DRAFT
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

WESTSIDE SUBBASIN EPHEMERAL CREEKS RECHARGE PROJECTS

March 2025

LEAD AGENCY:

Westlands Water District
286 W. Cromwell
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ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
AE	Agriculture Exclusive
AF	acre-feet
AFY	acre-feet per year
BMP	Best Management Practice
BPSs	Best Performance Standards
CAA	Clean Air Act
CAL FIRE	California Department of Forestry and Fire Protection
CalOSHA	California Division of Occupational Safety and Health Administration
CARB	California Air Resources Board
CCAP	Climate Change Action Plan
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFCs	Chlorofluorocarbons
CFGC	California Fish and Game Code
CH4	methane
CIP	Canalside Integration Project
CNDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CNPS	California Native Plant Society
CO	Carbon Monoxide
CO2	Carbon Dioxide
CUPA	Certified Unified Program Agencies
CVP	Central Valley Water Project
CVPIA	Central Valley Project Improvement Act
CVRWQCB	Central Valley Regional Water Quality Control Board
dB	Decibel
dBA	A-weighted decibel scale
District	Westlands Water District
DMC	Delta-Mendota Canal
DTGW	depth to groundwater
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
EC	electro-conductivity
EPA	Environmental Protection Agency
ESA	Endangered Species Act
Farmland	Farmland of Statewide Importance
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Maps
FMMP	Farmland Mapping and Monitoring Program
GHG	greenhouse gas

ACRONYMS AND ABBREVIATIONS

gpm	gallons per minute
GPS	Global Positioning System
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
HCFCs	hydrochlorofluorocarbons
I-5	Interstate 5
IS	Initial Study
LRA	Local Responsibility Area
LSCE	Ludhorff & Scalmanini Consulting Engineers
MLD	Most Likely Descendent
MND	Mitigated Negative Declaration
N2O	nitrous oxide
NAS Lemoore	Naval Air Station Lemoore
NO	nitric oxide
NO2	Nitrogen Dioxide
NOx	Nitrogen oxides
Ozone	Ground-level Ozone
PM10	Respirable Particulate Matter
PM2.5	Fine Particulate Matter
Project	Westside Subbasin Ephemeral Creeks Recharge Projects
SB	Senate Bill
SFHA	Special Flood Hazard Area
SIP	State Implementation Plan
SJVAPCD	San Joaquin Valley Air Pollution Control District
SLC	San Luis Canal
SGMA	Sustainable Groundwater Management Act
SO2	Sulfur Dioxide
SRA	State Responsibility Area
SSC	Species of Special Concern
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminant
TPZ	Timberland Preserve Zone
USBR	United States Bureau of Reclamation
USFWS	U.S. Fish and Wildlife Service
VOC	volatile organic compounds
WSGM	Westside Groundwater Model

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CHAPTER 1
INTRODUCTION AND PROJECT DESCRIPTION

1.0 PROJECT TITLE

Westside Subbasin Ephemeral Creeks Recharge Projects

2.0 LEAD AGENCY NAME AND ADDRESS

Westlands Water District
286 W Cromwell Avenue
Fresno, California 93711-6162

3.0 CONTACT PERSON AND PHONE NUMBER

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(559) 241-6226

4.0 PROJECT VICINITY AND LOCATION

The Westside Subbasin Ephemeral Creeks Recharge Projects (Project) is located within the Fresno County portion of the Westlands Water District (District), which lies on the west side of the San Joaquin Valley (Figure 1). The District and the Project areas overlie the Westside Subbasin (referenced throughout as "Subbasin" or "Westside Subbasin") of the San Joaquin Valley Groundwater Basin. The Project's proposed groundwater recharge facilities are located at three separate sites along three ephemeral drainages – Cantua Creek, Arroyo Pasajero Creek (an intermittent stream also known as Los Gatos Creek), and Panoche Creek. The proposed recharge facilities would be located within portions of the drainage channel for these three ephemeral drainages and/or located on historically cultivated commercial agricultural lands immediately adjacent to the drainage channels.

5.0 PROJECT SPONSOR'S NAME AND ADDRESS

Westlands Water District
286 W Cromwell Avenue
Fresno, California 93711-6162

6.0 GENERAL PLAN DESIGNATION

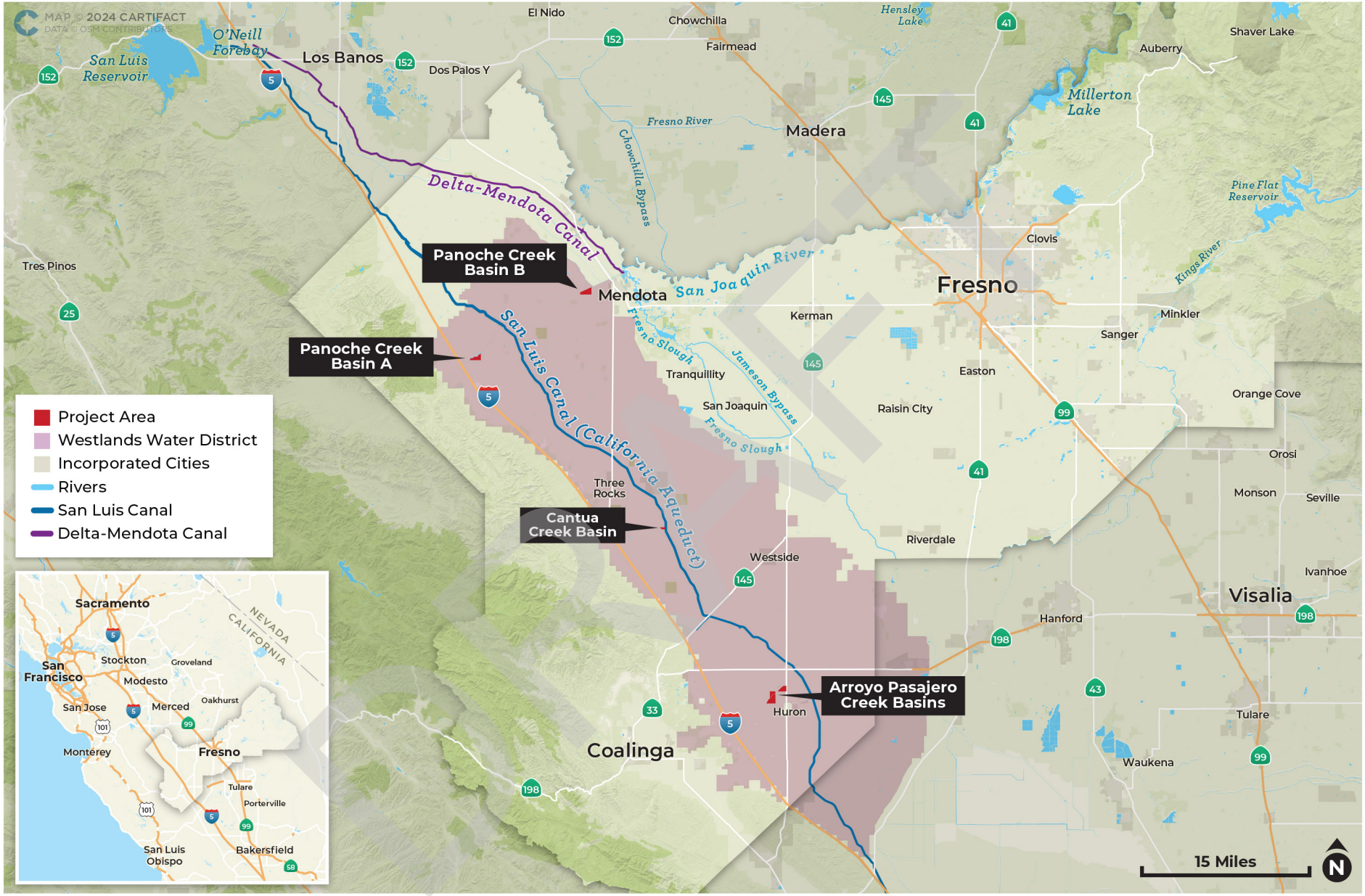
Agricultural

7.0 ZONING

Various agricultural and rural; See Section 15.11, *Land Use and Planning*

8.0 INTRODUCTION

This Initial Study (IS) and Mitigated Negative Declaration (MND) (collectively, the "Draft IS/MND") was prepared in accordance with the California Environmental Quality Act (CEQA) and Guidelines for Implementation of CEQA (CEQA Guidelines). It serves as the environmental document for the proposed Project. The primary intent of this document is to (1) determine whether Project implementation would result in potentially significant or significant impacts on the environment; and (2) to incorporate mitigation measures into the Project design, as necessary, to eliminate the Project's potentially significant or significant Project impacts or reduce them to a less than significant level.



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Project Vicinity

FIGURE 1

In accordance with CEQA, projects that have the potential to result in either a direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment, must undergo analysis to disclose the potential significant effects. The provisions of CEQA apply to California governmental agencies at all levels, including local agencies, regional agencies, state agencies, boards, commissions, and special districts. CEQA requires that an IS be prepared for a discretionary project such as the Project to determine the range of potential environmental impacts of that project and define the scope of the environmental review document. As specified in the CEQA Guidelines Section 15064(f), the lead agency may prepare an MND if, through the IS analysis, there is substantial evidence that the project may have a significant effect on the environment, but that impacts could be mitigated through the incorporation of feasible mitigation measures. As the lead agency for the proposed Project, the District has the principal responsibility for conducting the CEQA environmental review to analyze and disclose the potential environmental effects associated with Project implementation. During the review process, it was determined that potential Project-related impacts would be less than significant with the incorporation of feasible mitigation measures. Therefore, an MND was prepared for the proposed Project.

9.0 PROJECT BACKGROUND

9.1 Sustainable Groundwater Management Act and the District's Groundwater Sustainability Plan

On September 16, 2014, Governor Jerry Brown signed into law three bills, Assembly Bill (AB) 1739 (Dickinson), Senate Bill (SB) 1168 (Pavley), and SB 1319 (Pavley), collectively known as the Sustainable Groundwater Management Act (SGMA). The intent of this legislation is to manage the use of groundwater in a manner that can be maintained long-term without causing any of the six identified undesirable results in SGMA: 1) a chronic lowering of groundwater levels; 2) significant and unreasonable reduction in groundwater storage; 3) significant and unreasonable seawater intrusion; 4) significant and unreasonable degraded water quality (including the migration of contaminated plumes); 5) significant and unreasonable land subsidence that substantially interferes with surface land uses; or 6) depletions of interconnected surface water that have significant and unreasonable adverse impacts on beneficial uses of the surface water.

In the context of statewide concerns over mismanaged groundwater resources and poor groundwater quality, SGMA provides a framework and guidance for developing Groundwater Sustainability Plans (GSPs) and designates authority to local Groundwater Sustainability Agencies (GSAs). SGMA requires all groundwater basins designated as high or medium priority by the California Department of Water Resources (DWR) to be managed in a sustainable manner, and GSAs overlying basins designated as critically overdrafted must submit plans to DWR by January 31, 2020. The subbasin within the Project area, the Westside Subbasin, was designated as critically overdrafted and a high-priority basin. The District, acting as the GSA for the Westside Subbasin, prepared and adopted the Westside Subbasin GSP on January 8, 2020, and submitted the GSP to the DWR for review on January 23, 2020. Following review and comment by DWR, the District prepared an amendment to the GSP and resubmitted to the DWR on July 18, 2022. On August 4, 2023, DWR approved the revised Westside Groundwater Subbasin GSP ("District GSP"). The District GSP was further amended and the 2025 GSP Amendment published in January 2025.[1,2] The approved District GSP includes various

[1] The August 4, 2023 DWR Determination letter can be found here: https://sgma.water.ca.gov/portal/gsp/assessments/8.

[2] The District GSP and associated documents can be found here: https://sgma.water.ca.gov/portal/gsp/preview/8.

management strategies and actions for achieving sustainability of the groundwater basin, including groundwater level and land subsidence monitoring, utilization of surface water imports, increased aquifer storage and recovery, and targeted pumping reductions. The District GSP is incorporated into the Draft IS/MND analysis.

Specifically, the District GSP identifies Project No. 3 – Westlands Water District Groundwater Recharge Enhancement – as a key project/management action to achieve basin sustainability. Under this project/management action, the District would utilize District-operated recharge enhancement projects as a conjunctive use strategy to promote groundwater sustainability in the Subbasin. District recharge projects are intended to store and recharge supplemental surface water into the aquifer to enhance groundwater conditions within the Subbasin. Such projects are a common method for improving groundwater conditions and sustainability. *California's Water Supply Strategy: Adapting to a Hotter, Drier Future* identifies the intentional, direct recharge of groundwater as one of the fastest, most economical, and widely available ways to harness water from wet years and is necessary to help correct decades of over-pumping of groundwater basins (2025). At the time of completion of the District's GSP, the District had completed investigations of the feasibility of groundwater recharge at sites along Cantua Creek and Arroyo Pasajero Creek.

9.2 Purpose

The purpose of the Project is to provide facilities to capture excess surface water supply to be more efficiently recharged to the underlying groundwater basin, improving water supply reliability within the region, and improving conditions of the underlying aquifer consistent with the District GSP. In addition, some of the other goals of the Project are to protect baseline replenishment and existing beneficial uses while appropriating flood waters, enhancing natural aquifer recharge, promoting groundwater sustainability in the Subbasin, and providing flood relief to landowners adjacent to the proposed Project facilities. More efficient and reliable groundwater recharge would reduce adverse effects related to groundwater pumping and support agricultural operation throughout the region. Recharging excess surface water during normal and wet hydrological years would also aid in lessening the effect of dry years and drought periods.

10.0 Project Description

10.1 Proposed Diversion and Recharge Basins

The District proposes (1) the construction and operation of new surface water diversion and groundwater recharge basins and facilities located along Arroyo Pasajero Creek and Panoche Creek, and (2) the conversion and operation of the existing Cantua Creek storage basin to a surface water diversion system and recharge basin facility. The proposed basins would provide a combined percolation area of 1,004.95 acres, up to a maximum of 1,485.3 acres. The District proposes to divert up to a total maximum of 24,260 acre-feet per year (AFY) of surface waters from these three ephemeral drainages during periods of high flow to be retained in three (3) proposed diversion and recharge basin locations.

A summary of the proposed diversions and recharge basins is presented in Table 1, with an additional detailed description of each proposed diversion and recharge basin presented below.

Table 1. Summary of Proposed Diversion and Recharge Basins

Diversion and Recharge Basins	Basin Location	Parcel Info	Existing Site Use	Basin Design
Cantua Creek	4 miles south of Cantua Creek township	APN(s): 045-070-46ST (79.19 acres) Zoning: AE20	Existing storage basin	Size: 79 acres Diversion: 3,560 AFY
Arroyo Pasajero Creek	Palmer Avenue, 1 mile northwest of the City of Huron	APN(s): 075-020-34S (40.00 acres); 075-020-08S (150.70 acres); 075-020-38S (217.41 acres); 068-111-52T (475.41 acres) Zoning: AE20	Fallowed agriculture (orchards and row crops); vacant	Size: 449 acres Diversion: 15,000 AFY
Panoche Creek	West Panoche Road and I-5, 15 miles southwest of the City of Mendota	APN(s): 012-180-14ST (37.59 acres); 012-180-13ST (239.36 acres); 017 080 84S (245.64 Acres); Zoning: AE40; AE20	Vacant; floodplain; fallowed agriculture (orchards and row crops)	Size: 476.95 acres Diversion: 5,700 AFY

Cantua Creek Diversion and Recharge Basin

Location

The proposed Cantua Creek diversion and recharge basin would involve modification of the existing 42.5-acre located on a District-owned 79.91-acre parcel (Assessor's Parcel Number [APN] 045-070-46ST) located at the terminus of Cantua Creek adjacent to the California Aqueduct (San Luis Canal), approximately 4 miles south of the town of Cantua Creek in Fresno County, California (Figure 2). The parcel is zoned Exclusive Agricultural (minimum 20 acres) (AE20) and is currently developed as an existing storage basin comprised of three cells.

Recharge Basin Design

The proposed Cantua Creek diversion and recharge basin would involve modification of the existing 42.5-acre storage basin to a 79-acre basin to support percolation and recharge. The basin would support an infiltration rate of 0.60 feet/day and a maximum ponding depth of 1.5 feet. Consistent with the existing storage basin, the Cantua Creek diversion and recharge basin would be designed with six (6) cells to reduce the wetted area and control the flow into the basin. Improvements to this basin would include minor earthwork to adjust and stabilize the basin walls, and the installation of diversion facilities to divert flood flows from Cantua Creek into the basin for recharge.

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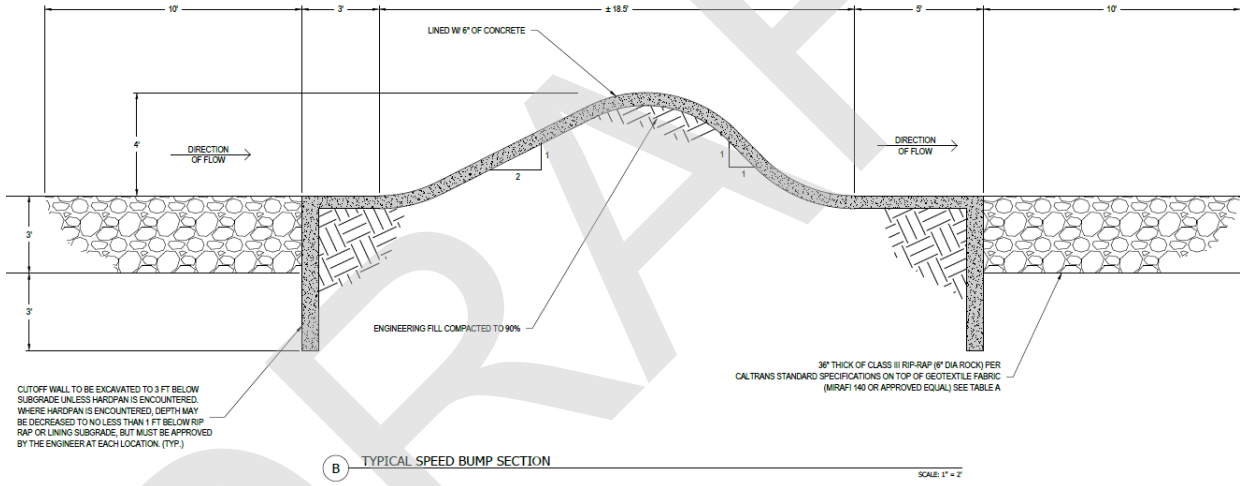
Cantua Creek Basin

FIGURE 2

Diversion Infrastructure

Diversion of water from Cantua Creek into the recharge basin would be accomplished with the construction of a new diversion structure and associated infrastructure along Cantua Creek. The diversion point would be comprised of a flow control structure ("speed bump") constructed across the creek channel to allow for slowing and ponding of water on the upstream side of the structure. The water control structure would be constructed using compacted fill material covered or lined with 6 inches of concrete. The upstream slope of the structure would be constructed to a slope of 2:1 (horizontal:vertical), while the downstream slope of the structure would be constructed to a slope of 1:1. Cutoff walls would be constructed on the upstream and downstream sides of the structure that would consist of a 6-inch-thick wall excavated to 3 feet below the subgrade. Erosion control on the upstream and downstream sides of the structures would be achieved by the installation of class III rip-rap (6-inch diameter rock) material that would be placed on top of geotextile fabric and extending approximately 10 feet from the structure in either direction. Enough class III rip-rap material would be placed to achieve a desired thickness of 36 inches for the full 10-foot-long extent on either side of the structure (see Figure 3).

