12 Mineral Resources

#12. MINERAL RESOURCES. Would the Project?	Have Potentially Significant Impact?	Have Less Than Significant Impact with Mitigation Incorporated?	Have Less Than Significant Impact?	Have No Impact?	Have Beneficial Impact?
#12 -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?	No.	No.	Yes.	No.	No.
#12 -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?	No.	No.	No.	Yes.	No.

3.12.1 Environmental Setting

The Project site is located within a Surface Mining and Reclamation Act of 1975 (SMARA) study area for aggregate materials in the Bakersfield production-consumption region. The Project site is designated as Mineral Resource Zone-3 (Areas containing mineral deposits, the significance of which cannot be evaluated from available data) (DOC 2009).

3.12.2 Discussion

#12 -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?

The Project site is located in a S.M.A.R.A. study area but there are no known significant mineral deposits. The Project includes construction of groundwater recharge pond which would be constructed on a historically active agricultural field and would disturb approximately 110 acres. There would be no loss of mineral resources, however, the site would not be available for extraction of mineral resources (if any are present) while the pond is operational. Therefore, this impact would be **less than significant**.

#12 -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 Project is not located within the vicinity of a locally important mineral resource recovery site. There would be **no impact**.

3.13 Noise

#13. NOISE. Would the Project?	Have Potentially Significant Impact?	Have Less Than Significant Impact with Mitigation Incorporated?	Have Less Than Significant Impact?	Have No Impact?	Have Beneficial Impact?
#13 -a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable standards of other agencies?	No.	No.	Yes.	No.	No.
#13 -b. Generation of excessive groundborne vibration or groundborne noise levels?	No.	No.	Yes.	No.	No.
#13 -c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 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?	No.	No.	Yes.	No.	No.

3.13.1 Environmental Setting

The Project is located in an agricultural area. The closest sensitive receptors would be the residences located on the north side of SR 58, approximately 0.80 miles east of the Project on Kratzmeyer Road. The Kern County Code of Ordinances states that construction related noise is limited to the hours of 6:00 a.m. to 9:00 p.m. on weekdays and 8:00 a.m. to 9:00 p.m. on weekend (Kern County 2020).

3.13.2 Discussion

#13 -a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable standards of other agencies?

Construction noise impacts typically occur when construction activities take place during noise-sensitive times of the day (e.g., early morning, evening, or nighttime hours), when construction activities occur immediately adjacent to noise sensitive land uses, or when construction durations last over extended periods of time. Construction of the proposed Project would temporarily increase the ambient noise levels within the vicinity of the Project site.

Although construction activities would for the most part occur only during the daytime hours, uncontrolled construction noise could still be considered disruptive to residents adjacent to the proposed Project. Therefore, the proposed Project would generate temporary construction noise

from the use of heavy machinery during construction activities, and from the transport of construction workers and materials to the site. The list of construction equipment that may be used for Project construction activities is shown in **Table 3-7** with typical noise levels generated at 50 feet from the equipment (reference levels). Since the closest sensitive noise receptor is approximately 0.80 miles from the Project site, construction noise levels at the sensitive noise receptors would be considerably lower. Additionally, construction related noise would be short-term and temporary and therefore is not considered significant. All work at the proposed Project sites would be limited to the hours identified in Kern County's Noise Ordinance.

Table 3-7: Typical Noise Levels from Equipment.

Type of Equipment	Typical Noise Levels (dBA) L_{max} at 50 feet
Backhoe	80
Dozer	82
Drill Rig	79
Excavator	81
Hoist Crane	81
Trencher	80
Pick-up Truck	75
Water Truck	75

Notes:
dB = decibels; Lmax = maximum instantaneous sound level
Leq = 1-hour equivalent sound level (the sound energy averaged over a continuous 1-hour period)
Source: Construction equipment list based on Federal Highway Administration 2006, adapted by GEI.

During operations, the proposed Project will not generate loud noises. Therefore, noise impacts would be **less than significant**.

#13 -b. Generation of excessive groundborne vibration or groundborne noise levels?

Ground vibration would only be caused during construction activities and would primarily occur during excavation of the groundwater recharge ponds. Ground vibrations could be detectable by nearby sensitive receptors; however, the closest sensitive noise receptor is approximately 0.80 miles from the Project site so a vibrational impact would not be significant. No adverse levels of vibration would be generated during Project operations. Therefore, vibration impacts would be **less than significant**.

#13 -c) For a project located within-the vicinity of a private airstrip or-an airport land use plan or, where such a plan has not been adopted, within 2 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?

