Draft

Initial Study/Mitigated Negative Declaration

for the

Carrisa Plains School Water System Improvements Project

Prepared for:

Atascadero Unified School District

Prepared by:

Denise Duffy & Associates, Inc.

December 2024

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Abbreviations

Acronym or Abbreviation	Definition
AB	Assembly Bill
Achasta	Achasta Archaeological Services
ADD	Average Daily Demand
APE	Area of Potential Effect
BAU	Business as Usual
BMP	Best Management Practice
BSC	Building Standards Commission
CA SRF	California Safe Drinking Water State Revolving Fund
CAAQS	California Ambient Air Quality Standards
CAL FIRE	California Department of Forestry and Fire Protection
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CalGreen	California Green Building Standards Code
California Register	California Register of Historic Resources
CalRecycle	California Integrated Waste Management Board
Caltrans	California Department of Transportation
CAO	Clean-up and Abatement Order
CAP	Clean Air Plan
CCA	California Coastal Act
CCAA	California Clean Air Act
CCIC	Central Coast Information Center
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CDO	Cease and Desist Order
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CESA	California Endangered Species Act
cf	cubic feet
CGP	Construction General Permit
CNPS	California Native Plant Society
CNPPA	California Native Plant Protection Act
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CPGB	Carrizo Plain Groundwater Basin
CPRP	California Rare Plant Ranks
CPUC	California Public Utilities Commission
CWA	Clean Water Act

Acronym or Abbreviation	Definition
dB	Decibel
dBA	A-weighted sound level
DD&A	Denise Duffy & Associates, Inc.
DDW	Division of Drinking Water
District	Atascadero Unified School District
DOC	California Department of Conservation
DOT	U.S. Department of Transportation
DPM	Diesel Particulate Matter
DTSC	Department of Toxic Substances Control
DWR	California Department of Water Resources
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
EQZapp	California Earthquake Hazards Zone Application
ESA	Federal Endangered Spcies Act
ESHA	Environmentally Sensitive Habitat Area
FCAA	Federal Clean Air Act
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Maps
FHSZ	Fire Hazard Severity Zone
FIP	Federal Implementation Plan
FMMP	Farmland Mapping and Monitoring Program
FPPA	Farmland Protection Policy Act
GHGs	Greenhouse Gases
IS/MND	Initial Study/Mitigated Negative Declaration
K-12	Kindergarten through grade twelve
LOP	Local Oversight Program
LUST	Leaking Underground Storage Tank
MBTA	Migratory Bird Treaty Act
MCL	Maximum Contaminant Level
MDD	Maximum Daily Demand
MLD	Most Likely Descended
MMT	million metric tons
$MTCO_2e$	Metric tons of carbon dioxide equivalent
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCER	North Carrizo Ecological Reserve
NEHRP	National Earthquakes Hazards Reduction Program
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NHTSA	National highway Traffic Safety Administration

Acronym or Abbreviation	Definition
NMFS	National Marine Fisheries Service
NOD	Notice of Determination
NO_x	oxides of nitrogen
NPDES	National Pollutant discharge Elimination System
NRHP/National Register	National Register of Historic Places
OPR	Office of Planning and Research
PCBs	Polychlorinated biphenyls
PF	Public Facilities
PG&E	Pacific Gas & Electric
Proposed Project	Carrisa Plains School Water System Improvements Project
PRC	Public Resources Code
PVC	Polyvinyl Chloride
PM_{10}	Particulate Matter
RCAC	Rural Community Assistance Corporation
RCRA	Resources Conservation and Recovery Act
ROG	Reactive Organic Gases
SB	Senate Bill
SCCAB	South Central Coast Air Basin
School	Carrisa Plains Elementary School
SFHA	Special Flood Zone Hazard Area
SGMA	State Groundwater Management Agency
SIP	State Implementation Plan
SJKF	San Joaquin Kit Fox
SLF	Sacred Lands File
SLO County APCD	San Luis Obispo County Air Pollution Control District
SLOCOG	San Luis Obispo Council of Governments
SR	State Route
SWRCB	State Water Resources Control Board
TA	Technical Assistance
TAC	Toxic Air Contaminant
TSCA	Toxic Substances Control Act
USDA	United States Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	United States Geological Survey
Vdb	Velocity Level at 25 feet
VMT	Vehicle Miles Travelled
Williamson Act	California Land Conservation Act of 1965
WMP	Water Management Plan
WPA	Water Planning Area