Figure 3. Typical Flow Control "Speed Bump" Cross-Cross Section



Water Availability and Water Rights

The District proposes to divert up to 3,560 AFY of water from Cantua Creek during periods of high flow into the proposed basin for recharge. All of the 3,560 AFY that the District proposes to divert contributes to the current recharge of the Westside Subbasin and is subject to the prior and paramount rights of existing groundwater users. Within the Cantua Creek tributary, there are a total of four existing water rights with a combined total right of 30 AFY from the Cantua Creek watershed.[3] However, all of these existing water rights are located upstream of proposed points of diversion and are thus assumed to be fulfilled according to their priority. All remaining water flowing through Cantua Creek at the point of proposed diversion is considered available for downstream users – in this case, for use at the proposed basin (LSCE 2025).

[3] Accounts for all listed water rights, including those listed as revoked or inactive.

Arroyo Pasajero Creek Diversion and Recharge Basins

Location

The Arroyo Pasajero Creek diversion and recharge basin system is proposed to consist of up to four recharge basins and three points of diversion from Arroyo Pasajero Creek (an intermittent stream also known as Los Gatos Creek). The first and second recharge basins (Arroyo Pasajero Creek Basins A & B) combined would be approximately 142 acres in size and be located on APN 075-020-34S, a 40-acre parcel, and APN 075-020-08S, a 150.7-acre parcel. The third recharge basin (Arroyo Pasajero Creek Basin C) would be approximately 181 acres in size and be located on APN 075-020-38S, a 217.41-acre parcel. The fourth recharge basin (Arroyo Pasajero Creek Basin D) would be approximately 126 acres in size and be located on APN 068-111-52T, a 475.41-acre parcel (Figure 4).

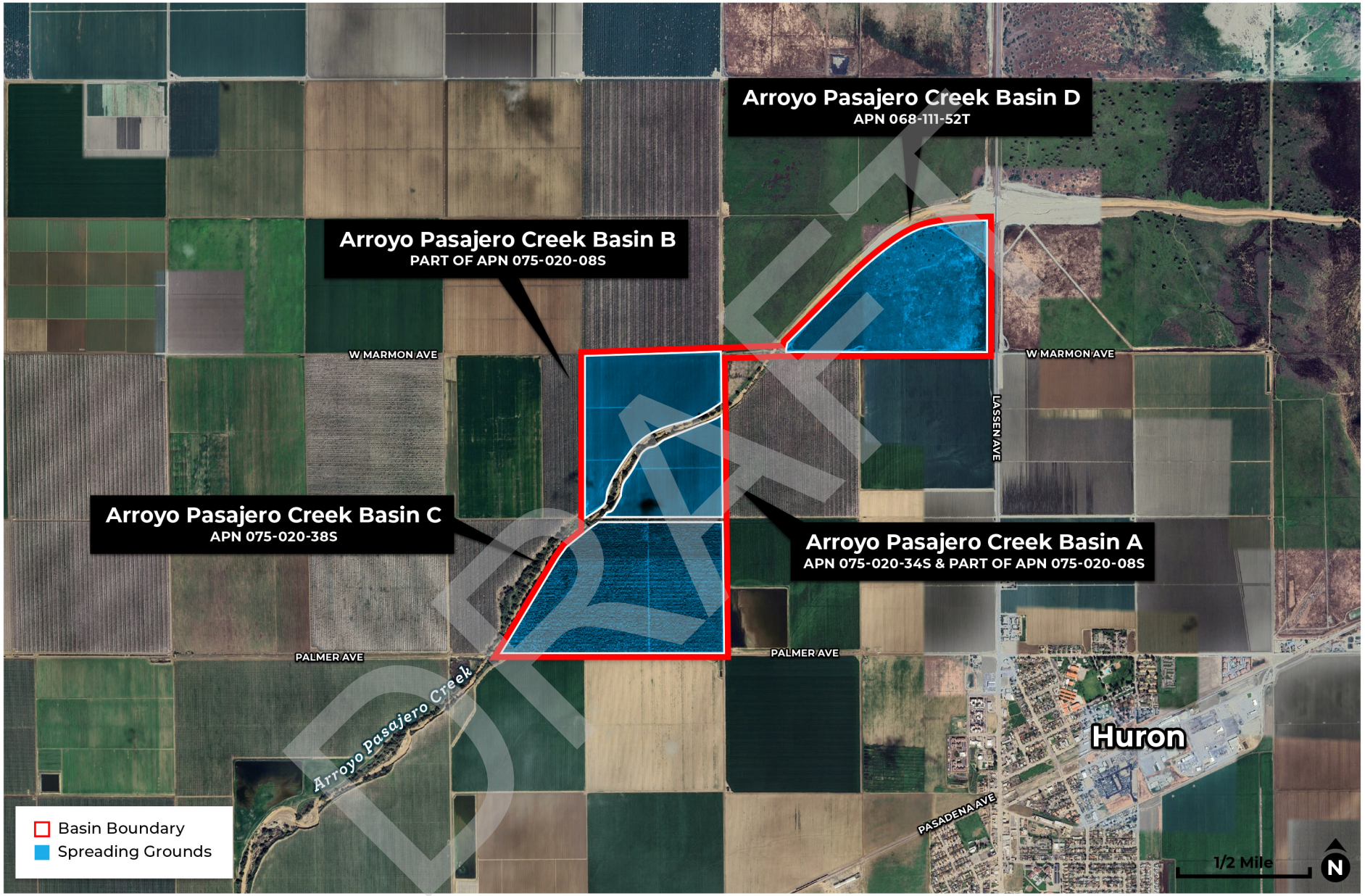
The proposed basins are located near the terminus of Arroyo Pasajero Creek north of Palmer Avenue, approximately 1 mile northwest of the City of Huron. The site is bisected by Arroyo Pasajero Creek and is comprised of fallowed agricultural land. All four parcels are zoned Exclusive Agricultural (minimum 20 acres) (AE20).

Recharge Basin Design

The proposed Arroyo Pasajero Creek diversion and recharge basins would be designed with a total percolation and ponding area of approximately 449 acres. Each percolation basin would have an infiltration rate of approximately 0.80 feet/day and a maximum ponding depth of 4 feet. The exterior and interior embankments of each basin would be constructed with a maximum 5.9-foot-tall earthen berm designed to a 3:1 (horizontal:vertical) slope and a 16-foot-wide crest width. At each corner of the embankment walls, the embankment would be designed to a 5:1 slope for basin access and maintenance. Each of the proposed basins would be comprised of a settling basin that would receive diverted water from the creek, and riprap constructed spillways that would allow water to flow into each recharge cell.

Diversion Infrastructure

Diversion of water from Arroyo Pasajero Creek into the recharge basins would be accomplished with the construction of three diversion structures and associated infrastructure along Arroyo Pasajero Creek. One diversion structure would be constructed at the southwest corner of the Arroyo Pasajero Creek Basin A and would serve to divert water directly into this basin. A second diversion structure would be constructed across Arroyo Pasajero Creek between Arroyo Pasajero Creek Basins B and C that would be capable of diverting water into both of these basins. The third and final diversion structure would be constructed adjacent to Arroyo Pasajero Creek Basin D and would serve this basin. The diversion structures serving the Arroyo Pasajero Creek basins would each have a similar design to that described in detail above for the Cantua Creek diversion facilities.



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Arroyo Pasajero Creek Basin

FIGURE
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Concrete sump pump structures would be installed on the upstream side of the structure to pump water pooled behind the structure into each of the two settling basins on the north and south sides of the creek. Diverted water pumped by the sump pumps would be conveyed through HDPE suction pipelines into the respective settling basin. Additional Class I rip rap material (20" long x 10" wide x 3" thick rock) would be installed on top of geotextile fabric at the end of the diversion pipe within the settling basins to reduce erosion in the basins.

Water Availability and Water Rights

The District proposes to divert up to 15,000 AFY from Arroyo Pasajero Creek during periods of high flow into the proposed basins for recharge. All of the 15,000 AFY that the District proposes to divert contributes to the current recharge of the Westside Subbasin (in most years) and is subject to the prior and paramount rights of existing groundwater users. Within the Arroyo Pasajero Creek tributary, there are a total of 134 existing water rights with a combined total right of 745 AFY from the Arroyo Pasajero Creek watershed.[4] However, all of these existing water rights are located upstream of proposed points of diversion and are thus assumed to be fulfilled according to their priority. All remaining water flowing through Arroyo Pasajero Creek at the point of proposed diversion is considered available for downstream users – in this case, for use at the proposed basin (LSCE 2025).

Panoche Creek Diversion and Recharge Basin

Location

The Panoche Creek diversion and recharge basin is proposed to consist of up to two separate recharge basins and two points of diversion from Panoche Creek. The first recharge basin (Panoche Creek Basin A) is proposed to be 200 acres in size and is proposed on a 245.64-acre parcel (APN 017-080-84S) that is located near the intersection of West Panoche Road and Interstate 5 (I-5), approximately 13 miles southwest of the City of Mendota in Fresno County, California (Figure 5). The parcel is zoned Exclusive Agricultural (minimum 20 acres) (AE20). The area proposed for the diversion and recharge basin is comprised of fallowed agricultural land located adjacent to Panoche Creek.

The second recharge basin (Panoche Creek Basin B) is proposed be 276.95 acres in size and is proposed on APN 012-180-14ST (37.59 acres) and APN 012-180-13ST (239.36 acres). This basin is located near the natural terminus of Panoche Creek adjacent to the intersection of Belmont Avenue and North San Diego Avenue, roughly 2 miles west of the City of Mendota and approximately 10.6 miles northeast of Panoche Creek Basin A. The portion of Panoche Creek near Basin B is completely confined within a roadside canal running adjacent to Belmont Avenue. The proposed site for Panoche Creek Basin B consists of fallowed agricultural land and is zoned Exclusive Agricultural (minimum 20 acres) (AE20).

Recharge Basin Design

The proposed Panoche Creek recharge basins would be designed with a total percolation and ponding area of approximately 476.95 acres. Each percolation basin would be designed consistent with the basin designs described above for the Arroyo Pasajero Creek diversion and recharge basin. Each basin would have an approximate infiltration rate of 0.25 feet/day and a maximum ponding depth of 4 feet.

[4] Accounts for all listed water rights, including those listed as revoked or inactive.

Diversion Infrastructure

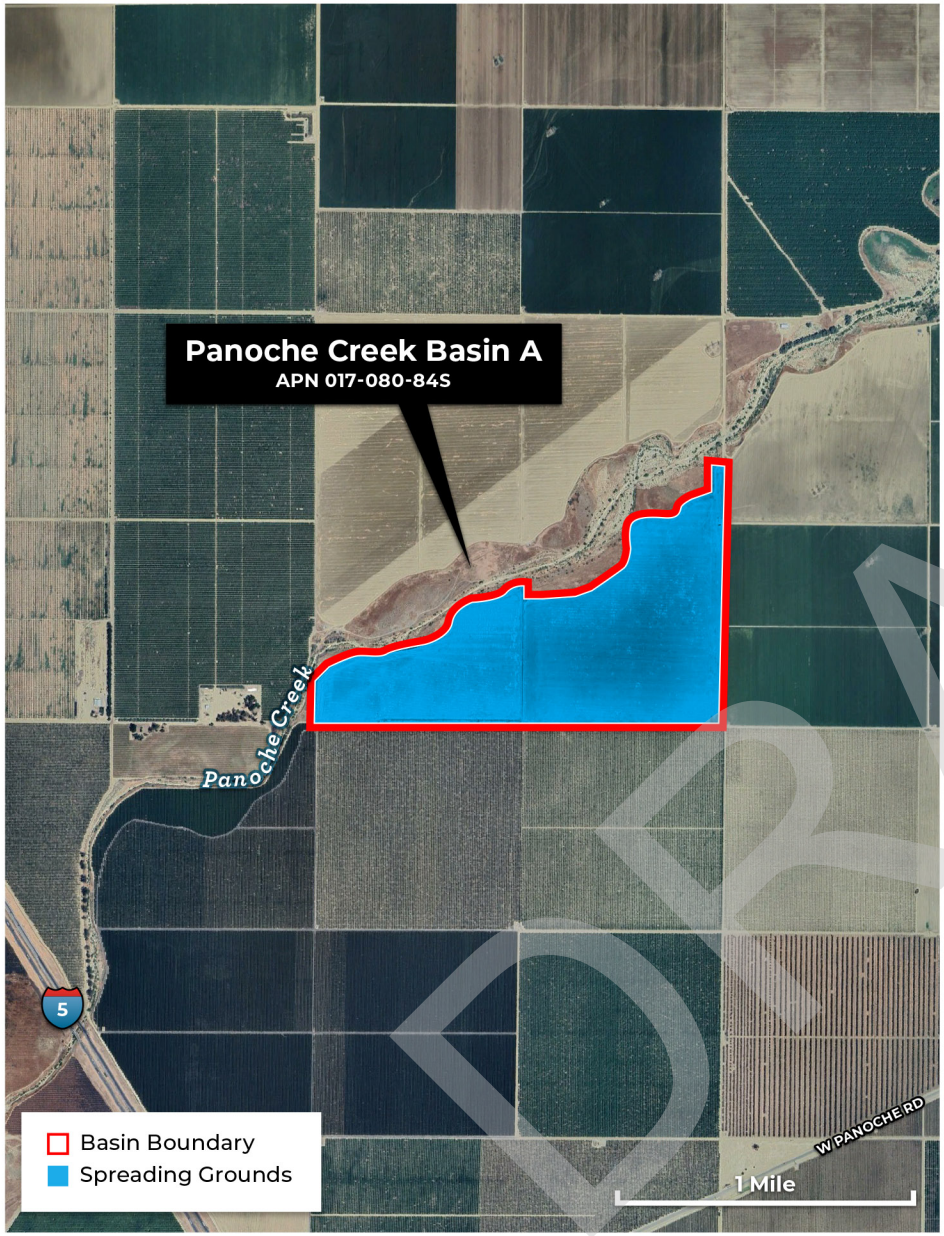
Diversion of water from Panoche Creek into Panoche Creek Basin A would be accomplished with the construction of a new diversion structure and associated infrastructure along Panoche Creek. The diversion structure serving Panoche Creek Basin A would have a similar design to that described in detail above for the Cantua Creek diversion facilities.

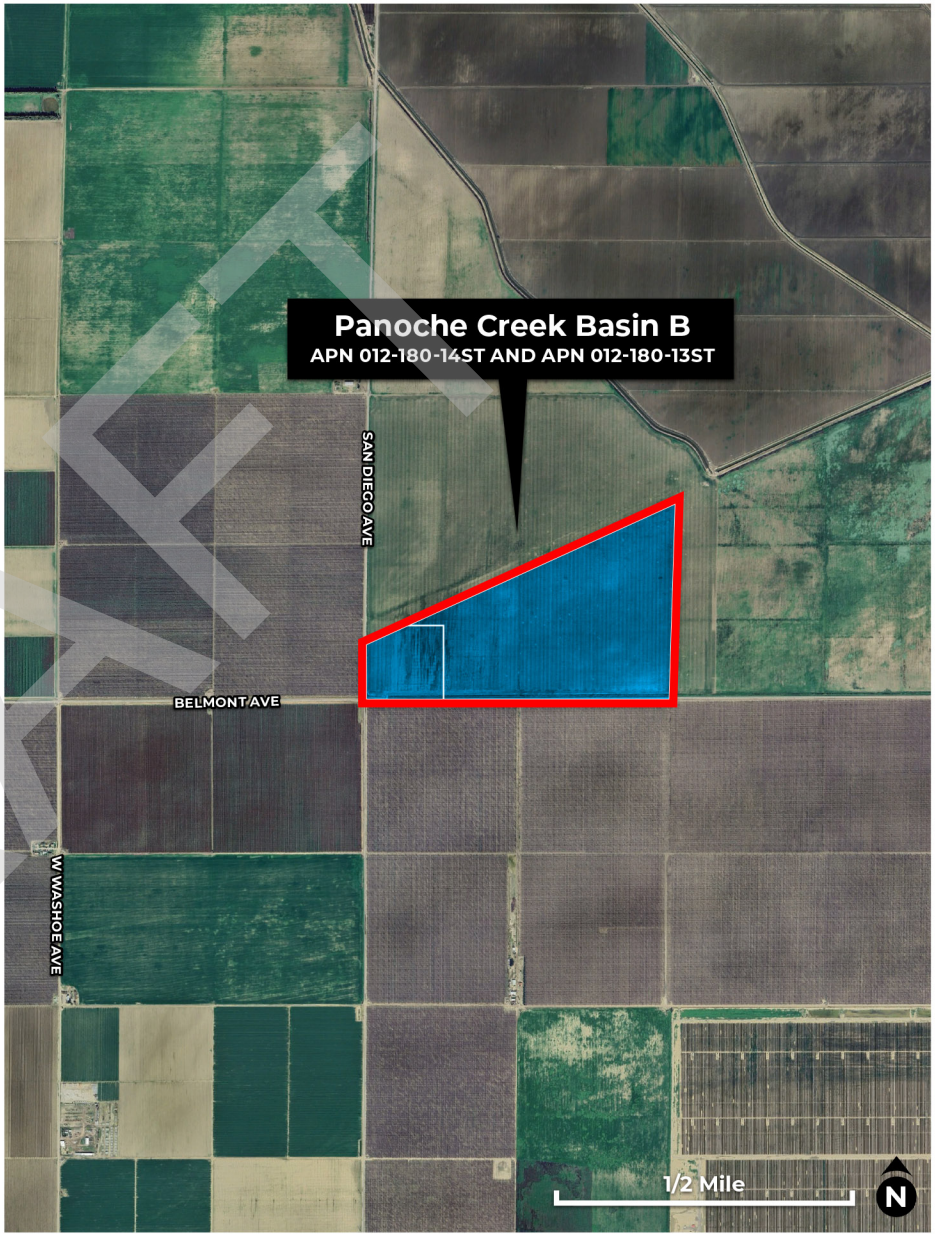
For Panoche Creek Basins B, diversion from Panoche Creek would be achieved with a much smaller diversion structure given the shallow, channelized nature of the creek where diversion is proposed. Diversion to Panoche Creek Basin B would require minimal piping given the basin is located directly adjacent to the canal.