Kern County has established an Airport Land Use Compatibility Plan which has been incorporated into the General Plan (Kern County 2012). The Project is located approximately 5.5 miles southwest of Minter Field. The Project is not within an Airport Land Use Compatibility Plan. *See* Section 3.9 "Hazards and Hazardous Materials" Question 9e for further discussion. This impact would be **less than significant**.

3.14 Population and Housing

#14. POPULATION AND HOUSING. Would the Project?	Have Potentially Significant Impact?	Have Less Than Significant Impact with Mitigation Incorporated?	Have Less Than Significant Impact?	Have No Impact?	Have Beneficial Impact?
#14 -a. Induce substantial unplanned 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)?	No.	No.	No.	**Yes.**	No.
#14 -b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	No.	No.	No.	**Yes.**	No.

3.14.1 Environmental Setting

The Project sites are located in unincorporated Kern County. In 2019, the population of Kern County was estimated to be 907,476 in (Department of Finance 2023).

3.14.2 Discussion

#14 -a. Induce substantial unplanned 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 include any new developments that would support or facilitate construction of new homes or businesses or extend roadways or other infrastructure that could increase population near the proposed Project. The Project neither involves construction of any permanent housing nor requires additional employees for operation. The Project would not increase the amount of water pumped to the District. There would be **no impact**.

#14 -b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

The Project would not displace people or housing. The Project is located in an area zoned as "exclusive agriculture" with little to no residential properties in the vicinity. There would be **no impact**.

3.15 Public Services

#15. PUBLIC SERVICES. Would the Project?	Have Potentially Significant Impact?	Have Less Than Significant Impact with Mitigation Incorporated?	Have Less Than Significant Impact?	Have No Impact?	Have Beneficial Impact?
#15 -a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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:	No.	No.	No.	**Yes.**	No.
Fire protection?	No.	No.	No.	**Yes.**	No.
Police protection?	No.	o.	No.	**Yes.**	No.
Schools?	No.	No.	No.	**Yes.**	No.
Parks?	No.	No.	No.	**Yes.**	No.
Other public facilities?	No.	No.	No.	**Yes.**	No.

3.15.1 Environmental Setting

The Kern County Sheriff and California Highway Patrol provide law enforcement services for unincorporated Kern County. The Kern County Fire Department provides fire protection to residents of the unincorporated areas of the County, and the cities of Arvin, Delano, Maricopa, McFarland, Ridgecrest, Shafter, Tehachapi and Wasco (Kern County 2004b). A mutual agreement between the County and the cities of Bakersfield, Taft, and California City allows for protection and assistance in the jurisdiction of each as needed. The County also has a mutual aid contract with USFWS and a service agreement with the Bureau of Land Management.

3.15.2 Discussion

#15 -a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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:

The proposed Project would not require new or altered government facilities, as the Project would not increase the need for public services from the existing conditions. There would be **no impact**.

3.16 Recreation

#16. RECREATION. Would the Project?	Have Potentially Significant Impact?	Have Less Than Significant Impact with Mitigation Incorporated?	Have Less Than Significant Impact?	Have No Impact?	Have Beneficial Impact?
#16 -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?	No.	No.	No.	**Yes.**	No.
#16 -b. Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	No.	No.	No.	**Yes.**	No.

3.16.1 Environmental Setting

The only recreational facilities within 3 miles from the Project are located at the Rio Bravo Elementary School.

3.16.2 Discussion

#16-a and b. 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 or include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

The Project is not growth inducing and would not increase the use of existing parks or recreational facilities or require the construction or expansion of recreational facilities. There would be **no impact**.

3.17 Transportation

#17. TRANSPORTATION. Would the Project?	Have Potentially Significant Impact?	Have Less Than Significant Impact with Mitigation Incorporated?	Have Less Than Significant Impact?	Have No Impact?	Have Beneficial Impact?
#17 -a. Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	No.	No.	No.	**Yes.**	No.
#17 -b. Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	No.	No.	No.	**Yes.**	No.
#17 -c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	No.	No.	No.	**Yes.**	No.
#17 -d. Result in inadequate emergency access?	No.	No.	No.	**Yes.**	No.

3.17.1 Environmental Setting

The proposed Project is located in rural, unincorporated Kern County. The Project is located approximately 1.9 miles east of State Route 43. There are no transit or on-street bicycle/pedestrian facilities near the Project.

3.17.2 Discussion

#17 -a, b, c, and d). Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)? Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? Result in inadequate emergency access?