Project Summary

1. **Project Title**: Carrisa Plains School Water System Improvements Project ("Proposed Project or Project")
2. **Lead Agency:** Atascadero Unified School District
3. **Contact:** Brant Lloyd, Director of Support Services
   4355 Potrero Road
   Atascadero, CA 93422
   (805) 462-4243
   brantlloyd@atasusd.org
4. **Prepared By:** Denise Duffy and Associates, Inc. ("DD&A")
5. **Date Prepared:** December 2024
6. **Project Location:** 9640 California State Route 58, Santa Margarita, CA 93453
7. **Name of Property Owner/Project Proponent:** Atascadero Unified School District
8. **Project Location:** The Proposed Project, described below, is located east of the City of Atascadero at 9640 California State Route 58. The Project components, described below in **Section 6.5**, are entirely within the existing 10.21-acre Carrisa Plains School campus. The Proposed Project is located within unincorporated San Luis Obispo County. Regional access to the Project site is provided from State Route 58. The Project property is surrounded primarily by agricultural and low-density residential uses, a solar farm, and an ecological preserve. The Project site is currently occupied by Carrisa Plains Elementary School, which consists of an elementary school campus including a paved parking area, education and related structures, grassy areas, and two (2) single-family residences.
9. **Assessor's Parcel Number(s):** 072-101-041 (approximately 2.18 acres) and 072-101-011 (approximately 8.03 acres)
10. **Acreage of Parcel(s):** 10.21 acres.
11. **Project Description:** The Proposed Project would replace the existing water source serving the School by removing the existing well, pump, and storage tank, and replacing them with new infrastructure including a new water source well, 5,000 gallon storage reservoir, booster pump, connecting piping, electrical conduit, and an emergency back-up generator intended to provide the School with a reliable source of potable water.
12. **General Plan Designation:** The Project area is governed by the Carrizo Area Plan component of the San Luis Obispo County General Plan. The Land Use Designation of the Project site is Public Facilities ("PF").

Chapter 1. Introduction and Project Description

1.1 Introduction

This Initial Study has been prepared to evaluate the potential environmental effects associated with the Carrisa Plains School Water System Improvements Project ("Proposed Project"), located in unincorporated San Luis Obispo County, east of the City of Atascadero. This document has been prepared in accordance with the California Environmental Quality Act ("CEQA"), Public Resources Code §21000 et. Seq., and the State CEQA Guidelines, California Code of Regulations ("CCR") §15000 et. Seq.

An Initial Study is an informational document prepared by a Lead Agency to determine if a project may have a significant effect on the environment (CEQA Guidelines §15063, subd. (a)). If there is substantial evidence that a project may have a significant effect on the environment, an Environmental Impact Report ("EIR") must be prepared, in accordance with CEQA Guidelines §15064(a). However, if the Lead Agency determines that revisions in the project plans or proposals made by or agreed to by the applicant to mitigate the potentially significant effects to a less than significant level, a Mitigated Negative Declaration ("IS/MND") may be prepared instead of an EIR (CEQA Guidelines §15070, subd. (b)). Per CEQA Guidelines for an IS/MND, a Lead Agency prepares a written statement describing the reasons a proposed project would not have a significant effect on the environment and, therefore, why an EIR need not be prepared. This IS/MND conforms to the content requirements under CEQA Guidelines §15071.

The Atascadero Unified School District ("District") is acting as the Lead Agency pursuant to CEQA Guidelines §15050(a). As the Lead Agency, the District prepared this IS/MND pursuant to CEQA Guidelines §15063, §15070, and §15152. This IS/MND will be circulated for agency and public review during a 30-day public review period pursuant to CEQA Guidelines §15073. Comments received by the District on this IS/MND will be reviewed and considered as part of the deliberative process in accordance with CEQA Guidelines §15074.