Water Availability and Water Rights

The District proposes to divert up to 5,700 AFY from Panoche Creek during periods of high flow into the proposed basins for recharge. All of the 5,700 AFY that the District proposes to divert contributes to the current recharge of the Westside Subbasin and is subject to the prior and paramount rights of existing groundwater users. Within the Panoche Creek tributary, there are a total of 33 existing water rights with a combined total right to 373 AFY from the Panoche Creek watershed.[5] However, all of these existing water rights are located upstream of proposed points of diversion and are thus assumed to be fulfilled according to their priority. All remaining water flowing through Panoche Creek at the point of proposed diversion is considered available for downstream users – in this case, for use at the proposed basin (LSCE 2024b).

[5] Accounts for all listed water rights, including those listed as revoked or inactive.





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Panoche Creek Basin

FIGURE
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10.2 Operation and Maintenance

The proposed diversion and recharge basins would be operated and maintained by the District. The operation and maintenance of the facilities would be consistent with similar facilities in the area of the District in that recharge basins and diversion infrastructure would require infrequent maintenance, including the removal of any vegetation in the basins that might decrease percolation rates and as-needed maintenance or replacement of pumps or piping infrastructure. Once construction is completed, operation and maintenance of the facility would be funded through fees collected from water users in the District and/or from landowners whose groundwater allocations are supported by the Project.

10.3 Construction

Basin Construction

Project construction would involve three separate construction areas, one associated with each of the diversion and recharge basin systems. As described above, multiple cells would be included. The construction area for the Cantua Creek basin would be approximately 79 acres; the construction area for the Arroyo Pasajero Creek basins would be approximately 449 acres; and the construction area for the Panoche Creek basins would be approximately 476.95 acres. The total Project construction area would be approximately 1,004.95 acres in size, but up to 1,485.3 acres if the entirety of the parcels are built out.

Construction of each basin would involve earthwork to move dirt onsite to be used to build the berms for each cell. There would be no export or import of cut or fill material to accommodate the proposed infrastructure, as all material would be balanced onsite. Construction of the Cantua Creek, Arroyo Pasajero Creek, and Panoche Creek recharge basins and diversion structures would require an estimated 45,000 cubic yards, 330,000 cubic yards, and 525,000 cubic yards of earthwork, respectively, or a total of 900,000 cubic yards of grading and earthwork. Construction of each basin would be accomplished with graders, loaders, excavators, backhoes, concrete trucks, pumper trucks, water trucks, hauling trucks, and dump trucks.

Construction Schedule

Construction of the Project would occur in three phases – one phase for each of the three recharge basin systems – with construction beginning as early as Spring 2026. Construction of the Cantua Creek basin improvements is anticipated to take place over approximately 6 months, while construction of associated diversion facilities will last an additional 6 months. Construction of the Arroyo Pasajero Creek basins is anticipated to take place over approximately 11 months, with construction of diversion facilities requiring an additional 8 months. Lastly, construction of the Panoche Creek basins is anticipated to take place over approximately 6 months, with construction of diversion facilities requiring an additional 6 months. The total duration for construction of the Project, including all proposed recharge and diversion facilities, is anticipated to be 43 months.

11.0 REQUIRED PERMITS AND APPROVALS

The proposed Project would likely require the following permits and approvals:

- Central Valley Regional Water Quality Control Board review and approval of General National Pollutant Discharge Elimination System (NPDES) Permit for Low Threat Discharges;
- California Department of Fish and Wildlife review and approval of Lake and Streambed Alteration Agreement

- County of Fresno approval and issuance of Grading Permit(s) and land use approval(s); and
- Approval and certification of the IS/MND by the District Board of Directors.

12.0 PURPOSE OF THIS INITIAL STUDY

This IS/MND was prepared for the Project in compliance with CEQA requirements. This document provides a project-level assessment of the potential environmental consequences of the adoption and implementation of the proposed Project.

13.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would potentially be affected by this Project (i.e., the Project would involve at least one impact that is a "Potentially Significant Impact"), as indicated by the checklist on the following pages.

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

CHAPTER 2
DETERMINATION

On the basis of this initial evaluation:

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

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect 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.

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

☐ 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.

☐ 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 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.

Stephen Farmer

Chief Administrative Officer

CHAPTER 3
DISCUSSION OF ENVIRONMENTAL CHECKLIST

A discussion of the environmental checklist is included below. In general, the format followed includes a discussion of the setting and an impact analysis for each resource category.

14.0 EVALUATION OF ENVIRONMENTAL IMPACTS

The Environmental Checklist and discussion that follows is based on examples questions and areas of concern which are provided in the State CEQA Guidelines - Appendix G, which focuses on 17 different broad environmental categories (and arranged in alphabetical order). The State CEQA Guidelines also provide specific direction and guidance for preparing responses to the Environmental Checklist. The example questions are meant to be used to meet the requirements and analysis for an initial study. Substantial evidence of potential environmental impacts that are not listed in the checklist must also be considered. The sample questions are intended to encourage thoughtful assessment of impacts, and do not necessarily represent thresholds of significance.

Each possible answer to the questions listed in the State CEQA Guidelines - Appendix G, and the different type of discussion required, is discussed below:

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained if it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including offsite as well as onsite, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the Lead Agency has determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
4. "Negative Declaration: Less than Significant with Mitigation Incorporated" applies when the incorporation of mitigation measures has reduced an effect from a "Potentially Significant Impact" to a "Less-than-Significant Impact". The Lead Agency must describe the mitigation measures and briefly explain how they reduce the effect to a less-than-significant level.
5. Earlier analyses may be used if, pursuant to tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration [Section 15063(c)(3)(D)]. In this case, a brief discussion should identify the following:
    a. Earlier Analysis Used. Identify and state where earlier analyses are available for review.

b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards and state whether such effects were addressed by mitigation measures based on the earlier analysis.

c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Incorporated," describe the mitigation measures that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead Agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, when appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used, or individuals contacted should be cited in the discussion.
8. This is only a suggested form, and Lead Agencies are free to use different formats; however, Lead Agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
9. The explanation of each issue should identify:
    a. the significance criteria or threshold, if any, used to evaluate each question; and
    b. the mitigation measure identified, if any, to reduce the impact to a less-than-significant level.

14.1 Aesthetics

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

14.1.1 Existing Setting

The proposed Project is located within the boundaries of the District in Fresno County. The visual character of the proposed Project area is characterized as open, low-elevation, flat agricultural land within the San Joaquin Valley. Agricultural operations in the Project area comprise row crops, orchards, and unpaved roads. Cantua Creek in the vicinity of the proposed basin is a narrow, confined earthen ditch channel support some vegetation. The portion of Arroyo Pasajero Creek in the vicinity of the proposed Arroyo Pasajero Creek Basins A - D is a more natural winding channel supporting some stands of trees before flowing into a broader flood plain area. Panoche Creek in the vicinity of the proposed Panoche Creek Basin A is characterized as a more natural winding ephemeral creek channel that is sparsely vegetated, before transitioning into a small, narrow, and confined roadside earthen ditch channel in the vicinity of Panoche Creek Basin B. Natural landforms, like hillsides, can be seen in the distance. There are no scenic vistas or designated state scenic highways within the area. The Project area is rural and there are no substantial sources of light or glare.

14.1.2 Discussion

a. No impact. Scenic vistas are vista points, scenic overlooks, wildlife views, trailhead access areas, or other areas specifically for the traveling public to stop and view the local landscape (Caltrans, 2020). The proposed Project area is not located in the immediate vicinity of an officially designated scenic vista or scenic highway by Fresno County (Caltrans 2020; County of Fresno 2000). However, the Project area is adjacent to agricultural lands and natural landforms, like hillsides, which are considered scenic in Fresno County. Activities associated with the proposed Project would include site preparation, grading, and construction equipment and material staging in the surrounding areas. The proposed Project would also include the construction of new embankments, but they would have a maximum height of 5.9 feet, which would not have a substantial adverse effect on the visual resources or quality of the Project area. Given the rural and remote location of the Project area, areas of disturbance or equipment staging would not be highly visible from public viewpoints along local paved and dirt roadways. **No impact** on scenic vistas would occur.

b. No impact. A highway is officially designated as a state scenic highway when a local jurisdiction adopts a scenic corridor protection program, applies to Caltrans for scenic highway approval, and receives notification from Caltrans that the designation has been approved. Based on a review of the Caltrans State Scenic Highway Map, the Project area is not located along or within the vicinity of a state scenic highway. Therefore, the Proposed Project would not impact scenic resources within a state scenic highway and **no impact** would occur.

c. No impact. Public views of the area are provided very briefly to motorists traveling along local roadways and recreational visitors. Construction of the proposed Project would include site preparation, grading, equipment staging, and material stockpiling over an estimated 43-month period. Operation of the proposed Project would include routine maintenance and the intermittent use of pumps during periods of high-water flow. These visual effects associated with the Project would be minor and insubstantial to the visual resources within the Project area and the vicinity, including views of natural features and open agricultural areas. Further, in operation, the diversions and basins would be maintained in a natural condition and would blend into the rural agricultural landscape. As such, the proposed Project would not permanently or significantly impact the existing visual character and quality of public views of the Project site and immediate vicinity. Therefore, **no impact** would occur.

d. No impact. The proposed Project would not install or add new permanent sources of light or glare to the Project vicinity. No nighttime work would occur. No new facilities would be built that would have reflective surfaces. Further, there would be no new sources of lighting or glare to affect daytime or nighttime views. Therefore, there would be **no impact**.

14.2 Agricultural and Forestry Resources

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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) 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 (CARB). **Would the Project:**				
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?	☐	☐	☒	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
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?	☐	☐	☐	☒

14.2.1 Existing Setting

Agricultural production is the dominant land use in western Fresno County and within the District, and the Project areas support Prime Farmland, Unique Farmland, and Farmland of Local Importance, as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program (FMMP) (California Department of Conservation 2024). The entirety of the Project area is zoned AE20. There are no forestry resources within the Project areas; none of the Project areas or their vicinities are zoned as Timberland Preserve Zone (TPZ).

California Farmland Mapping and Monitoring Program

The California Department of Conservation, under the Division of Land Resource Protection, has established the Farmland Mapping and Monitoring Program (FMMP). The FMMP monitors the conversion of the state's farmland to and from agricultural use. The map series identifies eight classifications and uses a minimum mapping unit size of 10 acres. The FMMP also produces a biannual report on the amount of land converted from agricultural to non-agricultural use. The FMMP maintains an inventory of state agricultural land and updates its "Important Farmland Series Maps" every two years (DOC, 2016). Important farmlands are divided into the following five categories based on their suitability for agriculture:

- **Prime Farmland.** Prime Farmland is land with the best combination of physical and chemical characteristics able to sustain long-term production of agricultural crops. This land has produced irrigated crops at sometime within the four years prior to the mapping date.
- **Farmland of Statewide Importance.** Farmland of Statewide Importance is land that meets the criteria for Prime Farmland but with minor shortcomings such as greater slopes or lesser soil moisture capacity.
- **Unique Farmland.** Unique Farmland has even lesser quality soils and produces the state's leading agricultural crops. This land is usually irrigated, but also includes non-irrigated orchards and vineyards.
- **Farmland of Local Importance.** Farmland of Local Importance is land that is important to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.
- **Grazing Land.** Grazing Land is land on which the existing vegetation is suited to the grazing of livestock.

Williamson Act

The California Land Conservation Act of 1965, also known as the Williamson Act, is designed to preserve agricultural and open space lands by discouraging their premature and unnecessary conversion to urban uses. Williamson Act contracts, also known as agricultural preserves, create an arrangement whereby private landowner's contract with counties and cities to voluntarily restrict their land to agricultural and compatible open-space uses. The Westside Subbasin contains some parcels with County Williamson Act contracts in place. Of the parcels affected by the proposed Project, the parcels for proposed Arroyo Pasajero Creek Basins A, B, and C (APNs 075-020-34S, 075-020-08S, and 075-020-38S) are currently enrolled in Williamson Act contracts.

California Public Resources Code Section 12220(g)

The California Public Resources Code defines "forest land" under section 12220(g) as land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.

Projects are subject to this code if there are any potentially significant changes to existing areas zoned as forest land.

California Public Resources Code Section 4526

The California Public Resources Code defines "timberland" as land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees. Commercial species shall be determined by the board on a district basis after consultation with the district committees and others. Projects may have significant impacts to timberland if the project conflicts with existing zoning.

California Government Code Section 51104(g)

The California Timberland Productivity Act of 1982, like the Land Conservation Act, was passed to encourage the production of timber resources. Government Code Section 51104(g) defines "Timber," "Timberland," and "Timberland Production Zone" for the purposes of CEQA and "Timberland Preserve Zone," which may be used in city and county general plans.

- "Timber" means trees of any species maintained for eventual harvest for forest production purposes, whether planted or of natural growth, standing or down, on privately or publicly owned land, including Christmas trees, but does not mean nursery stock.
- "Timberland" means privately owned land, or land acquired for State forest purposes, which is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, and which is capable of growing an average annual volume of wood fiber of at least 15 cubic feet per acre.
- "Timberland Production Zone" or "TPZ" means an area which has been zoned pursuant to Section 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, as defined in subdivision (h). With respect to the general plans of cities and counties, "Timberland Preserve Zone" means "Timberland Production Zone."

California Land Evaluation and Site Assessment Model

The Land Evaluation and Site Assessment (LESA) is a point-based approach for rating the relative importance of agricultural land based upon specific measurable features. The California Agricultural LESA Model was developed to provide lead agencies with an optional methodology to ensure that potentially significant effects on the environment of agricultural land conversions are quantitatively and consistently considered in the environmental review process (Public Resources Code Section 21095), including in CEQA reviews.

The California Agricultural LESA Model evaluates measures of soil resource quality, a given project's size, water resource availability, surrounding agricultural lands, and surrounding protected resource lands. For a given project, the factors are rated, weighted, and combined, resulting in a single numeric score. The project score becomes the basis for making a determination of a project's potential significance.

14.2.2 Discussion

a. Less than Significant Impact. As mentioned above, the Project areas contain important farmland. Panoche Creek Basins A and B are located on soil classified as Farmland of Local Importance. The Cantua Creek basin is located on Unique Farmland. The Arroyo Pasajero Creek Basins A, B, and C are located on soils classified as Prime Farmland, while Arroyo Pasajero Creek Basin D is comprised of Farmland of Local Importance. None of the lands affected by the Project are currently irrigated or support active agricultural operations because the land is fallowed or drainage impaired. Approximately 915.95 acres are fallowed farmland, and 42.5 acres support groundwater recharge basins.

The proposed Project would result in the construction and operation of three groundwater recharge basins within the District that would have the ability to store/recharge up to 26,000 AFY. Project construction would involve earthwork to create berms for each cell, but there would be no export or import of cut or fill material to accommodate the proposed infrastructure, as all soil material would be balanced onsite. The Project would not displace any existing agricultural operations given that the Project area consists entirely of fallowed farmland and non-agricultural uses, nor would it convert important agricultural lands to urban or non-agricultural uses. The proposed basins would allow for excess surface water supply to be recharged, improving water supply reliability within the region and improving the condition of the underlying overdrafted aquifer. As a result, the proposed Project would help sustain agricultural operations in the District and support the long-term viability of agriculture within the area. Therefore, although the proposed Project would be located on land designated as important farmland, the proposed Project would serve as an agricultural-supporting use, would not temporarily or permanently convert any farmland to a non-agricultural use or preclude further agricultural use on Project areas in the future, and would align with the agricultural operations within the surrounding areas. As a result, impacts would be **less than significant**.

b. No Impact. The Project areas are zoned AE20. Panoche Creek Basin A (APN 017-080-84S) and Arroyo Pasajero Creek Basins A, B, and C (APNs 075-020-38S, 075-020-34S, and 075-020-08S) are currently enrolled in Williamson Act contracts with the County. Pursuant to Section 808.2.010(A) of the Fresno County Ordinance Code, the AE zone "...is intended to protect agricultural land and provide for those uses which are necessary and an integral part of an agricultural operation." California Government Code Article 2.5 Section 51238 provides that "the erection, construction, alteration, or maintenance" of water facilities is a compatible use for an agricultural preserve. Given the Project would construct and maintain water facilities that would support agricultural activities, the Project would be compatible with the Williamson Act and California Government Code Article 2.5 Section 51238. Additionally, because the proposed Project would support long-term agricultural viability in the region by improving water supply reliability and contributing to groundwater recharge in a critically overdrafted basin, it would directly relate to agricultural activities on adjacent and proximate parcels. Therefore, **no impacts** would occur.

c. No Impact. The proposed Project areas are not zoned for forest land, timberland, or TPZ under the County's Zoning Ordinance, nor are they used for timber production. In addition, the Project does not propose any zoning changes. Therefore, **no impacts** would occur.

d. No Impact. As described in Section 14.2.1, *Existing Setting*, the Project areas are zoned AE and consist of drainage channels, historically cultivated commercial agricultural lands, and existing water basins. No forest land exists in or adjacent to the Project areas. Therefore, there would be **no impacts** relating to the loss or conversion of forest lands.

e. No Impact. The proposed Project would not result in any rezones, and the recharge basins would be compatible with existing agricultural operations and ultimately support the long-term viability of agriculture in the region. In addition, the proposed Project would not involve development that would directly or indirectly induce residential, commercial, or industrial growth or conversion of agricultural land to non-agricultural land uses. Therefore, there would be **no impacts** relating to other changes in the existing environment which, due to their location or nature, would result in the conversion of farmland or forest land to non-agricultural or non-forest use.

14.3 Air Quality

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. **Would the Project:**				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

14.3.1 Existing Setting

The Project area is in the San Joaquin Valley Air Basin (SJVAB), which includes all of Fresno County and seven other Central Valley counties. The San Joaquin Valley Air Pollution Control District (SJVAPCD) implements air quality management strategies to attain and maintain Central Valley air quality standards.