The Project would not conflict with any program plan, ordinance, or policies. Construction and operation of the Project would be located entirely within the 110-acre site. Traffic would utilize existing Snow Road and/or Kratzmeyer Road to deliver equipment, supplies, and workers to and from the Project site. The Project would not require any road closures or result in inadequate emergency access. Since no new roads are being developed, the Project would not increase hazards due to a geometric design feature or incompatible uses. There would be **no impact**.

3.18 Tribal Cultural Resources

#18. TRIBAL CULTURAL RESOURCES. Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC 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:	Have Potentially Significant Impact?	Have Less Than Significant Impact with Mitigation Incorporated?	Have Less Than Significant Impact?	Have No Impact?	Have Beneficial Impact?
#18 -a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k), or	No.	No.	No.	**Yes.**	No.
#18 -b. 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 PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	No.	No.	No.	**Yes.**	No.

3.18.1 Environmental Setting

A request for a Sacred Lands File search was filed with the Native American Heritage Commission (NAHC) by GEI archaeologist Amy Wolpert. A response was received from the NAHC on December 5, 2023; the search failed to identify any tribal cultural resources on or in the vicinity of the proposed Project (NAHC 2023).

The District has not received any notice from California Native American tribes requesting consultation on projects per AB 52 (PRC Section 21080.3.1) and so no letters requesting consultation could be sent.

3.18.2 Discussion

#18 -a and b) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC 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 listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k)? 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 PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

There are no known tribal cultural resources located in the vicinity of the Project. There are no known Indian Sacred Sites in the vicinity of the Project. Since no known Indian Sacred Sites have been identified within any of the Project area, there would be no direct, indirect, or cumulative impacts to Indian Sacred Sites from the proposed Project. The proposed Project would not have the potential to affect or prohibit access to any ceremonial use of Indian Sacred Sites. There would be **no impact**.

3.19 Utilities and Service Systems

#19. UTILITIES AND SERVICE SYSTEMS. Would the Project?	Have Potentially Significant Impact?	Have Less Than Significant Impact with Mitigation Incorporated?	Have Less Than Significant Impact?	Have No Impact?	Have Beneficial Impact?
#19 -a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	No.	No.	No.	**Yes.**	No.
#19 -b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	No.	No.	No.	**Yes.**	No.
#19 -c. Result in a determination by the wastewater treatment provider that 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?	No.	No.	No.	**Yes.**	No.
#19 -d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	No.	No.	**Yes.**	No.	No.
#19 -e. Comply with Federal, State, and local management and reduction statutes and regulations related to solid waste?	No.	No.	**Yes.**	No.	No.

3.19.1 Environmental Setting

The Project is served by PG&E, Southern California Edison, and Southern California Gas (Kern County 2004a). Sewage disposal is handled by both public and private agencies, and by private individual systems. Several incorporated and unincorporated communities are severed by wastewater treatment plants managed by community service districts. The closest wastewater treatment plant to the Project is the Wasco Wastewater Treatment Plant, which is approximately 15 miles northwest. Domestic water is serviced to the public by various water purveyors consisting of public and private water systems. The Kern County Waste Management Department currently owns and operates seven Class II Landfills, of which the closest landfill is the Metropolitan Bakersfield Sanitary Landfill located in Bakersfield (Kern County 2004b).

3.19.2 Discussion

#19 -a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

No utility services would need to be constructed or expanded as a result of the proposed Project. Water would be delivered to the site delivered via existing water conveyances, such as the R- 3 Canal. Implementation of the proposed Project would result in **no impact**.

#19 -b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

The proposed Project consists of constructing a groundwater recharge pond with water obtained from existing District sources and delivered via existing water conveyances. The District would only deliver water during "wet" years when surface water supplies are adequate. There is no reasonably foreseeable future development related to the construction and operation of the proposed Project. There would be **no impact**.

#19 -c. Result in a determination by the wastewater treatment provider that 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?

See Question "a" above. Wastewater would not be produced as a result of the proposed Project. There would be **no impact**.

#19 -d and e) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? Comply with Federal, State, and local management and reduction statues and regulations related to solid waste?

The proposed Project would not create substantial amounts of solid waste, and as such would not exceed the capacity of local infrastructure. Minimal waste would be generated during construction and no increase in waste production would occur during the operation of the Project. The Project would comply with federal, state, and local management and reduction statues and regulations related to solid waste. There would be **less than significant** impacts.