The District is applying for California Safe Drinking Water State Revolving Fund ("CA SRF") funding through the State Water Resources Control Board ("SWRCB") for the Proposed Project. Funding for the Proposed Project would be disbursed solely from State sources and no Federal funds are being pursued.

Publication of this IS/MND marks the beginning of a 30-day public review and comment period. During this period, the IS/MND will be available to local, state, and federal agencies and to interested organizations and individuals for review. Written comments concerning the environmental review contained in this IS/MND during the 30-day public review period should be sent to:

Brant Lloyd, Director of Support Services
4355 Potrero Road
Atascadero, CA 93422
brantlloyd@atasusd.org

This IS/MND and all documents referenced in it are available for public review at the offices of the District at the above address. Following the conclusion of the public review period, the Atascadero Unified School District will consider the adoption of the IS/MND for the Proposed Project at a regularly scheduled public hearing. The District shall consider the IS/MND together with any comments received during the public review process. Upon adoption of the IS/MND, the District may proceed with approval actions for the Proposed Project. If the District approves the Proposed Project, the District will file a Notice of Determination ("NOD"), which will be available for public inspection and posted in 24 hours of

receipt at the County Clerk's Office for 30 days. The filing of the NOD starts a 30-day statute of limitations on court challenges to the approval under CEQA (CEQA Guidelines Section 15075(g)).

The District prepared the following section consistent with the requirements of CEQA Guidelines Section 15124 to the extent that it applies to the Proposed Project. The following section provides a discussion of key background details related to the Proposed Project, including project components, site and area characteristics, and applicable regulatory requirements.

1.2 Background

Carrisa Plains Elementary School ("School") is a small rural K-5 public school with a current enrollment of approximately 18 students. It is located in San Luis Obispo County approximately 34 miles east of the City of Atascadero and is surrounded by agricultural and low density residential uses, a solar farm, and an ecological preserve. The School consists of three (3) educational buildings, support structures, a 2,500-gallon plastic storage tank and chlorination system for domestic use, a 10,000 gallon welded steel tank for irrigation, solar panels, and outdoor seating and play areas. In addition, two (2) attached single-family residences are located on the campus. The School has its own water system (No. CA4000732), which has had documented issues with elevated nitrate concentrations since at least 2002. As a result, water from the existing well is not consumed and staff and students have been using bottled water for potable use (including drinking and cooking) for at least 20 years. Point-of-use reverse osmosis treatment systems were previously used but were decommissioned due to maintenance and filter replacement costs.