Air quality is primarily characterized by ambient ground-level concentrations of seven specific pollutants – known as "criteria pollutants" – identified by the U.S. Environmental Protection Agency (USEPA) to be of concern with respect to public health and welfare. The air pollutants most relevant to air quality planning and regulation in the SJVAB and their potential health impacts include:

- **Ground-Level Ozone (Ozone):** Ozone is a pungent, colorless, toxic gas produced by a photochemical reaction (triggered by sunlight) between nitrogen oxides (NOx) and volatile organic compounds (VOCs). Conditions that produce high concentrations of ozone are direct sunshine, stagnation, high temperatures, and strong temperature inversions. Ozone concentrations are generally highest during the summer months when these conditions are favorable. Direct health effects include respiratory and eye irritation and possible changes in lung functions. Groups most sensitive to ozone include children, the elderly, persons with respiratory disorders, and persons who exercise strenuously outdoors.
- **Respirable Particulate Matter (PM_{10}) and Fine Particulate Matter ($PM_{2.5}$):** PM_{10} and $PM_{2.5}$ consist of suspended dust particles of less than 10 or 2.5 microns, respectively. PM_{10} is

generally fugitive dust kicked up from mobile sources or wind. $PM_{2.5}$ is emitted during combustion processes or is formed as a secondary pollutant through chemical reactions. Most particulate matter is produced by fuel combustion, motor vehicle travel, and construction activities. Children, the elderly, and persons with pre-existing respiratory or cardiovascular disease are more susceptible to the effects of high PM_{10} and $PM_{2.5}$ levels. Potential health effects include skin, eye, and throat irritation, respiratory infections, and asthma attacks. Daily fluctuations in $PM_{2.5}$ concentration levels have been tied to hospital admissions, school and kindergarten absences, a decrease in respiratory lung volumes in normal children, and increased medication use. Recent studies show lung function in children is reduced with long-term exposure to particulate matter.

- **Carbon Monoxide (CO):** CO is a colorless, odorless gas produced by the incomplete combustion of fuels. CO concentrations tend to be the highest near congested transportation corridors and intersections, especially during winter mornings with little to no wind, when surface-based inversions trap the pollutant at ground levels. Elevated concentrations of CO weaken the heart's contractions and lower the amount of oxygen carried by the blood. Inhalation of moderate levels of CO can cause nausea, dizziness, and headache, while inhalation of high levels can be fatal. CO reduces the amount of oxygen in the blood, causing heart difficulties in people with chronic diseases, reduced lung capacity, and impaired mental abilities. Individuals most at risk include fetuses, patients with heart disease, and patients with chronic hypoxemia (oxygen deficiency).
- **Nitrogen Dioxide (NO_2):** NO_2 is a byproduct of fuel combustion. The principal form of nitrogen oxide produced by combustion is nitric oxide (NO), which reacts quickly to form NO_2, creating a mixture of NO and NO_2 commonly called NO_x. NO_2 results in reduced visibility. NO_2 also contributes to the formation of ground-level ozone and $PM_{2.5}$. Major sources of NO_x include power plants, large industrial facilities, and motor vehicles. NO_x irritates the nose and throat and increases susceptibility to respiratory infections, especially in asthmatics.
- **Sulfur Dioxide (SO_2):** SO_2 is a colorless, extremely irritating gas or liquid that is produced as a result of burning high sulfur-content oils and coal, and from chemical processes occurring at chemical plants and refineries. Major sources of SO_2 include power plants and large industrial facilities. SO_2 emissions aggravate lung diseases, especially bronchitis, and constrict breathing passages, especially in asthmatics and during moderate to heavy exercise. SO_2 can cause wheezing, shortness of breath, and coughing. High levels of particulate appear to worsen the effect of SO_2, and long-term exposures to both pollutants lead to higher rates of respiratory illness.
- **Lead:** Lead occurs in the atmosphere as particulate matter. The primary sources of airborne lead include the manufacturing and recycling of batteries, paint, ink, ceramics, ammunition, and secondary lead smelters. From 1980 to 2005, lead emissions in the U.S. dropped by 98 percent (USEPA 2020). Fetuses, infants, and children are sensitive to the adverse effects of lead exposure. Exposure to low levels of lead can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. In adults, increased levels of lead are associated with increased blood pressure. Lead poisoning can cause anemia, lethargy, seizures, and death.
- **Toxic Air Contaminants (TACs):** TACs are a diverse group of air pollutants including both organic and inorganic chemical substances emitted from sources including gasoline stations, motor vehicles, dry cleaners, industrial operations, painting operations, and research facilities. TACs differ from the above criteria pollutants in that ambient air quality standards have not been established for TACs. TACs can cause chronic and acute health effects. These effects include an increased risk of cancer. Most of the estimated health risks from TACs can be attributed to a relatively few compounds, the most important being particulate matter from diesel-fueled engines.

- **Odors:** Odors are not regulated under the federal or state Clean Air Acts; however, they are considered under CEQA. Odors can potentially affect human health in several ways. Odorant compounds can irritate the eye, nose, and throat, which can reduce respiratory volume. VOCs that cause odors can stimulate sensory nerves to cause neurochemical changes that might influence health, for instance, by compromising the immune system. Unpleasant odors can also trigger memories or attitudes, causing cognitive and emotional effects such as stress.

Table 2 shows the National Ambient Air Quality Standards (NAAQS), which are set by the USEPA, and the California Ambient Air Quality Standards (CAAQS), which are set by the California Air Resources Board (CARB). An area is designated in "attainment" when it is in compliance with the NAAQS and/or the CAAQS for a criteria pollutant. If an area exceeds the NAAQS and/or CAAQS, the area is classified as "nonattainment" for that criteria pollutant. If there is not enough data available to determine whether an area exceeds the NAAQS and/or CAAQS, the area is designated as "unclassified."

The SJVAB is currently designated as being in nonattainment of the CAAQS for ozone (O_3; 1-hour and 8-hour), PM_{10}, and $PM_{2.5}$. The SJVAB is currently designated as being in nonattainment of the NAAQS for O_3 (8-hour) and $PM_{2.5}$ (SJVAPCD 2022a).

Table 2. Criteria Air Pollutant Standards

Pollutant	Averaging Period	California (CAAQS)	Federal (NAAQS)
Ozone (O_3)	1-Hour Average	0.09 ppm (180 µg/m³)	--
	8-Hour Average	0.070 ppm (137 µg/m³)	0.070 ppm (137 µg/m³)
Carbon Monoxide (CO)	1-Hour Average	20 ppm (23 µg/m³)	35.0 ppm (40 mg/m³)
	8-Hour Average	9.0 ppm (10 mg/m³)	9.0 ppm (10 mg/m³)
Nitrogen Dioxide (NO_2)	1-Hour Average	0.18 ppm (338 µg/m³)	0.10 ppm (188 µg/m³)
	Annual Arithmetic Mean	0.03 ppm (57 µg/m³)	0.053 ppm (100 µg/m³)
Sulfur Dioxide (SO_2)	1-Hour Average	0.25 ppm (655 µg/m³)	0.075 ppm (196 µg/m³)
	24-Hour Average	0.04 ppm (105 µg/m³)	--
	Annual Arithmetic Mean	--	0.030 ppm (80 µg/m³)
Respirable Particulate Matter (PM_{10})	24-Hour Average	50 µg/m³	150 µg/m³
	Annual Arithmetic Mean	20 µg/m³	--
Fine Particulate Matter ($PM_{2.5}$)[1]	24-Hour Average	--	35 µg/m³
	Annual Arithmetic Mean	12 µg/m³	9.0 µg/m³
Lead (Pb)	30-day Average	1.5 µg/m³	--
	Calendar Quarter	--	1.5 µg/m³
	Rolling 3-Month Average	--	0.15 µg/m³
Sulfates (SO_4)	24-Hour Average	25 µg/m³	No Federal Standards
Hydrogen Sulfide (H_2S)	1-Hour Average	0.03 ppm (42 µg/m³)	
Vinyl Chloride (C_2H_3Cl)	24-Hour Average	0.01 ppm (26 µg/m³)	

Notes: ppm = parts per million; µg/m³ = micrograms per cubic meter.

[1] Effective May 6, 2024, the NAAQS for $PM_{2.5}$ was lowered from 12.0 to 9.0 µg/m^3. The USEPA expects to finalize the attainment designations for the lower standard by February 2026.
Source: CARB 2024.

14.3.2 Discussion

a. Less than significant. Under the Clean Air Act (CAA), each state is required to prepare an air quality control plan, referred to as a State Implementation Plan. The SJVAPCD is responsible for implementing programs and regulations required by the CAA and the California CAA within the SJVAB. The SJVAPCD has prepared plans to attain state and federal ambient air quality standards for which it has been designated as non-attainment within its jurisdiction. These plans include the identification of air pollutants, computer modeling to predict future air pollution, strategies for the reduction of air pollution, and evaluations of the efficacy of pollution reduction strategies.

To meet Federal CAA requirements, the SJVAPCD adopted the following plans: the 2024 Plan for the 2012 $PM_{2.5}$ Plan Standard, the 2022 Plan for the 2015 8-hour Ozone Standard, and the Ozone Contingency Measure State Implementation Plan Revision for the 2008 and 2016 8-hour Ozone Standards. The SJVAPCD continues to coordinate emission reduction strategies to address multiple standards, maximize efficiency for staff and stakeholders, and maximize health benefits. Building on previous plans, the 2022 Ozone Plan addresses overlapping standards and streamlines the SJVAPCD's approach to reduce ozone precursors while meeting state and federal requirements. Similarly, the 2024 $PM_{2.5}$ Plan addresses federal 2012 $PM_{2.5}$ standards. The above plans include regulatory and incentive-based measures to reduce emissions of ozone and PM precursors throughout the San Joaquin Valley.To be consistent with the SJVAPCD's Air Quality Plans, a project's direct and indirect emissions must be accounted for in the growth assumptions of the plan, and the project must not exceed SJVAPCD's established emissions thresholds or cause a significant impact on air quality. As discussed under criterion (b) below, the proposed Project would not generate new criteria air pollutant concentrations that would exceed SJVAPCD's thresholds of significance. Therefore, the proposed Project would not conflict with or obstruct the implementation of SJVAPCD's air quality plans and impacts would be **less than significant.**

b. Less than significant. The Project would have short-term air quality impacts due to vehicle emissions and equipment operation associated with the proposed activities. Operational emissions would be minimal and related to routine maintenance and the intermittent use of pumps in the case of high water flow events.

The SJVAPCD has established thresholds of significance by which to determine whether a project's individual construction and/or operational emissions would be cumulatively considerable. As stated above, the Project would result in short-term construction-related air pollutant emissions. To determine whether these emissions would be significant, the Project's construction-related emissions were qualitatively assessed. Consistent with the SJVAPCD's guidance for estimating project impacts, the California Emissions Estimator Model (CalEEMod) Version 2022.1.1.28 was utilized to model the Project's anticipated construction-related emissions. Table 3 below summarizes the results of the modeling exercise. It should be noted that these modeled emissions represent a highly conservative assessment of the Project's construction-related emissions, particularly for PM_{10} emissions, as the modeling does not account for the implementation of fugitive dust control measures, such as those required under SJVAPCD's Regulation VIII (Fugitive PM_{10} Prohibitions).

Table 3. Estimated Project Construction Emissions

	Peak Emissions (tons/year)					
	ROG	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Construction Emissions	0.35	3.04	3.18	0.1	1.14	0.52
SJVAPCD Construction Emissions Thresholds	*10*	*10*	*100*	*25*	*15*	*13*
Thresholds Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***

Source: Appendix C.

As presented in Table 3, the Project's estimated construction-related emissions would be below SJVAPCD thresholds, and operational emissions generated by Project maintenance activities would be negligible. Therefore, the Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is in non-attainment under an applicable federal or state ambient air quality standard. Therefore, there would be a **less than significant** impact.

c. Less than significant. The location in which the Project would occur is characterized by agricultural fields and largely undeveloped land. The area is rural and predominantly uninhabited, and there are no sensitive receptors within 1,000 feet of any of the proposed basin development sites. If implemented, the Proposed Project would not expose sensitive receptors to substantial criteria pollutants due to the lack of receptors near the Project site and the short-term nature of the proposed activity. Therefore, the impact would be **less than significant**.

d. Less than significant. During construction, diesel-powered construction equipment could generate short-term, non-persistent odors due to engine exhaust, but these dissipate quickly and would likely not be noticeable beyond the work site. Operational impacts in this regard would be minimal, as maintenance work would be routine and infrequent. Additionally, as discussed above, the area surrounding the Project site is rural. Therefore, the Project would not create odors that could impact a substantial number of people, and the impact would be **less than significant**.

14.4 Biological Resources

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

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
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?	☐	☐	☒	☐
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?	☐	☒	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐
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?	☐	☐	☐	☒

14.4.1 Existing Setting

The State CEQA Guidelines address species of plants or animals listed or proposed for listing under the Federal Endangered Species Act (ESA) or the California Endangered Species Act (CESA), as well as those covered under the Migratory Bird Treaty Act (MBTA), the California Native Plant Protection Act, various sections of the California Fish and Game Code (CFGC), and local

policies or ordinances. To evaluate whether the Project may affect biological resources under CEQA purview, biological surveys and assessments were completed for the Cantua Creek and Arroyo Pasajero Creek basins sites and are included as Appendices A and B, respectively. As part of these studies, lists of special-status species from the United States Fish and Wildlife Service (USFWS), the California Department of Fish and Wildlife (CDFW), and the California Native Plant Society (CNPS); other relevant background information such as satellite imagery and topographic maps were reviewed; and field reconnaissance surveys at the Project sites were conducted.

Desktop Surveys

The USFWS species list for the Cantua Creek and Arroyo Pasajero Creek Project sites included 11 species listed as threatened or endangered under the ESA. None of those species could occur on or near the Project site due to either the lack of habitat, the Project site being outside the current range of the species, or the presence of development that would otherwise preclude occurrence. As identified in the species list, the Cantua Creek and Arroyo Pasajero Creek study areas do not occur in USFWS-designated or proposed critical habitat for any species (Appendix A; Appendix B).

Searching the California Natural Diversity Database (CNDDB) for the Cantua Creek site produced records of 40 special-status species. Six of these species are known within 5 miles of the Cantua Creek site, but only one—the burrowing owl (*Athene cunicularia*) (a California Species of Special Concern [SSC])—could occur on or near the Project site (Appendix A). Searching the CNDDB for the Arroyo Pasajero Creek site produced records of 40 special-status species. Eleven of these species are known within 5 miles of the Arroyo Pasajero Creek Project area, but only two could occur on or near the Project site. These include Swainson's hawk (*Buteo swainsoni*) (State listed as Threatened) and the Western mastiff bat (*Eumops perotis californicus*) (a California Species of Special Concern). The loggerhead shrike (*Lanius ludovicianus*) could also occur on or near both Project sites based on the presence of suitable habitat (Appendix B).

Searching the CNPS's Inventory of Rare and Endangered Plants of California yielded 12 and 13 species, respectively, at the Cantua Creek and Arroyo Pasajero Creek sites; none of these species are expected to occur on or near the Project sites due to a lack of suitable habitat (Appendix A; Appendix B).

Special-Status Species and Habitats with Potential to Occur

Burrowing owl (Cantua Creek): The burrowing owl is a member of the family *Strigidae* and is recognized as an SSC by the CDFW. It occurs primarily in grassland but can persist in agricultural or other developed and disturbed areas (Shuford and Gardali 2008, Rosenberg and Haley 2004). Burrowing owls depend on burrow systems excavated by other species, such as the California ground squirrel (*Otospermophilus beecheyi*) and American badger (*Taxidea taxus*). Burrowing owls use burrows for protection from predators and weather and as roosting sites and dwellings to raise young (Poulin et al. 2020). There are four CNDDB occurrence records of burrowing owls within 5 miles of the Cantua Creek site (CDFW 2024). The nearest CNDDB occurrence record of burrowing owl overlaps the southeast corner of the Cantua Creek site. Ground squirrel burrows that could support this species were present throughout the Cantua Creek site, and the Project site provides foraging habitat. However, the habitat is routinely disturbed by flooding of the existing Cantua Creek water storage basins, disking, and other agricultural activities, and no sign of burrowing owl was detected during the March 2024 reconnaissance survey. Therefore, the potential for this species to occur on the Cantua Creek site is low (Appendix A).

Swainson's hawk (Arroyo Pasajero Creek): Swainson's hawk is a raptor in the family *Accipitridae*. It is a migratory breeding resident of central California. It uses open areas, including grassland, sparse shrubland, pasture, open woodland, and annual agricultural fields such as grain and alfalfa, to forage on small mammals, birds, and reptiles. Swainson's hawks build small to medium-sized nests in medium to large trees near foraging habitat. There are nine CNDDB

occurrence records of Swainson's hawks within 5 miles of the Arroyo Pasajero Creek site. One juvenile Swainson's hawk was observed perched in an almond tree near the southern end of the Arroyo Pasajero Creek site during the September 2023 reconnaissance survey. Potential nest trees with nearby foraging habitat were within 0.5 miles of the site. Therefore, the species is present and could nest near the Arroyo Pasajero Creek site (Appendix B).

Western mastiff bat (Arroyo Pasajero Creek): The Western mastiff bat is an SSC. It is most abundant in the southern half of California, but its range extends almost to the Oregon border. This species forages in large, open areas in habitats such as desert washes, floodplains, conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, and agricultural lands (Cockrum 1960, Ross 1961). Roosts include the undersides of large slabs or boulders, trees, cliff faces, and cracks in buildings (Howell 1920; Dalquest 1946; Barbour and Davis 1969). There is a single CNDDB occurrence record of western mastiff bat within 5 miles of the Arroyo Pasajero Creek site (CDFW 2023). Trees along Arroyo Pasajero Creek provide potential roosting habitat for this species, and surrounding agricultural lands may provide foraging habitat. However, anthropogenic disturbance in the area associated with agricultural operations limits habitat quality. Therefore, the species has a low potential to occur on or near the Arroyo Pasajero Creek site (Appendix B).

Loggerhead shrike (Cantua Creek, Arroyo Pasajero Creek): The loggerhead shrike is an SSC only during its breeding season. It breeds in non-forested areas throughout most of California, beginning as early as January and extending into July (Humple 2008). It breeds and forages mainly in shrublands and open woodlands with ample grass cover and bare ground. It uses trees and tall shrubs for nesting and trees, tall shrubs, fences, and utility lines and poles as hunting perches. There are no CNDDB occurrence records of loggerhead shrike within 5 miles of the proposed recharge basins. Although the species could use trees and tall shrubs along Cantua Creek and Arroyo Pasajero Creek for nesting and the open areas of the Project sites for foraging, anthropogenic disturbance in the area associated with agricultural operations limits habitat quality. Therefore, the species has a low potential to occur on or near the Project sites (Appendix A and B).

Migratory Birds

Migratory birds protected by the MBTA or CFGC could nest on or near the Project sites during periods of seasonal migration. These include, but are not limited to, California scrub-jay (*Aphelocoma californica*), house finch (*Haemorhous mexicanus*), northern mockingbird (*Mimus polyglottos*), mourning dove (*Zenaida macroura*), red-winged blackbird (*Agelaius phoeniceus*), and western meadowlark (*Sturnella neglecta*).