3.20 Wildfire

#20. **WILDFIRE.** If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, **would the Project?**	Have Potentially Significant Impact?	Have Less Than Significant Impact with Mitigation Incorporated?	Have Less Than Significant Impact?	Have No Impact?	Have Beneficial Impact?
#20 -a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	No.	No.	No.	**Yes.**	No.
#20 -b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	No.	No.	No.	**Yes.**	No.
#20 -c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	No.	No.	No.	**Yes.**	No.
#20 -d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	No.	No.	No.	**Yes.**	No.

3.20.1 Environmental Setting

The Project is not located in a high severity fire zone (CAL FIRE 2007a). The Project is located in an unincorporated Local Responsible Area (LRA) zone (CAL FIRE 2007b). The Kern County Fire Department provides fire protection for residents of the unincorporated areas of the County and the cities of Arvin, Delano, Maricopa, McFarland, Ridgecrest, Shafter, Tehachapi and Wasco (Kern County 2004b).

3.20.2 Discussion

#20 -a, b, c, and d) Substantially impair an adopted emergency response plan or emergency evacuation plan? Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire? Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment? Expose people or structures to significant risks, including

downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

The Project is not located in a high severity fire zone. The short-term, temporary nature of construction would not pose a risk to emergency response or evacuation during an emergency. The Project would not require any infrastructure that would exacerbate fire risk or the risk of flooding, slope instability, or drainage changes. There would be **no impact**.

3.21 Mandatory Findings of Significance

#21. MANDATORY FINDINGS OF SIGNIFICANCE. Would the Project?	Have Potentially Significant Impact?	Have Less Than Significant Impact with Mitigation Incorporated?	Have Less Than Significant Impact?	Have No Impact?	Have Beneficial Impact?
#21 -a. Have the potential to substantially 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, substantially reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?	No.	**Yes.**	No.	No.	No.
#21 -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)?	No.	**Yes.**	No.	No.	No.
#21 -c. Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	No.	No.	**Yes.**	No.	No.

3.21.1 Discussion

#21 -a. Would the project have the potential to substantially 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, substantially reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?

The analysis conducted in this IS/MND concludes that implementation of the proposed Project would not have a significant impact on the environment. As evaluated in Chapter 3.4, "Biological Resources," impacts on biological resources would be less than significant or less than significant with mitigation incorporated. The proposed Project would not substantially 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; or reduce the number or restrict the range of an endangered, rare, or threatened species. As discussed in Chapter 3.5, "Cultural Resources," the

proposed Project would not eliminate important examples of the major periods of California history or prehistory. This impact would be **less than significant with mitigation incorporated**.

#21 -b. Would the Project 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.)

To consider cumulative impacts[4] to the environment, past, present, and reasonably foreseeable probable future projects implemented within the vicinity of the proposed Project were considered and analyzed for potential cumulative impacts to water quality. RRID is considering six other groundwater recharge projects of which two would be contiguous with the proposed Project (one to the west along Kratzmeyer Road and one to the north along Snow Road). Cumulatively, these projects, including the proposed Project, involve up to 1,600 acres of groundwater recharge. As a whole, these projects would be operated to provide a long-term benefit to the basin and aid in regional compliance with SGMA.

Overall, cumulative impacts to water levels and quality from the Project is **less than significant with mitigation incorporated**. Mitigation Measure HYDRO-1 will be incorporated into the proposed Project to reduce potential impacts to undiscovered pollutants (if present).

For all other resources, as discussed in this IS/MND, the proposed Project would result in less than significant impacts with mitigation incorporated, less than significant impacts, or no impacts on aesthetics, air quality, biological resources, cultural resources, geology and soils, GHG emissions, hazards and hazardous materials, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation, tribal cultural resources, utilities and service systems, and wildfire. The temporary nature of the proposed Project's construction impacts, and the minor, negligible changes to long-term operations and maintenance at the Project location would result in no impacts or less than significant environmental impacts on the physical environment. None of the proposed Project's impacts would make cumulatively considerable, incremental contributions to significant cumulative impacts due to the incorporation of mitigation presented in this IS/MND. This impact would be **less than significant with mitigation incorporated**.

#21 -c. Would the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?

The Project would result in less than significant impacts and would not cause substantial adverse effects on human beings, either directly or indirectly. This impact would be **less than significant**.

[4] The CEQA Guidelines, Section 15355 state, "The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time."

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No Citations.

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Appendix A Project Site Photos

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Photo 1. Looking north within the R-3 Canal toward the proposed groundwater recharge ponds.

Photo 2. Looking south from Snow Road toward the proposed groundwater recharge ponds.

Photo 3. Looking west along Kratzmeyer Road toward the proposed groundwater recharge ponds.

Photo 4. Looking south from Greely Road toward the proposed groundwater recharge ponds.