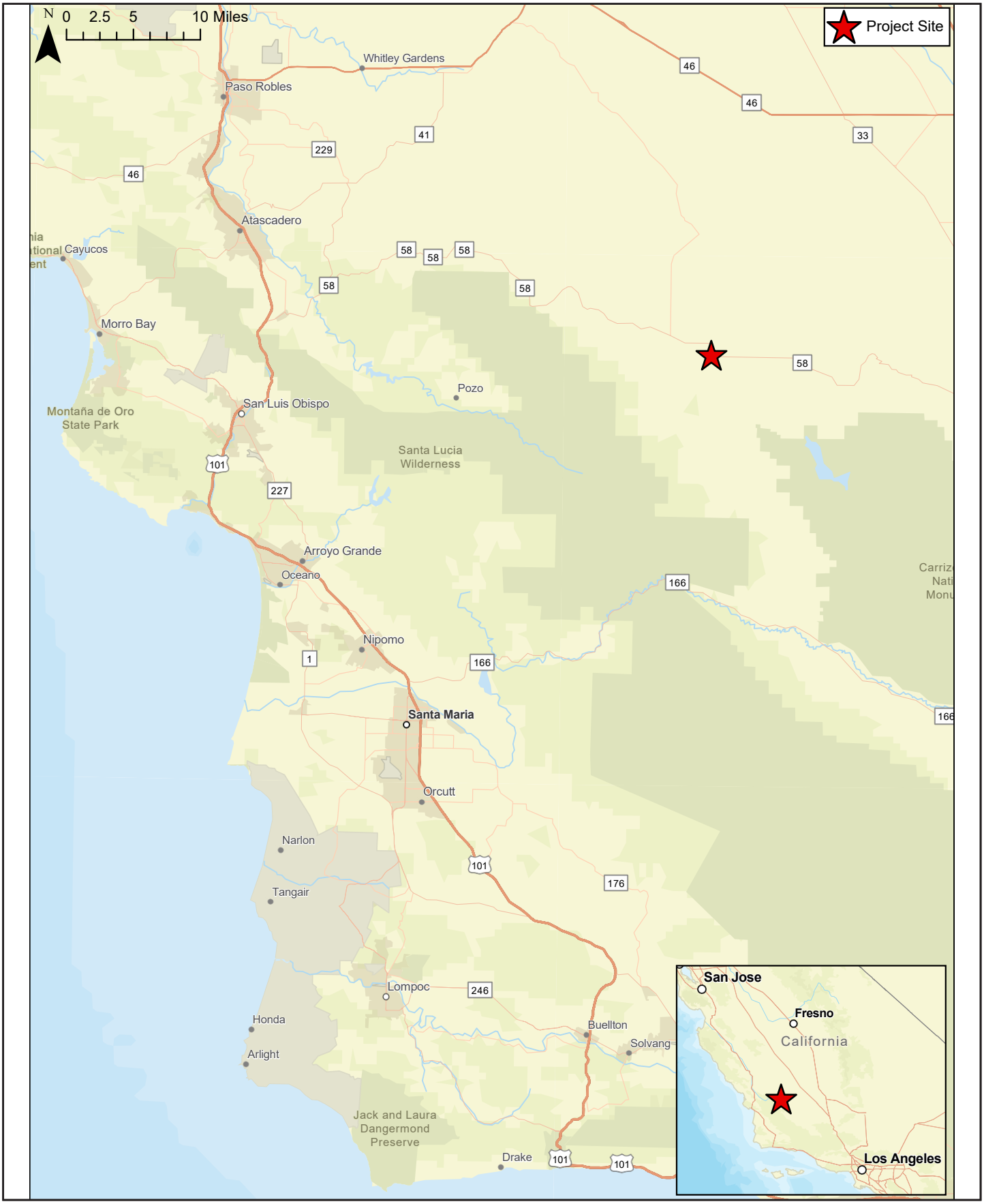
Based on these challenges, the School received a Technical Assistance ("TA") Grant to help bring their water system into regulatory compliance. As part of this grant process, MNS Engineers prepared an Engineering Report for Potable Water System Improvements at the School District in February 2023. The TA Grant is from the SWRCB assigned to and administered by the Rural Community Assistance Corporation ("RCAC"). MNS' Engineering Report evaluated five (5) alternatives to resolve the problem of elevated levels of nitrate (at concentrations exceeding the drinking water Maximum Contaminant Level ("MCL") in the School's water supply well as further detailed below.

1.3 Project Location

The Proposed Project, described below, is located east of the City of Atascadero at 9640 California State Route 58. The Proposed Project components, described below in **Section 6.5**, are entirely within the existing 10.21-acre Carrisa Plains School campus. The Proposed Project is located within unincorporated San Luis Obispo County (see **Figure 1. Regional Project Map**). The Proposed Project would be located on the following assessor's parcels:

- 072-101-041
- 072-101-011

Regional access to the site is provided from State Route 58. The Proposed Project is surrounded primarily by agricultural and low density residential uses, a solar farm, and an ecological preserve (see **Figure 2. Vicinity Map**. The site currently consists of Carrisa Plains Elementary School, which consists of a paved parking area, structures, and grassy areas, and two (2) single-family residences (see **Figure 3. Site Photos**).