Regulated Habitats

The only potentially regulated habitats in the survey areas were Arroyo Pasajero Creek and Cantua Creek. Arroyo Pasajero Creek is classified by the National Wetlands Inventory (NWI) as R4SBA (riverine, intermittent, streambed, temporarily flooded) (USFWS 2023b). Cantua Creek is classified by the NWI as R4SBCx (riverine, intermittent, streambed, seasonally flooded, excavated) (USFWS 2024b). These creeks are characterized as ephemeral drainages with flowing water existing only during or shortly after periods of rainfall. Both water bodies lacked water during their reconnaissance surveys. As streams in California, they are regulated by the CDFW, and as surface waters in California they are regulated by the State Water Resources Control Board (SWRCB). As they lack relatively permanent flows and are not tributaries to waters of the United States, these water bodies are not likely under the regulatory jurisdiction of the U.S. Army Corps of Engineers (USACE) (Google 2023). No other aquatic resources were found in the survey areas.

14.4.2 Discussion

a. Less than Significant with Mitigation. Implementation of the proposed Project could have substantial adverse effects, either direct or through habitat modifications, on four special-status animals that occur or may occur on or near the proposed recharge basins: the burrowing owl, the loggerhead shrike, Swainson's hawk, and the Western mastiff bat. Construction activities, such as grading and the use of other heavy equipment, would have the potential to disturb or harm these special-status species or substantially modify their habitat. However, implementation of Mitigation Measures (MM) BIO-1 through BIO-4 below would ensure that the Project includes site surveys of the Project areas prior to disturbance and avoid all adverse effects to species and habitat. Therefore, Project impacts would be **less than significant with mitigation**.

MM BIO-1: Burrowing Owl Surveys and Avoidance Measures.

A qualified avian biologist shall conduct four focused, pre-construction burrowing owl surveys at each basin location to assess the presence or absence of burrowing owl in accordance with the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012) and *Burrowing Owl Survey Protocol and Mitigation Guidelines* (California Burrowing Owl Consortium [CBOC] 1993), or the most recent CDFW survey protocol available If burrowing owls are detected during the focused surveys, the qualified biologist and Project proponent shall prepare a Burrowing Owl Plan that shall be submitted to CDFW for review and approval prior to commencing Project activities. The Burrowing Owl Plan shall describe proposed avoidance, monitoring, relocation, minimization, and/or mitigation actions. The Burrowing Owl Plan shall include the number and location of occupied burrow sites, acres of burrowing owl habitat that will be impacted, details of site monitoring, and details on proposed buffers and other avoidance measures if avoidance is proposed. If impacts to occupied burrowing owl habitat or burrow cannot be avoided, the Burrowing Owl Plan shall also describe minimization and compensatory mitigation actions that will be implemented. Proposed implementation of burrow exclusion and closure should only be considered as a last resort, after all other options have been evaluated as exclusion is not in itself an avoidance, minimization, or mitigation method and has the possibility to result in take. The Burrowing Owl Plan shall identify compensatory mitigation for the temporary or permanent loss of occupied burrow(s) and habitat consistent with the "Mitigation Impacts" section of the 2012 Staff Report and shall implement CDFW-approved mitigation prior to initiation of Project activities. If impacts to occupied burrows cannot be avoided, information shall be provided regarding adjacent or nearby suitable habitat available to owls. If no suitable habitat is available nearby, details regarding the creation and funding of artificial burrows (numbers, location, and type of burrows) and management activities for relocated owls shall also be included in the Burrowing Owl Plan. The Project proponent shall implement the Burrowing Owl Plan following CDFW and USFWS review and approval.

Preconstruction burrowing owl surveys shall be conducted no more than 14 days prior to the start of Project-related activities and within 24 hours prior to ground disturbance, in accordance with the Staff Report on Burrowing Owl Mitigation (2012 or most recent version). Preconstruction surveys shall be performed by a qualified biologist following the recommendations and guidelines provided in the Staff Report on Burrowing Owl Mitigation. If the preconstruction surveys confirm occupied burrowing owl habitat, Project activities shall be immediately halted. The qualified biologist shall coordinate with CDFW and prepare a Burrowing Owl Plan that shall be submitted to CDFW and USFWS for review and approval prior to commencing Project activities.

MM BIO-2: Loggerhead Shrike Considerations and Surveys.

To the extent practicable, construction shall be scheduled to avoid the loggerhead shrike nesting season, which extends from January through July. If it is not possible to schedule

construction between August and December, a pre-construction survey for nesting loggerhead shrikes shall be conducted by a qualified biologist to ensure that no active nests would be disturbed during Project implementation. A pre-construction survey shall be conducted no more than 14 days prior to the initiation of construction activities. During this survey, the qualified biologist shall inspect all potential nest substrates in and immediately adjacent to Project areas. If an active nest is found within 250 feet of the construction area to be disturbed by these activities, the qualified biologist shall determine the extent of a construction-free buffer zone to be established around the nest. If work cannot proceed without disturbing the nesting birds, work will either be (1) halted or (2) redirected to other areas at least 250 feet from the nest until nesting and fledging are completed or the nest has otherwise failed for non-construction related reasons.

MM BIO-3: Swainson's Hawk Nest Protection.

To the extent practicable, construction shall be scheduled to avoid the Swainson's hawk nesting season, which extends from March through August. If it is not possible to schedule construction between September and February, a qualified biologist shall conduct surveys for Swainson's hawk in accordance with the Swainson's Hawk Technical Advisory Committee's (SWTAC's) Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley (SWTAC 2000). These methods require six surveys— three in each of the two survey periods—prior to Project initiation. Surveys shall be conducted within a minimum 0.5-mile radius around the Project site. If an active Swainson's hawk nest is found within 0.5 miles of the Project site, and the qualified biologist determines that Project activities would disrupt the nesting birds, the qualified biologist shall consult CDFW and implement: (1) a construction-free buffer; and/or (2) a limited construction period that shall enforced by the Project proponent and construction team and overseen by the qualified biologist.

MM BIO-4: Surveys for Roosting Western Mastiff Bats.

A pre-construction clearance survey shall be conducted by a qualified biologist to ensure that no roosting western mastiff bats would be disturbed during implementation of the Project. A pre-construction clearance survey shall be conducted no more than 14 days prior to the initiation of construction activities. During this survey, the qualified biologist shall inspect all potential roosting habitat in and immediately adjacent to the impact areas. If an active roost is found within 150 feet of the construction area to be disturbed by these activities, the qualified biologist shall determine the extent of a construction-free buffer zone to be established around the roost. If work cannot proceed without disturbing the roosting bats, work shall be (1) halted or (2) redirected to other areas at least 150 feet from the roost until the roost is no longer in use.

b. Less than Significant with Mitigation. Widening or otherwise modifying the channels of the three ephemeral drainages and installing infrastructure associated with the basins could substantially impact riparian habitat and therefore constitute a significant impact. However, MM BIO-5 would require the Project to avoid riparian vegetation and replace any affected tree or shrub with native vegetation at a 3:1 ratio to ensure successful restoration. Therefore, Project impacts would be **less than significant with mitigation**.

MM BIO-5: Riparian Vegetation Replacement Plan.

To the extent practical, the Project shall avoid impacting riparian vegetation. If impacts to riparian trees or shrubs are unavoidable, the District shall implement tree replacement and maintenance requirements, involving replacing native trees and/or shrubs that are damaged or removed by replanting native species at a 3:1 ratio (replaced to lost). The District shall ensure a performance criterion of 70 percent survival of plantings for a minimum period of five consecutive years, including up to three years within supplemental irrigation and a minimum of two years without such assistance. The District shall specify the tree

replacement and maintenance requirements in their application for a Streambed Alteration Agreement to be issued by the CDFW for the Project.

c. Less than Significant. As discussed in Section 14.10, *Hydrology and Water Quality*, the proposed Project's potential to impact any water bodies in the Project area or its vicinity is low. Construction of the proposed recharge basins, including any ground-disturbing activities, would require the implementation of a Storm Water Pollution Prevention Plan (SWPPP) and compliance with all applicable regulations relating to water quality. The proposed diversion structures would alter the drainage patterns of Panoche Creek and Arroyo Pasajero Creek. However, water that is diverted into the basins through existing (e.g., Cantua Creek) or proposed diversion points would remain in the basins for groundwater recharge; no runoff out of the basins would occur. As a result, impacts to any state or federally protected wetlands through direct removal, filling, hydrological interruption, or other means would be **less than significant.**

d. Less than Significant with Mitigation. Cantua Creek, Panoche Creek, and Arroyo Pasajero Creek are ephemeral streams and do not support periods of long-standing water. As a result, there would be no impact to migratory fish species. The Project has the potential to impede the use of nursery sites for native birds protected under the MBTA and CFGC. Migratory birds are expected to nest on and near the Project sites. Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings or otherwise lead to nest abandonment. Disturbance that causes nest abandonment or loss of reproductive effort can be considered "take" under the MBTA and CFGC. Loss of fertile eggs or nesting birds, or any activities resulting in nest abandonment, could constitute a significant effect if the species is particularly rare in the region. Construction activities such as grading that disturb a nesting bird in the Project site or immediately adjacent to the construction zone could constitute a significant effect. However, implementation of MM BIO-6 would ensure construction timing would avoid nesting birds., Therefore, Project impacts would be **less than significant with mitigation**.

MM BIO-6: Protection of Nesting Birds.

To the extent practicable, construction shall be scheduled to avoid the nesting season, which extends from February through August. If it is not possible to schedule construction between September and January, pre-construction surveys for nesting birds shall be conducted by a qualified biologist to ensure that no active nests would be disturbed during the construction of the Project. A pre-construction survey shall be conducted no more than 14 days prior to the initiation of construction activities. During this survey, the qualified biologist shall inspect all potential nest substrates in and immediately adjacent to the impact areas. If an active nest is found within 250 feet of the construction area to be disturbed by these activities, the qualified biologist shall determine the extent of a construction-free buffer zone to be established around the nest. If work cannot proceed without disturbing the nesting birds, work shall be (1) halted or (2) redirected to other areas at least 250 feet from the nests until nesting and fledging are completed or the nest has otherwise failed for non-construction-related reasons.

e. Less than Significant. There are no sensitive natural communities identified in local or regional plans, policies, or regulations, or by CDFW or USFWS, located in the Project vicinity. The Fresno County General Plan identifies several goals and policies intended to protect and preserve biological resources, including wetland and riparian habitat, general wildlife habitat, nesting and migratory birds, and special-status plant and animal species. Since the proposed Project could result in adverse impacts on special-status species, riparian habitat, movement of native resident or migratory fish or wildlife species, established native resident or migratory wildlife corridors, or nursery sites, MMs BIO-1 through BIO-6 above would be required to avoid significant impacts. With mitigation, the Project would be substantially in conformance with local and regional plans, policies, and regulations for biological resources. Therefore, **impacts would be less than significant with mitigation**.

f. No Impact. No Habitat Conservation Plans or Natural Community Conservation Plans are currently in place in Fresno County. Therefore, the proposed Project would not conflict with any Habitat Conservation Plans or Natural Community Conservation Plans, and **no impacts** would occur.

14.5 Cultural Resources

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
a) Cause a substantial adverse change in the significance of a historical pursuant to § 15064.5?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

14.5.1 Existing Setting

The District supports a rich history and assemblage of prehistoric and historic age resources, primarily due to a long history of human occupation dating back to the settlement of early Native American groups in the San Joaquin Valley approximately 13,500 to 11,000 years before present (BP). At present, the District area consists of a total of 297 cultural resources within Kings County and 434 cultural resources within Fresno County, for a total of 731 cultural resources within the District and its immediate sphere of influence. These resources are roughly split between prehistoric and historic post-contact period age resources. The majority of pre-contact cultural resources (prehistoric) consist of lithic scatters and bedrock milling features. However, there are 35 known burials, 5 known petroglyph sites, and 40 known locations of habitation sites previously recorded in the District.

Despite the abundance of previously recorded features, the archaeology of the San Joaquin Valley has been under-studied and is poorly understood, including areas under the District's footprint, even though specific and significant sites dating back to the earliest periods of human occupation in California have been identified immediately adjacent to the District's boundaries and continue to yield important information. Given the significant number of natural drainages and wetlands within the District's footprint, the potential for subsurface discovery of indigenous and post-contact cultural resources is high throughout. However, surface and shallow subsurface sensitivity may be minimal in some areas, particularly on historically cultivated agricultural lands. Due to the nature of alluvial deposits, especially in valley regions surrounded by substantial mountain terrain, culturally sensitive strata can be expected to exist in a wide depth range. In addition, there are well over 100 historic structures such as bridges, wells and cisterns, canals and aqueducts, and structural foundations within the District. Depending on the condition, cultural affiliation, and age of the historic resources, the State of California and the Office of Historic Preservation determine the varying degrees of significance and list them in the National Register of Historic Places. Federal, state, and local governments have implemented laws and regulations designed to protect significant cultural resources that may be affected by substantial adverse change (Public Resources Code Sections 21083.2 and 21084.1 and Sections 15064.5 and 15126.4 (b) of the CEQA Guidelines).

14.5.2 Discussion

a-c. Less than Significant with Mitigation. The proposed Project would result in the construction of several new surface water diversion and groundwater recharge basins along three ephemeral drainages within the District: Panoche Creek, Cantua Creek, and Arroyo Pasajero Creek. Construction of the recharge basins would include earthwork to move dirt onsite to build the berms for cells within each basin and would involve graders, loaders, excavators, backhoes, and other ground-disturbing tools and equipment. However, earthwork activities would generally be surficial. In addition, the Project areas have been subjected to substantial ground disturbance over the last 100 years due to historical and recent commercial agricultural activities, such as ripping and grubbing, that would limit the potential for disturbance of any buried, undisturbed resources. Though the abundance of archaeological resources within the District is considered to be high, the potential for any intact archaeological resources to exist onsite is low. Regardless, although the potential for cultural resources, including historical and archaeological resources and human remains, to occur is low, it is not nonexistent. Therefore, the Project is considered to result in potentially significant impacts on buried, undiscovered archaeological resources. Implementation of the MM CUL-1 and MM CUL-2 would ensure that the Project would avoid potential impacts on archaeological and historical resources, as well as human remains, and, therefore, impacts would be **less than significant with mitigation**.

MM CUL-1: Inadvertent Discovery Plan for Archaeological Materials.

Should any cultural resources or archaeological materials be discovered during excavation, work in the immediate vicinity of the find shall halt until the District retains a qualified archaeological consultant to assess the find. Responsibility for making this determination shall be with the District's onsite inspector. If the qualified archaeologist determines the materials belong to a potentially significant archaeological or historic resource, a treatment plan shall be developed in consultation with the District, tribal representatives (in the event of a prehistoric site), and the Fresno County Department of Public Works and Planning.

MM CUL-2: Inadvertent Discovery Plan for Human Remains.

In the event that human remains are encountered during construction activities, the following procedures shall be implemented:

a. All construction activities in the vicinity of the discovered resource shall be halted immediately and a District representative contacted.

b. Per the stipulations of the California Health and Safety Code 7050.5(b), the Fresno County Coroner's Office will be contacted immediately by the District.

c. The Coroner's Office has two working days in which to examine the identified remains. If the Coroner determines that the remains are Native American, then the Office shall notify the Native American Heritage Commission (NAHC) within 24 hours of the determination.

d. Following receipt of the Coroner's Office notice, the NAHC will contact a Most Likely Descendant (MLD). The MLD may, with the permission of the landowner or authorized representative, inspect the site and make recommendations regarding the treatment and/or a re-interment of the human remains and any associated grave goods within 48 hours of being granted access to the site.

e. Appropriate treatment and disposition of Native American human remains and associated grave goods will be collaboratively determined in consultation between the MLD, the consulting archaeologist, and the landowner or authorized representative. The treatment of human remains may potentially include the preservation, excavation, analysis, and/or reburial of those remains and any associated artifacts.

f. If the remains are determined not to be Native American, the Coroner, archaeological research team, and the District will collaboratively develop a procedure for the appropriate study, documentation, and ultimate disposition of the historic human remains prior to reinitiating construction activities in the vicinity of the discovery.

14.6 Energy

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

14.6.1 Existing Setting

California law requires counties and cities to develop comprehensive, long-term general plans related to energy supplies, consumption, and conservation. General plans are required to include a conservation element and an inventory of energy resources from renewable sources to be consistent with applicable air quality standards. The Project area does not generate a demand for public energy utilities, including electricity and natural gas.

14.6.2 Discussion

a. Less than significant. Equipment needed for Project construction includes graders, loaders, excavators, backhoes, concrete trucks, pumper trucks, water trucks, hauling trucks, and dump trucks. There would be a nominal increase in fuel demand, primarily gasoline and diesel, that would result from the use of construction equipment and vehicle trips generated by construction workers during the construction period and maintenance workers during the operational period. Project operation would cause negligible increases in fuel demand from powering pumps in diversion structures and infrequent maintenance activities, such as vegetation removal, of the basins and associated infrastructure. Energy consumed during construction and operational activities of the proposed Project would not result in the wasteful, inefficient, or unnecessary consumption of energy. Therefore, impacts associated with the construction and operation of the proposed Project would be **less than significant**.

b. No impact. Following the construction of the Project, there would be no significant increase in energy demand due to the operation and maintenance of the recharge basins and diversion facilities. The proposed Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Implementation of the Project and the continued use of existing energy supplies at a rate similar to existing conditions would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Therefore, there would be **no impact**.

14.7 Geology and Soils

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☐	☒
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
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?	☐	☐	☐	☒
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the	☐	☐	☐	☒

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒

14.7.1 Existing Setting

Fresno County is located within the Great Valley geomorphic province of California. The geology of the Great Valley is typically characterized by thick sequences of alluvial sediments. The alluvial plain is approximately 400 miles long and 50 miles wide. The District area is not located in an Alquist-Priolo Earthquake Fault Zone or a mapped landslide or liquefaction zone.

14.7.2 Discussion

a. No impact. The proposed Project would not involve construction or activities that would expose people or structures to adverse effects involving rupture of a known earthquake fault, strong seismic ground shaking, ground failure, liquefaction, or landslides. The proposed Project involves the construction of several earthen-berm groundwater recharge basins, diversion facilities, and associated infrastructure. The Project does not involve the development of any new structures that would be occupied by any persons or structures that would be substantially adversely affected by seismic hazards. Therefore, there would be **no impact**.

b. Less than significant. The proposed Project would not include any new development activities or land use changes that could result in substantial erosion or the loss of topsoil. Though Project activities would include earthwork, erosion would be reduced through required grading regulations and best management practices (BMPs). According to Fresno County's Grading and Excavation Code, the District would be required to obtain Grading Permits and create a Grading Plan for earthwork activities. The Grading Plan and Permit would ensure that erosion-control measures would be instituted in accordance with County regulations (County of Fresno, 2024a). Additionally, more than one acre of ground disturbance triggers the requirement of a Stormwater Pollution Prevention Plan (SWPPP), which would control runoff and erosion. Construction could result in erosion and siltation in the creek, but compliance with existing regulations and permitting requirements would ensure impacts are **less than significant**.

c. No impact. The proposed Project area is not located on a mapped liquefaction zone or located within geologic units or soil that would be unstable as a result of the proposed Project. The proposed Project would not include activities that could result in soil becoming unstable and thus resulting in on- or off-site landslides, lateral spreading, liquefaction, or collapse. Therefore, there would be **no impact**.

d. No impact. The proposed Project would not result in significant risks to life or property from expansive soils, as the Project does not propose the development of land or construction of new facilities that would be particularly susceptible to expansive soil hazards. Therefore, there would be **no impact**.

e. No impact. The proposed Project would not require the use of septic tanks or wastewater disposal systems. Additionally, the proposed Project would not impact the existing sanitary sewer lines within the Project area. Therefore, there would be **no impact**.

f. No impact. As described, above, the proposed Project would involve surficial earthwork in an area characterized by thick sequences of alluvial sediments that have been subjected to substantial ground disturbance over the last 100 years due to historical and recent commercial agricultural activities, such as ripping and grubbing that significantly limits the potential presence of any buried, undiscovered paleontological or geologic resources. Therefore, there would be **no impact**.