Title: **Regional Map**

Date 3/28/2024
Scale N/A
Project 2023.82

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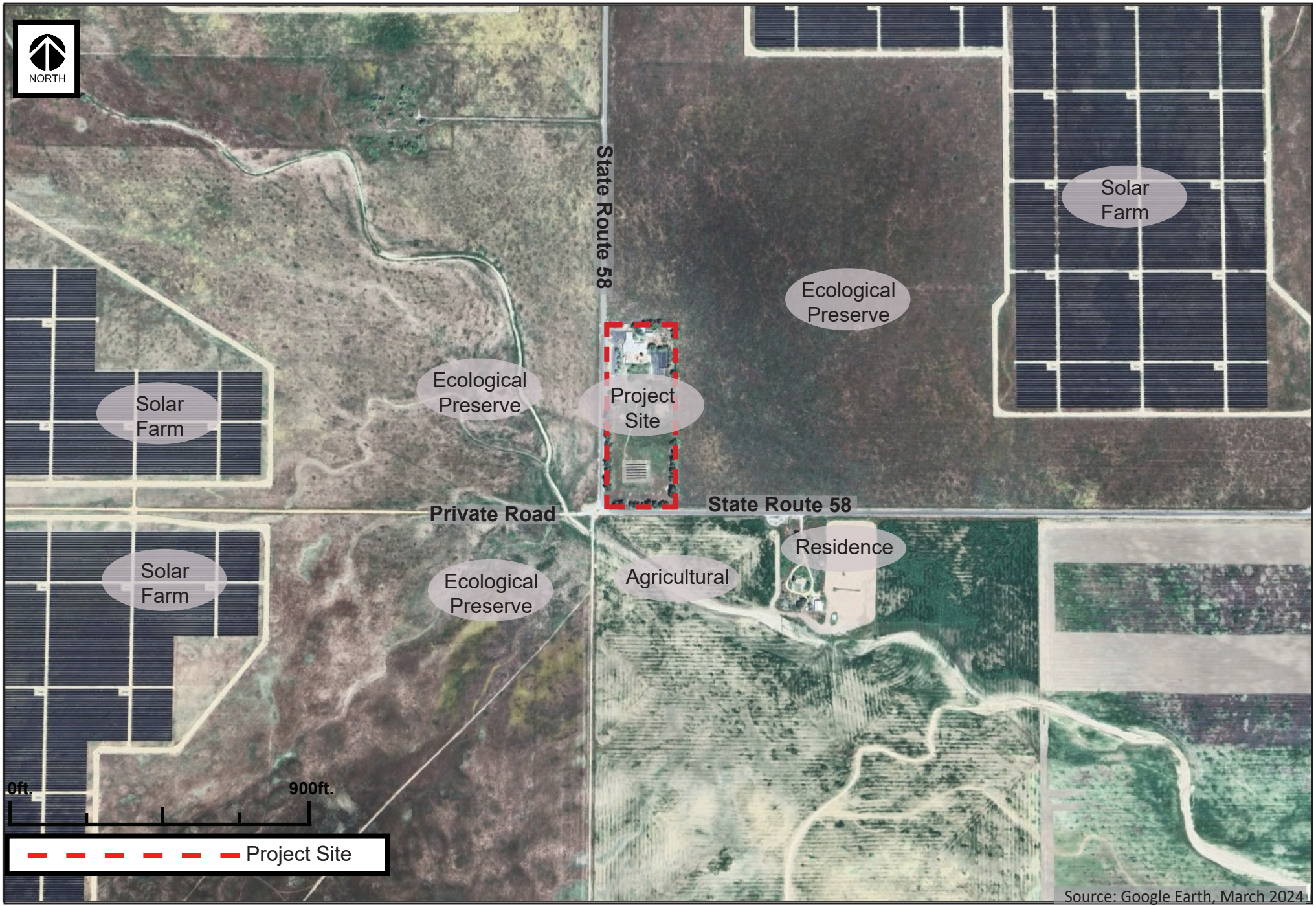
Environmental Consultants Resource Planners
947 Cass Street, Suite 5
Monterey, CA 93940
(831) 373-4341

Figure 1



Title:

Vicinity Map

Date	3/28/2024
Scale	N/A
Project	2023.82

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Figure 2

Photo #1: East facing view of project site from State Route 58. (Source: Google, 2022)

Photo #2: North facing view of project site from State Route 58. (Source: Google, 2022)

Photo #3: North facing view of storage tanks and well building from project site. (Source: MNS Engineers, 2024)

Photo #4: Northeast facing view of storage tanks and well building from project site. (Source: MNS Engineers, 2024)

Title:

Site Photos

Date	3/28/2024
Scale	N/A
Project	2023.82

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Figure 3

1.4 Surrounding Land Uses and Setting

The Proposed Project is located in a rural area approximately 34 miles east of the City of Atascadero. Surrounding land uses primarily consist of agricultural and rural residential uses, a solar farm, and an ecological reserve, as identified below:

North: Topaz Solar Farm, North Carrizo Ecological Reserve ("NCER")
South: Agricultural, Rural Residential
East: Topaz Solar Farm, NCER
West: Topaz Solar Farm, NCER

1.5 Existing Facilities

The School has a dedicated Water System (No. CA4000732) that supplies the School and two single-family residences located on the site. The existing site components are depicted in **Figure 4**. The Water System is permitted to serve up to 65 people. The existing well is housed in a Well and Booster Pump Building that was installed circa 1953 and reaches a depth of 102 feet. Water from the wells is stored in a 2,500-gallon plastic storage tank (with a sodium hypochlorite system) for domestic use and a 10,000 gallon welded steel tank for irrigation and fire suppression. The existing well remains functional but is considered to be in poor condition and near the end of its lifespan. Water from the existing well has been tested and confirmed to contain nitrates in levels above the Division of Drinking Water's ("DDW's") MCL since at least 2002. As a result, water from the existing well is not consumed and Carrisa Plains Elementary School staff and students have been using bottled water for potable use (including drinking and cooking) for at least 20 years. Point-of-use reverse osmosis treatment systems were previously used but were decommissioned due to maintenance and filter replacement costs.

Historically, the School did not actively measure water use. MNS estimated the School's water use based on a report of commercial water rates prepared by Pacific Institute (Pacific Institute, 2003).[1] MNS determined that the Average Daily Demand ("ADD") at the School would be approximately 1,540 gallons per day ("gpd") per person. This is considered a conservative water use estimate as it assumes an enrollment of 40 students. The Maximum Daily Demand ("MDD") of the School is estimated to be 3,465 gpd (MNS, 2024).

Also, see **Appendix A**, Figures 2-1, 2-2, and 2-3 for depictions of the existing site and system configuration.

1.6 Proposed Project

The Proposed Project would replace the existing water source serving the School by removing the existing well, pump, and storage tank, and replacing them with new infrastructure intended to provide the School a reliable source of potable water. The components of the Proposed Project are described in further detail below (see also **Figures 5a** through **5c**).

[1] https://pacinst.org/wp-content/uploads/2013/02/appendix_e3.pdf

Source: MNS Engineers, February 2024

Title: Existing Site Components	Date 3/28/2024 Scale N/A Project 2023.82	Monterey | San Jose **Denise Duffy and Associates, Inc.** Environmental Consultants Resource Planners 947 Cass Street, Suite 5 Monterey, CA 93940 (831) 373-4341	Figure 4