14.8 Greenhouse Gas Emissions

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

14.8.1 Existing Setting

Global climate change can be measured by changes in wind patterns, storms, precipitation, and temperature. Scientific consensus has identified human-related emissions of greenhouse gases (GHGs) above natural levels is a significant contributor to global climate change. GHGs are emissions that trap heat in the atmosphere and regulate the Earth's temperature, and include water vapor, CO_2, methane (CH_4), nitrous oxide (N_2O), ground-level ozone, and fluorinated gases, such as chlorofluorocarbons, hydrochlorofluorocarbons, and halons. The potential impacts of climate change include severe weather patterns, flooding, reduced quality and availability of water, sea level rise, and beach erosion. Primary activities associated with GHG emissions include transportation, operation of utilities (e.g., power generation and transport), industrial activities, manufacturing, agriculture, and residential uses. End-use sector sources of GHG emissions in California are as follows: transportation (41 percent), industry (24 percent), electricity generation (15 percent), agriculture and forestry (8 percent), residential (7 percent) and commercial (5 percent) (CARB 2020).

Assembly Bill (AB) 32 is a California State Law that establishes a comprehensive program to reduce GHG emissions from all sources throughout the state. AB 32 requires CARB to develop regulations and market mechanisms to reduce California's GHG emissions to 1990 levels by 2020, representing a 25 percent reduction statewide, with mandatory caps beginning in 2012 for significant emissions sources (CARB 2018). In 2015, the Governor issued Executive Order B-30-15, extending the AB 32 GHG reduction target to 40 percent below 1990 levels by 2030 to make it possible to reach the ultimate goal of reducing emissions by 80 percent under 1990 levels by 2050, as established in Executive Order S-3-05. Subsequently, in 2017, the State of

California enacted Senate Bill (SB) 32, which codified the GHG emissions target of Executive Order B-30-15, and AB 197, which is a measure that increases legislative oversight over CARB to ensure that strategies to lower emissions favor those most impacted by climate change. Lastly, in September 2018, the state issued Executive Order B-55-18, which established a statewide goal to achieve carbon neutrality as soon as possible, and no later than 2045, further demonstrating the state's continued commitment to address climate change.

San Joaquin Valley Air Pollution Control District

The SJVAPCD, the agency principally responsible for comprehensive air pollution control in the San Joaquin Valley Air Basin, adopted the Climate Change Action Plan (CCAP) in 2008, which guides SJVAPCD staff, valley businesses, land use agencies, and other permitting agencies in addressing GHG emissions as part of the CEQA process. In response, the SJVAPCD adopted a policy and guidance in December 2009 to provide direction in assessing and reducing the impacts of project-specific GHG emissions on global climate change from stationary sources. The policy is detailed in SJVAPCD Policy – *Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency* (SJVAPCD Policy) and guidance regarding this policy is provided in *Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA*.

The SJVAPCD Policy establishes the process to evaluate the significance of action-specific GHG emission impacts on global climate change and to establish Best Performance Standards (BPSs) to reduce action-specific GHG emissions. The use of BPSs is a method of streamlining the CEQA process of determining significance and is not a required emission reduction measure. Actions implementing BPSs are determined to have a less than cumulatively significant impact. Otherwise, a demonstration of a 29-percent reduction in GHG emissions, from business-as-usual, is required to determine that an action would have a less than cumulatively significant impact. The SJVAPCD has not officially adopted a significance threshold for the generation of GHGs from water exchanges to assess the level at which an action's incremental contribution is considered cumulatively considerable.

The SJVAPCD Policy applies to projects for which the SJVAPCD has discretionary approval authority over the project and serves as the lead agency for CEQA purposes. However, land use agencies can refer to it as guidance for projects that include stationary sources of emissions. The guidance does not limit a lead agency's authority in establishing its own process and guidance for determining the significance of action-related impacts on global climate change.

Fresno Council of Governments Comprehensive Climate Action Plan

The Fresno Council of Governments (Fresno COG) is preparing a Regional Climate Action Plan to meet federal and state requirements and regulations. The first component of the Regional Climate Action Plan is the Priority Climate Action Plan (PCAP) which includes a GHG inventory, identification and quantification of priority GHG emissions reduction measures, a benefit analysis for low-income communities, and identification of implementation authorities.

Following the PCAP, a Comprehensive Climate Action Plan (CCAP) and Status Report will be developed. The CCAP will build on the PCAP by including a more detailed technical analysis, a GHG forecast, and specific targets for GHG reduction (Fresno Council of Governments, 2024). The Fresno COG began development of the CCAP in late spring/early summer of 2024, and it is anticipated that it will take approximately 18 months to complete.

14.8.2 Discussion

a. Less than significant. Construction of the proposed Project would generate GHG emissions such as carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O) through the use and operation of construction equipment, as well as from worker vehicles and vendor vehicles. Equipment needed for Project construction includes graders, loaders, excavators, backhoes, concrete trucks, pumper trucks, water trucks, hauling trucks, and dump trucks. Although

construction activities related to the Project would result in GHG emissions, these emissions would be temporary and limited to the 43-month construction period. The SJVAPCD's current guidance for assessing impacts from GHG emissions is provided in the SJVAPCD's *Guidance for Valley Land-use Agencies in Addressing GHG Emissions Impact for New Projects under CEQA* (2009). This guidance is intended to apply primarily to operational GHG emissions, and the SJVAPCD does not currently recommend assessing impacts associated with construction-related GHG emissions given their temporary nature. However, other jurisdictions such as the Sacramento Metropolitan Air Quality Management District (SMAQMD) do have guidance and recommended methodology for assessing construction-related GHG emissions. Based on SMAQMD guidance and Assembly Bill (AB) 32 consistency thresholds, construction projects are not considered to result in significant impacts if the project would result in less than 1,100 annual metric tons of carbon dioxide equivalent units of measure (MT CO_2e).

Construction GHG emissions associated with the construction of the new recharge basins and diversion infrastructure were estimated using CalEEMod Version 2022.1.1.28. The results of this modeling effort are summarized in Table 4. As presented therein, construction of the Project is estimated to generate a maximum of 681 MT CO_2e per year. As such, implementation of the Project and the construction of new groundwater recharge and water diversion facilities would not exceed applicable thresholds of significance for land use projects for short-term construction emissions.

Table 4. Estimated GHG Emissions from Project Construction

Construction Year	Total CO_2	CH_4	N_2O	CO_2e
2025	427	<0.1	<0.1	428
2026	679	<0.1	<0.1	651
2027	338	<0.1	<0.1	339
2028	338	<0.1	<0.1	186
Maximum Annual GHG Emissions	681	<0.1	<0.1	681
Threshold of Significance				*1,100*
Threshold Exceeded?				***No***

Source: Appendix C.

Operation of the proposed Project's recharge basins and diversion facilities would not generate a substantial new amount of GHG emissions. Operation of the Project would be limited primarily to infrequent maintenance of the basins, which may require the operation of some mechanical equipment and the operation of water pumps during infrequent periods of high flow that would utilize electricity supplies. All operational activities would be small-scale and occur infrequently for a short duration of time. Thus, operation of the proposed Project would not represent a significant new source of energy demand and associated GHG emissions. Therefore, impacts related to the generation of GHG emissions would be **less than significant**.

b. Less than significant. The Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. The Project would be in compliance with all SJVAPCD policies and regulations and would not exceed an applicable threshold of significance for short-term construction emissions. Therefore, impacts related to GHG emissions and consistency with GHG plans and policies would be **less than significant**.

14.9 Hazards and Hazardous Materials

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
a) Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?	☐	☐	☐	☒
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?	☐	☐	☐	☒
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan area or, where such a plan has not been adopted, within two miles of a public airport or a public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	☐	☒

14.9.1 Existing Setting

A hazardous material is any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or the environment if released into the workplace or environment (Caltrans, 2023). State agencies regulating hazardous materials are the California Environmental Protection Agency (Cal/EPA) and the Office of Emergency Services. Within the Cal/EPA, the Department of Toxic Substances Control (DTSC) has regulatory authority for hazardous materials regulation and enforcement. State hazardous waste regulations are located primarily in the California Code of Regulations (CCR) Title 22. California Division of Occupational Safety and Health (CalOSHA) has primary responsibility for developing and enforcing standards for safe workplaces and work practices in California in accordance with regulations specified in CCR Title 8. The Environmental Health Services Department enforces hazardous waste regulations and serves as the Certified Unified Program Agency (CUPA) for Fresno County.

According to the California Department of Forestry and Fire (CAL FIRE), all of the proposed basins are located in Local Responsibility Areas (LRAs) of Fresno County. The surrounding vegetation and agricultural land use types have a low potential for wildland fires.

14.9.2 Discussion

a, b. No impact. The proposed Project activities would not create a significant hazard to the public or environment as the Project involves the construction and operation of recharge basins, diversion facilities, and associated infrastructure which would not typically involve the use, storage, transportation, or disposal of hazardous materials. The use and storage of hazardous materials such as fuels or lubricants could be involved during Project construction due to the operation of construction equipment. However, use and storage would be conducted in accordance with existing regulations. Therefore, the proposed Project would have **no impact**.

c. No impact. The proposed Project would not emit hazardous emissions or handle hazardous materials, substances, or waste within 0.25 miles of an existing or proposed school. Currently, there are no existing or proposed schools within a 0.25-mile radius of the Project area. Therefore, there would be **no impact**.

d. No impact. The proposed Project would not occur on a hazardous materials site that would create a risk to the public or the environment. Therefore, there would be **no impact**.

e. No impact. The proposed Project sites for the Cantua Creek Basin and Panoche Creek Basin A do not occur within 2 miles of an airport and are not located within an airport land use plan area.

There is a small private airstrip located approximately 0.8 miles southwest of Panoche Creek Basin B, and the nearest airport to the Arroyo Pasajero Creek Project site is Willett Field, located approximately 1.5 miles southeast. However, the Project does not include substantial new development, with a maximum construction height of approximately 5.9 feet. Additionally, based on a review of Fresno County's Airport Land Use Compatibility Plan, the proposed basin sites are not located in an Airport Safety Zone (Fresno Council of Governments, 2023). The proposed Project construction and operation would not create safety hazards or excessive noise for people residing or working in the Project area. Therefore, there would be **no impact**.

f. No impact. The proposed Project would not impair or physically interfere with an adopted emergency response plan or a local, state, or federal agency's emergency evacuation plan. The proposed Project would not materially change the characteristics of the site in a way that would alter emergency response or evacuation plans. Therefore, there would be **no impact**.

g. No impact. The proposed Project is not located within a very high fire hazard zone and not within or adjacent to uses prone to wildfires. In addition, standard safety procedures would be followed, and all vehicles and equipment would have fire prevention equipment on-site, including fire extinguishers and shovels. Therefore, the potential for wildfire impacts on people or structures due to Project implementation would be nominal. **No impact** would occur.

14.10 Hydrology and Water Quality

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☐	☒
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:	☐	☐	☒	☐
i) result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐
iii) create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☐	☒
iv) impede or redirect flood flows?	☐	☐	☒	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

14.10.1 Existing Setting

The proposed groundwater recharge facilities are located at separate sites along three ephemeral drainages – Panoche Creek, Cantua Creek, and Arroyo Pasajero Creek.

The District and the groundwater recharge facilities proposed as part of the Project overlie the Westside Subbasin of the San Joaquin Valley Groundwater Basin. The San Joaquin Valley Groundwater Basin comprises the San Joaquin River Hydrologic Region and Tulare Lake Hydrologic Region (DWR 2006; USBR 2011). The Project areas fall within the Tulare Lake Hydrologic Region. The aquifers are generally thick in this region, with groundwater wells commonly extending to depths of up to 800 feet. The Westside Subbasin (Subbasin No. 5-22.09) is in the western portion of the San Joaquin Valley Groundwater Basin, within Fresno and Kings Counties. The Westside Subbasin covers approximately 972 square miles (622,215 acres) and is characterized by a relatively flat topographic setting along the west side of the San Joaquin Valley (Luhdorff & Scalmanini Consulting Engineers [LSCE] 2025).

Although the San Joaquin Valley Groundwater Basin has a large storage capacity, water level records and studies indicate that groundwater withdrawals caused declines in groundwater levels as deep as 400 feet compared to predevelopment conditions. The District GSP utilized a numerical integrated groundwater flow model referenced as the Westside Groundwater Model (WSGM) to support the development of the Subbasin water budgets and quantify groundwater overdraft. The WSGM simulates a decline in groundwater storage averaging 19,000 AFY over the entire Westside Subbasin between 1987 and 2015. The results of groundwater monitoring show

high levels of pumping during 2013 through 2016, which correlated with California's most recent historic drought. The increase in groundwater pumping is correlated to decreased groundwater levels and elevated risk of groundwater overdraft (LSCE 2025).

Within this basin, primary constituents of concern are total dissolved solids, metals, organic chemicals, and other potential pollutants. Poor drainage and high evaporation rates also result in a higher concentration of salts on the surface of the valley floor, which in turn percolate into groundwater supplies. These constituents of concern are primarily naturally occurring as a result of the geologic composition of the aquifer materials; there is little evidence that groundwater quality degradation in the Westside Subbasin is a result of agricultural or industrial-related activities (LSCE 2025). Another concern within the district is land subsidence, which is the lowering of the land surface elevation that results from human-induced changes that take place underground. Land subsidence in the western and southern parts of the Central Valley has resulted primarily from groundwater extraction from the region's Lower Aquifer.

Sustainable Groundwater Management Act

The SGMA, enacted in 2014, encourages local agencies to work cooperatively in managing groundwater resources and is intended to increase local control and protection over groundwater basins. The intent of this legislation is to manage the use of groundwater in a manner that can be maintained long-term without causing the chronic lowering of groundwater levels, overdraft, and a significant reduction in groundwater storage, saline water intrusion, or subsidence. The Westside Subbasin was designated as a high-priority basin in critical overdraft by the DWR, requiring the development of a GSP for the area (DWR 2003). The District GSP, prepared for the District's GSA and the County of Fresno GSA-Westside, was developed in January 2020 and amended in January 2025. The GSP's sustainability goal is to develop projects and management actions that result in the sustainable management of the groundwater resources of the Westside Subbasin for long-term community, financial, and environmental benefits of residents and businesses in the Westside Subbasin (LSCE 2025). The GSP sets forth measurable objectives, minimum thresholds, and interim milestones to achieve the sustainability goal and avoid undesirable results in each sustainability indicator by 2040.

The GSP also sets forth the monitoring network and proactive management program to maintain the sustainability goal and details the Projects and Management Actions that will be implemented. The GSP was adopted by the District in January 2020, and amended in January 2025, with the objectives of:

- Set objectives to achieve sustainability within 20 years of plan implementation;
- Report data on groundwater levels, water quality, subsidence, and surface water interaction;
- Provide a monitoring program for managing groundwater levels, water quality, subsidence, and changes to surface flow and surface water quality;
- Provide mitigation of overdraft;
- Provide measures addressing recharge, diversion, and water recycling as necessary;
- Provide well construction policies;
- Establish efficient water management practices;
- Address impacts on groundwater-dependent ecosystems.

Water Quality Control Plan for the Tulare Lake Basin

The proposed Project is in the Westside Subbasin of the Tulare Lake Groundwater Basin. The Tulare Lake Basin Plan was developed in 1975 by the Central Valley Regional Water Quality Control Board (CVRWQCB) and approved by the SWRCB; it has been subsequently revised and

approved several times. The most recent revisions to the Tulare Lake Basin Plan were completed in May 2018. The Basin Plan performs all the functions required by the Porter-Cologne Water Quality Control Act, including identifying the designated beneficial uses for surface and groundwater resources, defining applicable water quality objectives necessary to support these beneficial uses, and establishing programs that protect water quality.

Westlands Water District Groundwater Management Plan

The District developed a Groundwater Management Plan in 1996 pursuant to AB 3030 and the Central Valley Project Improvement Act (CVPIA). The Groundwater Management Plan contains goals to preserve groundwater resources and quality, ensure the long-term availability of high-quality groundwater, maintain local control of groundwater resources, and minimize the impacts of groundwater use including subsidence, overdraft, and soil productivity.

Westlands Water District Water Management Plan

The District's water service contracts with the United States Bureau of Reclamation (USBR) and DWR require that the District adopt a Water Management Plan that demonstrates that the District is implementing best management practices to promote water conservation. The plan is to be updated every five years in conjunction with USBR's Standard Criteria for Agricultural and Urban Water Management Plans and DWR's Water Quality Policy and Implementation Process for Acceptance of Non-Project Water into the State Water Project. The most recent Water Management Plan developed to meet 2020 USBR criteria was developed in 2023.

14.10.2 Discussion

a. Less than Significant. The proposed Project's potential to impact any water bodies in the Project area or its vicinity is low. Construction of the proposed recharge basins, including any ground-disturbing activities, would require implementation of an SWPPP and compliance with all applicable regulations relating to incidental releases of pollutants or hazardous substances into surface water or groundwater. This would include various BMPs, such as dust abatement measures, clearing and grubbing plans, and other erosion control measures. Operation of the recharge basins would need to be implemented in a manner that would avoid or minimize the muddying and silting of any bodies of water. Therefore, impacts relating to violation of water quality standards or waste discharge requirements would be **less than significant**.

b. No Impact/Beneficial Impact. The goals of the proposed Project are to allow for groundwater percolation and recharge in each of the proposed basins to improve the conditions of the Project areas' underlying aquifer and protect baseline replenishment. This would be accomplished by diverting excess surface water from the three ephemeral drainages adjacent to the proposed basins to facilitate more efficient groundwater recharge. Implementation of the proposed Project would improve groundwater conditions in a critically overdrafted basin and would therefore increase groundwater supplies. Therefore, there would be **no impacts** or a **beneficial impact** relating to groundwater supplies, recharge, and sustainable management.

c (i). Less than Significant. Construction and operation of the proposed recharge basins would alter the drainage patterns of Panoche Creek, Cantua Creek, and Arroyo Pasajero Creek. However, as discussed in threshold a) above, the Project would require the development and implementation of an SWPPP and other BMPs relating to erosion control. In addition, water that is diverted into the basins through established diversion points would remain in the basins for groundwater recharge; no runoff out of the basins would occur. Siltation within the recharge basins would occur over time, but periodic removal of sediment during maintenance activities would reduce the accumulation of silt and sediments and would increase infiltration rates. Therefore, impacts relating to erosion and siltation would be **less than significant**.

c(ii). Less than Significant. As described above, construction activities relating to the proposed Project would have the potential to increase surface runoff. However, the potential for runoff would be reduced by implementation of an SWPPP and compliance with other regulations.

Therefore, the potential for the Project to increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site would be limited, and impacts would be **less than significant**.

c(iii). No impact.. As described above, implementation of an SWPPP and other erosion and dust control measures would reduce the potential for runoff, including polluted runoff. The limited potential for this runoff water would not result in exceedance of the capacity of existing storm water drainage systems. Rather, the construction and operation of the proposed recharge basins would include flow control structures, riprap spillways, and embankments to control the storage of surface water into the basins and prevent uncontrolled inundation of stormwater drainage systems. Therefore, there would be **no impact** or a **beneficial impact** relating to stormwater drainage systems**.**

c(iv). Less than Significant. Construction and operation of the proposed recharge basins would be considered to redirect flood flows. However, Project components such as flow control structures, riprap spillways, and embankments would result in increased control over potential flood waters and would provide flood relief to landowners adjacent to the proposed basins. Therefore, impacts relating to impeding or redirecting flood flows would be **less than significant.**

d. Less than Significant. The Project areas are not located within tsunami or seiche zones. The proposed Cantua Creek, Arroyo Pasajero Creek, and Panoche Creek basins are respectively located within the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Maps (FIRM) Panels 06019C1950H and 06019C2800H (dated 2/17/2009), Panels 06019C3235H and 06019C3255H (dated 2/18/2009), and Panels 06019C1975H and 06019C1445H (dated 2/17/2009). Project areas are located within Zone X, *Area of Minimal Flood Hazard*; Zone A, *Special Flood Hazard Area (SFHA) with a One Percent Annual Chance Flood Hazard*; and Zone AO, *SFHA with a One Percent Annual Chance Flood Hazard*. Therefore, portions of the Project site(s) are within floodplains.

However, as described above, construction of the proposed recharge basins would implement various BMPs, including an SWPPP, to reduce the potential for erosion and polluted runoff. In addition, the operation of the recharge basins would improve flood control measures through flow control structures, riprap spillways, and embankments, and would reduce the risk of inundation on- and off-site. Therefore, impacts relating to the risk of pollutants due to Project inundation in flood zones would be **less than significant.**

e. No Impact/Beneficial Impact. As described in Section 10.0, *Project Description*, the purpose of the proposed Project is to provide facilities for excess surface water supply to be recharged, improving water supply reliability within the region and improving conditions of the underlying aquifer consistent with the District's GSP implementation and management actions. In addition, some of the other goals of the diversion and groundwater recharge basins are to protect baseline replenishment and existing beneficial uses while appropriating flood waters, enhancing natural aquifer recharge, and promoting groundwater sustainability in the Subbasin. The increase in capacity for groundwater percolation and recharge would reduce adverse effects related to groundwater pumping, helping to stabilize groundwater levels in a critically overdrafted region. Implementation of the proposed Project would align directly with the 2025 District GSP's Project No. 5, Percolation Basins. Therefore, there would be **no impacts** or a **beneficial impact** relating to conflicts with water quality control plans or GSPs.

14.11 Land Use and Planning

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

14.11.1 Existing Setting

The primary land use throughout the proposed Project area is agriculture, with this industry supporting many of the jobs and much of the economic output of the region (County of Fresno, 2000b). The vast majority of land within the District is designated for agricultural use under the General Plan of Fresno County (County of Fresno, 2000b). Much of the land within this area is also classified as important farmlands by the California Department of Conservation, as well as being enrolled in Williamson Act contracts, as described below. As such, Fresno County protects agricultural resources as an important land use through its General Plan and zoning ordinances (County of Fresno, 2024b). These measures are generally based on the quality of land in terms of potential production value.

14.11.2 Discussion

a. No Impact. The proposed groundwater recharge basins would be used to reduce impacts from groundwater pumping and allow for replenishment of groundwater levels in a critically overdrafted basin. The proposed Project would not intrude on public rights-of-way, nor would it physically divide any established community. Therefore, there would be **no impacts.**

b. No Impact. There are several regulatory plans and programs applicable to the Project areas, as described below.

The Williamson Act protects important farmlands by incentivizing farmers to enter into agreements that commit their land to agricultural activities. The Act enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space uses in return for reduced property tax assessments. Specifically, this enables landowners who voluntarily agree to participate in the program to receive assessed property taxes according to the income-producing value of their property in agricultural use, rather than on the property's assessed market value. Private land within locally designated agricultural preserve areas is eligible for enrollment under Williamson Act contracts.

The California Department of Conservation uses the Natural Resources Conservation Service soil classifications to characterize agricultural lands. The FMMP assesses the location, quality, and quantity of agricultural lands and monitors the conversion of these lands to non-agricultural uses. The FMMP classifies important farmland into seven categories based on agricultural soil quality and current land use: prime farmland, farmland of statewide importance, unique farmland, farmland of local importance, grazing land, urban and built-up land, and other land.

The Fresno County General Plan 2024 Update outlines various goals and policies relating to the protection and continuation of agriculture throughout the county:

- Goal LU-A: To promote the long-term conservation of productive and potentially productive agricultural lands and to accommodate agricultural-support services and agriculturally related activities that support the viability of agriculture and further the County's economic development goals.
    - Policy LU-A.2: Agriculture-related Uses. The County shall allow by right in areas designated Agriculture activities related to the production of food and fiber and support uses incidental and secondary to the on-site agricultural operation
    - Policy LU-A.12: Agricultural Protection. In adopting land uses policies, regulations, and programs, the County shall seek to protect agricultural activities from encroachment of incompatible land uses.
    - Policy LU-A.20: Water Resources. The County shall adopt and support policies and programs that seek to protect and enhance surface water and groundwater resources critical to agriculture.
    - Policy LU-A.22: Drought Impacts. The County shall adopt and support policies and programs that seek to minimize the impact of reoccurring drought conditions on ground water supply and the agricultural industry.
- Goal PF-C: To ensure the availability of an adequate and safe water supply for domestic and agricultural consumption.
    - Policy PF-C.4: Water Storage. The County shall support efforts to expand groundwater and/or surface water storage that benefits Fresno County.
    - Policy PF-C.10: Ongoing Water Supply. The County shall actively participate, or support the efforts of other local agencies, in the development and implementation of Sustainable Groundwater Management Plans to ensure a sustainable water supply is available to help support agriculture and accommodate future growth.
- Goal OS-A: To protect and enhance the water quality and quantity in Fresno County's streams, creeks, and groundwater basins.
    - Policy OS-A.5: Groundwater Recharge. The County shall encourage, where economically, environmentally, and technically feasible, efforts aimed at directly or indirectly recharging the county's groundwater.
    - Policy OS-A.10: Sustainable Groundwater Management. The County shall coordinate with the relevant Groundwater Sustainability Agency(ies) concerning their Groundwater Sustainability Plan(s) and refer any substantial proposed General Plan amendment to the agency for review and comment prior to adoption. The County shall give consideration to the adopted groundwater sustainability plan when determining the adequacy of water supply.
- Agriculture and Land Use Implementation Programs: LU-A.A: The County shall review and amend its Zoning and Subdivision Ordinances to ensure consistency with policies and standards of this section.

The proposed Project would be consistent with the General Plan goals and policies relating to agriculture and water supply identified above. As discussed in Section 15.2, *Agricultural and Forestry Resources*, the Project areas are zoned AE, and portions of the Project areas are currently enrolled in Williamson Act contracts with the County. Pursuant to Section 808.2.010(A) of the Fresno County Ordinance Code, the AE zone "…is intended to protect agricultural land and provide for those uses which are necessary and an integral part of an agricultural operation."

While groundwater percolation and recharge are not explicitly stated as permitted uses within AE-zoned areas, they are necessary and an integral part of an agricultural operation and in supporting agricultural operations across a broader area by enhancing the long-term viability of agricultural use of the land or surrounding lands through improving water supplies used for the irrigation of agricultural lands. Further, California Government Code Article 2.5 Section 51238 provides that "the erection, construction, alteration, or maintenance" of water facilities is a compatible use for an agricultural preserve. The Project would involve construction and maintenance of water facilities. Therefore, the lands enrolled in the Williamson Act contracts are compatible with the Williamson Act and California Government Code Article 2.5 Section 51238. Additionally, because the proposed Project would support long-term agricultural viability in the region by improving water supply reliability and contributing to groundwater recharge in a critically overdrafted basin, it would directly relate to agricultural activities on adjacent and proximate parcels. Therefore, although the Project area is zoned AE and is, in part, enrolled in Williamson Act contracts, the Project would be compatible with the existing zoning and Williamson Act contracts. **No impacts** relating to conflicts with these zoning and contractual designations, along with any other land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect would occur**.**

14.12 Mineral Resources

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

14.12.1 Existing Setting

Fresno County has been a leading producer of minerals because of the abundance and wide variety of mineral resources that are present in the county. Sand, gravel, gypsum, and oil resources have been mapped in the vicinity of the District (County of Fresno, 2000a). However, none of the Project areas are located within regionally significant Mineral Resource Zones (County of Fresno, 2000b).

14.12.2 Discussion

a, b. No Impact. The proposed Project would result in the construction and operation of groundwater percolation and recharge basins along three ephemeral drainages within the District. None of the Project areas are located within regionally significant Mineral Resource

Zones. Additionally, the proposed Project would not require the use of mineral resources and would not result in the loss of availability of a known mineral resource or mineral resource recovery site that would be of value to the local area, regional area, or the state. **No impacts** relating to mineral resources would occur.

14.13 Noise

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project result in:				
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 applicable standards of other agencies?	☐	☐	☐	☒
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
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 two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

14.13.1 Existing Setting

Noise is typically defined as unwanted sound that interferes with normal activities or otherwise diminishes the quality of the environment. The noise environment includes background noise generated from both near and distant noise sources, as well as the sound from individual local sources. The standard unit of measurement of the loudness of sound is the Decibel (dB). Since the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear. Decibels are based on the logarithmic scale. In terms of human response to noise, studies have indicated that a noise level increase of 3 dBA is barely perceptible to most people, a 5-dBA increase is readily noticeable, and a

difference of 10 dBA would be perceived as a doubling of loudness. Everyday sounds normally range from 30 to 100 dBA.

Noise levels may also be measured in community noise equivalent level (CNEL). CNEL represents a time-weighted 24-hour average noise level based on the A-weighted decibel, where "time-weighted" refers to the fact that noise occurring during evening or early morning hours is received with greater sensitivity and therefore, is penalized with additional dBAs.

The District is primarily agricultural and relatively quiet with agricultural activities contributing to the existing noise environment. The highest measured noise levels in the Project area typically result from the operation of equipment in the cultivation of agricultural commodities, raised voices, dogs barking, or individual vehicles and are typically sustained only briefly. Other considerable noise and vibration sources in the District area include vehicle traffic from I-5, which runs through the west area of the District, and operations of the Lemoore Naval Air Station (NAS Lemoore) located on the border of Kings and Fresno counties. Several airfields used by crop dusters and personal aircraft are located throughout the counties and contribute to the ambient noise environment (Kings County 2010c).

There are no sensitive receptors (e.g., schools, residences, medical facilities) located near any of the proposed basin locations.

14.13.2 Discussion

a. No impact. The Fresno County General Plan does not establish quantitative noise exposure standards that apply to construction activity. The operation of the proposed Project would not increase ambient noise levels as compared to existing conditions, as the operation of the proposed recharge basins and associated infrastructure would involve only minor maintenance activities (e.g., maintenance and repair of water pumps, clearing of vegetation in the basin) that would occur on an infrequent basis and would involve relatively few personnel and equipment. Noise generated by basin maintenance activities would not be dissimilar from other activities conducted in the immediate vicinity. Therefore, there would be **no impact**.

b. Less than significant impact. Activities associated with the proposed Project have the potential to generate low levels of groundborne vibration due to the operation of equipment and superficial earthwork. No high-impact activities, like blasting or pile driving, would occur during construction or operation. As described above, there are no sensitive receptors located near any of the proposed basin locations. Vibration dissipates rapidly with distance and the chance of perception of vibrations would be very low. Therefore, the proposed Project would result in **less than significant impacts**.

c. No impact. The proposed Project would not impact the operations of any private airstrip, public airport, or public-use airport and would not expose people residing or working in such areas to excessive noise levels. The proposed Project sites for the Cantua Creek Basin and Panoche Creek Basin A do not occur within 2 miles of an airport and are not located within an airport land use plan area. There is a small private airstrip located approximately 0.8 miles southwest of Panoche Creek Basin B, and the nearest airport to the Arroyo Pasajero Creek Project site is Willett Field, located approximately 1.5 miles southeast. Based on a review of Fresno County's Airport Land Use Compatibility Plan, neither of these sites is located in an Airport Safety Zone (Fresno Council of Governments, 2023). The proposed Project's construction and operation would not create safety hazards or excessive noise for people residing or working in the Project area. Therefore, there would be **no impact**.

14.14 Population and Housing

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

14.14.1 Existing Setting

According to the U.S. Census Bureau's 2020 Census, Fresno County has a population of 1,008,654 (U.S. Census Bureau 2020). The District serves approximately 700 family-owned farms in Fresno and Kings counties. There are no major cities located within the District. However, small communities such as Cantua Creek, Three Rocks, Huron, and Five Points are located throughout the District.

14.14.2 Discussion

a. No Impact. The proposed Project would not directly or indirectly induce substantial unplanned population growth in the area. The Project does not propose new homes or businesses, nor does it propose the extension of roads. The construction and operation of the proposed recharge basins, although considered an extension of the District's infrastructure, would not require any long-term, on-site employees, and maintenance activities would be conducted by District staff. The proposed Project would increase the reliability of groundwater supply in the region and would potentially keep some farmland from being fallowed due to drought conditions, but it would not expand agricultural activities beyond existing levels. Therefore, **no impacts** would occur.

b. No Impact. The proposed Project areas are located either within the drainage channels of the ephemeral creeks or on historically cultivated commercial agricultural lands immediately adjacent to the drainage channels. There are no residential structures within Project boundaries, and construction and operation of the proposed Project would not result in the displacement of any people or housing, necessitating the construction of replacement housing elsewhere. Therefore, there would be **no impacts**.

14.15 Public Services

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

14.15.1 Existing Setting

Fire protection in Fresno County is provided by the Fresno County Fire Protection District, and police protection is provided by the Fresno County Sheriff-Coroner's Office (Fresno County Fire Protection District 2021; Fresno County Sheriff's Office N.D.). The Project areas and their vicinity are served by Dos Palos-Oro Loma, Golden Plains, and Coalinga/Huron Unified School Districts (Fresno County Superintendent of Schools 2024). Several recreational areas, including fishing access are located in the District and are owned and managed by the County (Fresno County Public Works 2024). Recreational facilities in proximity to Project areas include Huron Fishing Access, Three Rocks Fishing Access, and Fairfax Fishing Access. Library services are provided by the Fresno County Public Library.

14.15.2 Discussion

a(i). No Impact. The proposed Project would result in the construction and operation of several new groundwater percolation and recharge basins along ephemeral drainages in the District. There are no residential structures within Project boundaries, and the areas surrounding the Project areas are sparsely populated; for example, the Census Blockgroup within which the Panoche Creek basins are proposed has a population of 1,401 people, spread out over 227 miles. The Census Blockgroup within which the Cantua Creek basin is proposed has a population of 780 people, spread out over 162 square miles. The Census Blockgroup within which the Arroyo

Pasajero Creek basins are proposed has a population of 777 people, spread out over 42 square miles (USEPA 2024).

In addition, as discussed in Section 15.14, *Population and Housing*, the Project would not directly or indirectly induce population growth; therefore, public service ratios would not be affected, and the overall demand for fire protection services would not increase. The entirety of the Project area is within the Fresno County Fire Protection District's service area; therefore, response times would not be negatively impacted by the proposed Project, as the Fire Protection District's service area would not be expanded. Lastly, activities relating to the construction and operation of groundwater percolation and recharge basins are not anticipated to increase the demand for fire protection services. The proposed Project would not create a need for new or altered fire protection facilities, the construction of which could cause significant environmental impacts. Therefore, **no impacts** related to fire protection would occur.

a(ii). No Impact. As discussed in threshold a(i) above, the proposed Project would not directly or indirectly induce population growth in the District, which is already sparsely populated; service ratios would not be impacted. All of the Project areas fall within Area 1 of the Fresno County Sheriff-Coroner's Office (Fresno County Sheriff's Office N.D.). Operation of the groundwater percolation and recharge basins is not anticipated to result in increases in crime or other activities requiring police protection. Therefore, performance objectives would not be affected. For these reasons, the proposed Project would not create a need for new or altered police protection facilities and would not create a substantial adverse physical impact associated with the construction or expansion of such facilities. **No impacts** relating to police protection would occur.

a(iii). No Impact. As discussed above, the proposed Project areas fall within Dos Palos-Oro Loma Unified School District (Panoche Creek basins), Golden Plains Unified School District (Cantua Creek basin), and Coalinga/Huron Unified School District (Arroyo Pasajero Creek basins). The proposed Project would not provide any new housing that would generate new students or residents in the community, nor would it indirectly support population growth in the region through the introduction of businesses, road infrastructure, or long-term employment opportunities. Therefore, the proposed Project would not increase the demand for school services and facilities, nor would it result in the need for new or physically altered school facilities, the construction of which could cause adverse environmental impacts; **no impacts** would occur.

a(iv). No Impact. The proposed Project would not introduce any new temporary or permanent population in the Project areas or their vicinity, and thus it would not contribute to increased use of or demand for existing local or regional parks or other recreational facilities. There would be **no impact** on parks.

a(v). No Impact. As stated in thresholds a) through d) above, the proposed Project would not result in direct or indirect growth inducement. Therefore, the demand for other public facilities, such as libraries, would not be impacted to the extent that new or altered public facilities are needed, the construction of which could cause adverse environmental effects. There would be **no impacts** to other public services and facilities.

14.16 Recreation

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project 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?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

14.16.1 Existing Setting

Several recreational areas are located in the District that are owned and managed by the County (Fresno County Public Works 2024). Recreational facilities in proximity to Project areas include Huron Fishing Access (over 1.5 miles north of the Arroyo Pasajero Creek basins), Three Rocks Fishing Access (over 4 miles from the Cantua Creek basin), and Fairfax Fishing Access (over 5 miles from the Panoche Creek basins).

14.16.2 Discussion

a. No Impact. Implementing the proposed Project would not cause physical deterioration of existing recreational facilities. As discussed in Section 15.14, *Population and Housing*, the proposed Project would not increase the population by introducing new housing or employment opportunities, and thus it would not contribute to increased use of or demand for existing local or regional parks, or other recreational facilities, accelerating their deterioration. **No impact** on recreational facilities would occur.

b. No Impact. The proposed Project does not include recreational facilities. As discussed in threshold a) above, it would not increase the use of existing recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated, requiring the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. Therefore, **no impacts** would occur.

14.17 Transportation

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

14.17.1 Existing Setting

Roads in the District are primarily rural in character and function. I-5 is the primary regional access route to the Project site and runs in a north-south direction along the western boundary of the District. To access the sites, construction vehicles would use nearby local roads and highways.

14.17.2 Discussion

a. No impact. The proposed Project could temporarily increase the number of vehicles on local roadways due to the transport and delivery of equipment and daily worker commute trips. Operationally, traffic could be minimally increased due to routine maintenance and access as needed. All equipment and materials would be transported to the proposed Project sites on public highways, local roads, and private access roads, using standard transport vehicles, like trucks. The proposed Project would not conflict with adopted programs, policies, ordinances, or plans regarding public transit, roadway, bicycle, or pedestrian facilities, nor would it otherwise decrease the performance of such facilities. **No impact** would occur.

b. No impact. The proposed Project is not a transportation project and would not increase traffic or cause a substantial change in existing vehicle travel patterns. There are no new permanent vehicle trips associated with the proposed Project other than infrequent maintenance activities. As such, the proposed Project would not impact vehicle miles travelled (VMT) and would not conflict with CEQA Guidelines Section 15064.3, subdivision (b). **No impact** would occur.

c. No impact. The proposed Project does not include the construction of any permanent roadway infrastructure that would cause a safety risk to vehicle operations. Implementation of the proposed Project would not require any road closures and traffic flow would not be

significantly interrupted on any roadway such that emergency access to local roads would be hindered. **No impact** would occur.

d. No impact. The Project would not result in traffic delays that could substantially increase emergency response times or reduce emergency vehicle access. **No impact** would occur.

14.18 Tribal Cultural Resources

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 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:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code §5020.1(k), or	☐	☒	☐	☐
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 Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

14.18.1 Existing Setting

Native American Tribes existed throughout the region for at least a thousand years prior to the existence of western frontier expansion and settlements, and included, but were not limited to the Mono, Yokut, Chuckchansi, Choinumi, Wachumni, Wahtokes, and Tachi Yokut tribes. (County of Fresno, 2000a). Land within the Project area has previously undergone disturbance during the establishment of, and operations relating to, agricultural land use. Previous ground disturbance has occurred in the area, reducing the likelihood of tribal resources remaining in the area. Pursuant to AB 52, the District has engaged in tribal consultation processes with applicable Native American Tribes.

14.18.2 Discussion

a-b. Less than Significant with Mitigation. The proposed Project would involve superficial ground disturbance that would not cause a substantial adverse change to any known tribal cultural resources. Construction would include earthwork to move dirt onsite and would involve graders, loaders, excavators, backhoes, and other ground-disturbing tools and equipment. However, earthwork activities would generally be surficial. In addition, the Project areas have been subjected to substantial ground disturbance over the last 100 years due to historical and recent commercial agricultural activities, such as ripping and grubbing. In the unlikely event that historic or archaeological resources are encountered during implementation of the proposed Project, the District would adhere to CEQA Guidelines (CCR Title 14, Section 15064.5), which states that activities would cease in the affected area in the highly unlikely event an archaeological discovery is made. Once the discovery has been evaluated by a qualified archaeologist, (36 Code of Federal Regulations §800.11.1 and CCR, Title 14, Section 15064.5[f]) and if the resource is found to not be significant, the work can resume. If the resource is found to be significant, it shall be avoided or shall be treated consistent with Section 106 of the National Historic Preservation Act or State Historic Resource Preservation Officer Guidelines. Nevertheless, given that the presence of buried, undiscovered tribal cultural resources in the Project area is not non-existent, the Project is considered to result in a potentially significant impact on tribal cultural resources. Implementation of MM TCR-1 would ensure that potential impacts to archaeological and tribal cultural resources would be avoided through a response plan if archaeological or tribal cultural resources are inadvertently discovered during construction. Therefore, impacts would be **less than significant with mitigation**.

MM TCR-1: Inadvertent Discovery Plan for Archaeological and Tribal Cultural Resources

Should archaeological or tribal cultural materials be discovered during excavation, work in the immediate vicinity of the find shall halt until the District retains a qualified archaeological consultant to assess the find. If the archaeologist determines the materials to belong to a potentially significant archaeological or tribal resource, a treatment plan shall be developed in consultation with the District, tribal representatives (in the event of a prehistoric site), and the Fresno County Department of Public Works and Planning.

14.19 Utilities and Service Systems

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
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?	☐	☐	☐	☒
b) Have sufficient water supplies available to serve the project and reasonably	☐	☐	☐	☒

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
foreseeable future development during normal, dry, and multiple dry years?				
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand, in addition to the provider's existing commitments?	☐	☐	☐	☒
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?	☐	☐	☐	☒
e) Comply with federal, state and local statutes and regulations related to solid waste?	☐	☐	☐	☒

14.19.1 Existing Setting

The District provides water for agricultural use to approximately 700 family-owned farms in Fresno and Kings counties. Water is either delivered directly to lands in the District through the San Luis Canal and the Coalinga Canal or is stored temporarily in the San Luis Reservoir for later delivery. Once diverted from the San Luis Canal, water is delivered to farmers through 1,034 miles of underground pipe and over 2,900 metered delivery outlets within the District. Other local water districts provide municipal water to surrounding areas via pump stations, pipelines, and other water storage and conveyance facilities.

14.19.2 Discussion

a. No impact. The proposed Project would not include any new development that would require the relocation or construction of expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunication facilities. The proposed Project would improve existing percolation rates and would not introduce new impervious surfaces that would require the construction or expansion of these facilities. There would be no construction of utility infrastructure associated with the proposed Project and there would be **no impact**.

b. No impact. No new water supplies would be required for the proposed Project. In addition, the proposed Project would not include any new development that would require public water supplies. Thus, no new or expanded water supply entitlements would be needed. There would be **no impact**.

c. No impact. The proposed Project would not result in changes to wastewater generation rates and would not exceed a wastewater treatment provider's capacity. Once construction activities are completed, any wastewater would be properly handled and disposed of in accordance with applicable regulations. There would be **no impact**.

d. No impact. Any solid waste generated by the proposed Project would be negligible and would be disposed of in local landfills in accordance with all applicable statutes and regulations. Nearby disposal facilities have capacity to handle any solid waste generated from project actions. There would be **no impact**.

e. No impact. Project activities would result in minimal solid waste. As discussed in criterion (d), any solid waste generated by the proposed Project would be negligible and would be disposed of in accordance with applicable regulations. There would be **no impact**.

14.20 Wildfire

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, **Would the Project:**				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☐	☒

14.20.1 Existing Setting

The majority of land within the District does not fall into a locally or state-designated fire hazard severity area. All of the proposed basins are located in Local Responsibility Areas (LRAs) in Fresno County and are therefore not mapped as moderate, high, or very high fire risk. These areas tend to have low wildfire risk because they are surrounded by agricultural lands that are flat and frequently irrigated. In addition, the District is located within the San Joaquin Valley floor and is characterized by generally flat terrain and the absence of slopes that could substantially exacerbate wildfire risk.

14.20.2 Discussion

a - d. No impact. The proposed Project does not involve construction or operational activities that could impair emergency response or emergency evacuation plans through the transport of materials or obstruction of roadways, and Project actions would not involve road closures or traffic controls that might impair emergency response. Additionally, there would be no Project occupants, as the Project would be on uninhabited land and does not propose any new buildings or habitable structures. Therefore, there would be no increased risk of exposure to pollutants due to wildfire to occupants. Further, the Project would comply with applicable laws and would not require the installation or maintenance of any applicable infrastructure that might exacerbate wildfire hazards. The District occupies flat terrain, and the proposed Project is limited to the construction and operation of groundwater recharge basins. The Project would not place people or structures at risk of downstream flooding or landslides as a result of its construction or operation. Therefore, the proposed Project would have **no impact**.

14.21 Mandatory Findings of Significance

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does 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 a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does 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.)	☐	☐	☒	☐
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒

14.21.1 Discussion

a. Less than Significant with Mitigation. The analysis conducted in this IS concludes that the implementation of the proposed Project would not have a significant impact on the environment. As evaluated in Section 15.4, *Biological Resources*, impacts on biological resources would be less than significant with MMs BIO-1 through MM BIO-6 incorporated. Therefore, 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. Adherence to federal, State, and local regulations would reduce any significant impacts to resource areas. Impacts would be **less than significant with mitigation.**

As discussed in Section 15.5, *Cultural Resources,* and Section 15.18, *Tribal Cultural Resources*, the proposed Project would not eliminate important examples of the major periods of California history or prehistory. The proposed Project would involve superficial ground disturbance that would not cause a substantial adverse change to any known tribal cultural resources. MM CUL-1, MM CUL-2, and MM TCR-1 would be implemented to ensure impacts are minimized through proper treatment and handling of any discovered archeological or tribal cultural material. Impacts on cultural and tribal cultural resources would be **less than significant with mitigation**.

b. Less than Significant. As discussed in this IS, the proposed Project would result in less than significant impacts or no impacts to aesthetics, agriculture and forestry resources, air quality, biological resources, cultural resources, energy, geology and soils, GHG emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation, tribal cultural resources, utilities and service systems, and wildfire.

The proposed basins would result in no impacts or less than significant environmental impacts on the physical environment. None of the proposed Project's impacts make cumulatively considerable, incremental contributions to significant cumulative impacts. To the contrary, the proposed Project would provide benefits to agricultural production by protecting surrounding agricultural areas that are at risk of flooding. There would be **less than significant** impacts.

c. No Impact. The proposed Project would not result in significant impacts and would not cause substantial adverse effects on human beings, either directly or indirectly. The proposed Project would have **no impact**.

15.0 REFERENCES

Arnold, R., Curran, B., & Smith, P. 2018. "Jurisdictional Water Delineation." https://files.ceqanet.opr.ca.gov/148527-2/attachment/RU4sxSqQpo8lhxN0o_Y-gy3G3-3i4PQOsRfOa6zI7Y0_oSyNgowbU_0__in6rhwCLNvYzUIZpmRaHRMT0#:~:text=ds%20under%20Section%20404%20of%20the%20Clean%20Water,the%20streambed%2C%20bank%2C%20and%20associated%20habitat%20of%20strea

Barbour, R. W., and W. H. Davis. 1969. "Bats of America." University of Kentucky Press, Lexington. 286 pp.

California Air Resources Board (CARB). 2018. "Assembly Bill 32 – Overview." https://ww3.arb.ca.gov/cc/ab32/ab32.htm.

———. 2020. "GHG Current California Emission Inventory Data." http://www.arb.ca.gov/ghg-inventory-data.

———. 2024. "Table of Ambient Air Quality Standards." https://ww2.arb.ca.gov/sites/default/files/2024-08/AAQS%20Table_ADA_FINAL_07222024.pdf.

California Department of Conservation. 2024. "Important Farmland Categories." https://www.conservation.ca.gov/dlrp/fmmp/Pages/Important-Farmland-Categories.aspx

California Department of Forestry and Fire Protection (CAL FIRE). 2007a. "Fire Hazard Severity Zones in SRA – Fresno County." https://osfm.fire.ca.gov/media/6671/fhszs_map10.pdf.

_____. 2007b. "Draft Fire Hazard Severity Zones in LRA." https://osfm.fire.ca.gov/divisions/wildfire-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/.

California Department of Transportation. 2021. "Highway Design Manual." https://dot.ca.gov/-/media/dot-media/programs/design/documents/chp0910-a11y.pdf

_____. 2023. "Hazardous Materials, Hazardous Waste, and Contamination." https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-10-hazardous-materials-hazardous-waste-contamination

California Burrowing Owl Consortium (CBOC). 1993. "Burrowing Owl Survey Protocol and Mitigation Guidelines." https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83842&inline

CDFG. 2012. "Staff Report on Burrowing Owl Mitigation." State of California Natural Resources Agency, Department of Fish and Game. 36 pp.

California Department of Fish and Wildlife (CDFW). 2023. "California Natural Diversity Database (CNDDB) RareFind 5." https://apps.wildlife.ca.gov.

———.2024. "CNDDB RareFind 5." https://apps.wildlife.ca.gov.

California Native Plant Society (CNPS), Rare Plant Program. 2023. "Inventory of Rare and Endangered Plants (online edition, v9.5)." California Native Plant Society, Sacramento, CA. http://www.rareplants.cnps.org.

———.2024. "Inventory of Rare and Endangered Plants (online edition, v9.5)." California Native Plant Society, Sacramento, CA. http://www.rareplants.cnps.org.

California Water Quality Monitoring Council. 2016. "Surface Water and Groundwater." https://www.mywaterquality.ca.gov/water_quality_standards/index.html

Cockrum, E. L. 1960. "Distribution, habitat and habits of the mastiff bat, *Eumops perotis*, in North America." J. Arizona Acad. Sci. 1:79-84.

County of Fresno. 2000a. "Fresno County General Plan Background Report." https://www.fresnocountyca.gov/Departments/Public-Works-and-Planning/divisions-of-public-works-and-planning/development-services-division/planning-and-land-use/general-plan-maps

_____. 2000b. "Fresno County General Plan Policy Document." "https://www.co.fresno.ca.us/departments/public-works-planning/divisions-of-public-works-and-planning/development-services-division/planning-and-land-use/.

_____. 2000c. "Fresno County General Plan Update." Available: https://www2.co.fresno.ca.us/4510/4360/General_Plan/GP_Final_EIR/EIR/Visual416.pdf

_____. 2023. "Airport Land Use Compatibility Plan." October 2023. Available: https://www.dropbox.com/scl/fi/clh8iltq4f3eb10qyp93i/Fresno-Updated-ALUCP-Amended-Oct-2023.pdf?rlkey=e4ao8oy6ifk2btgzci95szb0u&e=4&dl=0

_____. 2024a. "Fresno County Code of Ordinances, Grading and Excavation." https://library.municode.com/ca/fresno_county/codes/code_of_ordinances?nodeId=TIT15BUCO_CH15.28GREX

_____.2024b. "Fresno County General Plan Policy Document." February 2024. fcgpr_general-plan_county_final_2024_02.pdf (fresnocountyca.gov)

Dalquest, W. W. 1946. "The daytime retreat of a California mastiff bat." Journal of Mammalogy 27:87-88.

Department of the Navy. 2010. Air Installations Compatible Use Zones Report.

Department of Water Resources (DWR). 2003. "California's Groundwater Bulletin 118 - Update 2003." https://water.ca.gov/LegacyFiles/groundwater/bulletin118/docs/Bulletin_118_Update_2003.pdf.

_____. 2006. "San Joaquin Valley Groundwater Basin - Westside Subbasin." https://water.ca.gov/LegacyFiles/groundwater/bulletin118/basindescriptions/5-22.09.pdf.

Fresno Council of Governments. 2024. "Priority Climate Action Plan." https://www.fresnocog.org/wp-content/uploads/2024/07/Fresno-COG-PCAP_030124_-FINAL-reduced-size-file.pdf

Fresno County Fire Protection District. 2021. "Service Area.: https://www.fresnocountyfire.org/service-area

Fresno County Public Works. 2024. "Fresno County Parks and Access Facilities." https://www.fresnocountyca.gov/Departments/Public-Works-and-Planning/divisions-of-public-works-and-planning/resources-and-parks-division/parks

Fresno County Sheriff's Office. N.D. "Area 1." https://www.fresnosheriff.org/area-1.html

Fresno County Superintendent of Schools. 2024. "Districts." https://www.fcoe.org/districts

Google. 2023. "Google Earth Pro. Version 7.3.6.9345." October 2023. https://www.google.com/earth/download/gep/agree.html.

Governor Gavin Newsom. "California's Water Supply Strategy: Adapting to a Hotter, Drier Future." August 2022. https://resources.ca.gov/-/media/CNRA-Website/Files/Initiatives/Water-Resilience/CA-Water-Supply-Strategy.pdf.

Howell, A. B. 1920. "Contributions to the life history of the California mastiff bat." Journal of Mammalogy 1:111–117.

Humple, D. 2008. "Loggerhead shrike (*Lanius ludovicianus*), mainland populations." *In* Shuford, W. D., and Gardali, T., editors. "California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California." Studies of Western Birds 1:271–277.

Ludhorff & Scalmanini Consulting Engineers (LSCE). 2025. "Westside Subbasin Groundwater Sustainability Plan." Amended 2025. https://sgma.water.ca.gov/portal/gsppe/update/view/8.

Poulin, R. G., L. D. Todd, E. A. Haug, B. A. Millsap, and M. S. Martell. 2020. "Burrowing Owl (*Athene cunicularia*), version 1.0." Birds of the World (A. F. Poole, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.burowl.01.

Rosenberg, D. K., and Haley, K. L. 2004. "The ecology of Burrowing Owls in the agroecosystem of the Imperial Valley, California." Studies Avian Biol. 27:120–135.

Ross, A. 1961. "Notes on food habits of bats." J. Mammal. 42:66-71.

Shuford, W. D., and Gardali, T., editors. 2008. "California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California." Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

Swainson's Hawk Technical Advisory Committee (SWTAC). 2000. "Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley."

U.S. Census Bureau. 2020. "2020 Decennial Census."

United States Bureau of Reclamation (USBR). 2011. "Chapter 12.0 Hydrology - Groundwater." San Joaquin River Restoration Program Programmatic EIS/EIR. https://www.usbr.gov/mp/nepa/includes/documentShow.php?Doc_ID=7560.

United States Environmental Protection Agency (USEPA). 2020. "Air Quality – National Summary." https://www.epa.gov/air-trends/air-quality-national-summary.

———.2024. "EJScreen Version 2.3." https://ejscreen.epa.gov/mapper/

USFWS. 2023a. "Information for Planning and Consultation." https://ipac.ecosphere.fws.gov/

———.2023b. "National Wetlands Inventory website." U.S. Department of the

Interior, Fish and Wildlife Service, Washington, D.C. http://www.fws.gov/wetlands/.

———.2024a. "Information for Planning and Consultation." https://ipac.ecosphere.fws.gov/

———.2024b. "National Wetlands Inventory website." U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. http://www.fws.gov/wetlands/.

Westlands Water District. 2025. "Groundwater Sustainability Plan.". Amended 2025. https://sgma.water.ca.gov/portal/gsppe/update/2C68592F1CAB456BE06350C29E0AF779