Source: MNS Engineers, November 2024

Title: Site Plan - Overall

Date 11/15/2024
Scale N/A
Project 2023.82

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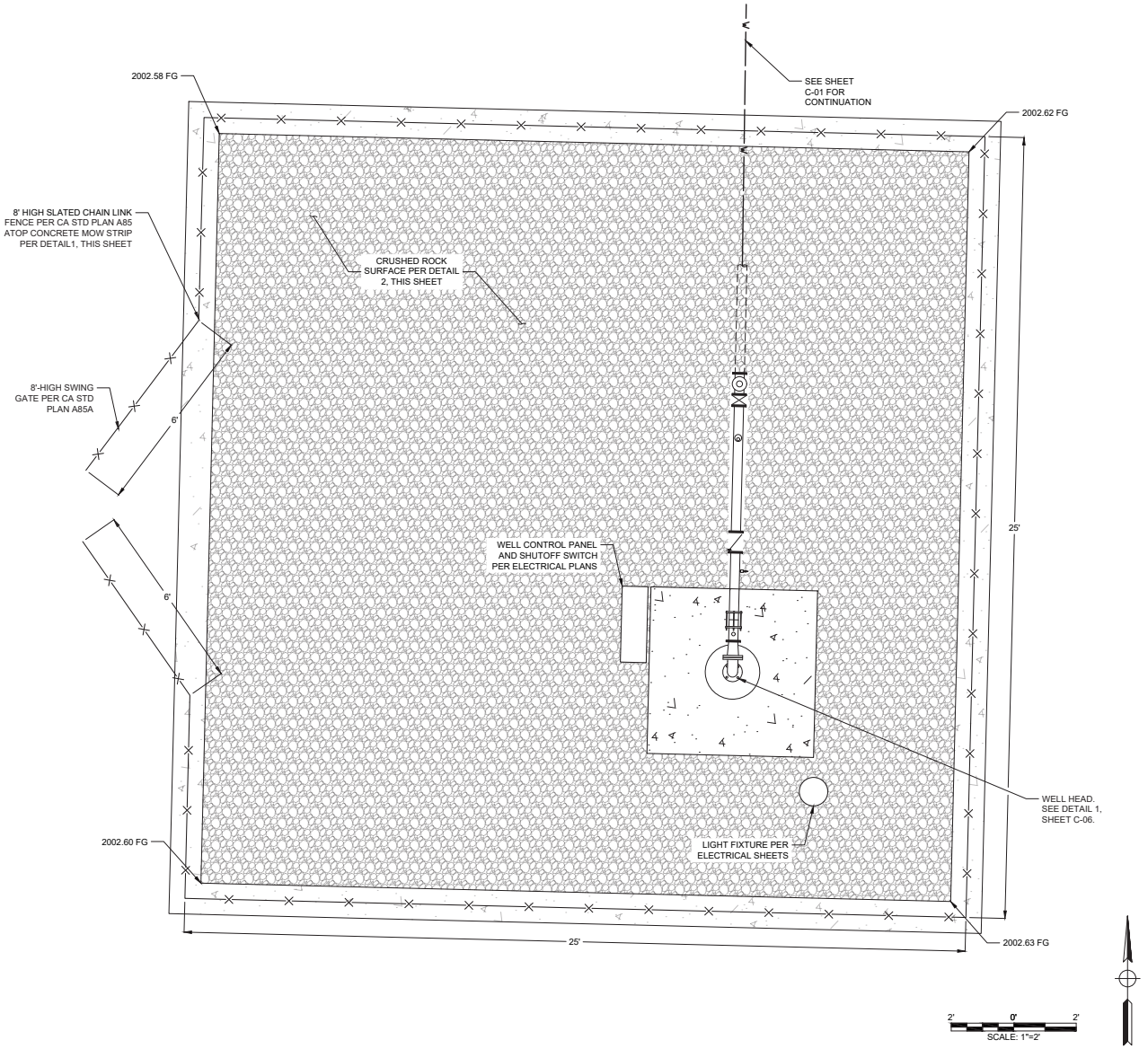
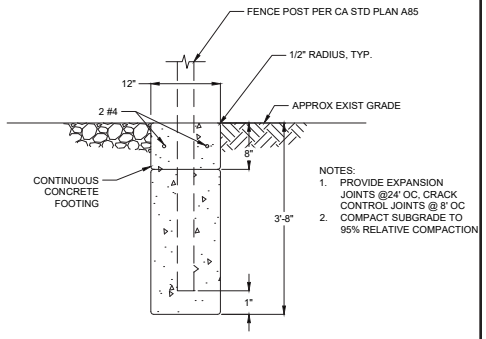
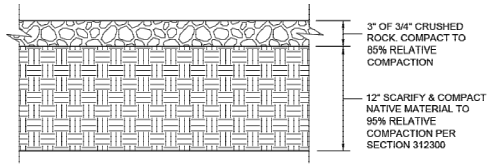
Figure 5a





1 **CONCRETE MOW STRIP**
NTS



2 **CRUSHED ROCK SURFACE SECTION**
NTS

Source: MNS Engineers, November 2024

Title:

Site Plan - Well

Date	11/15/2024
Scale	N/A
Project	2023.82

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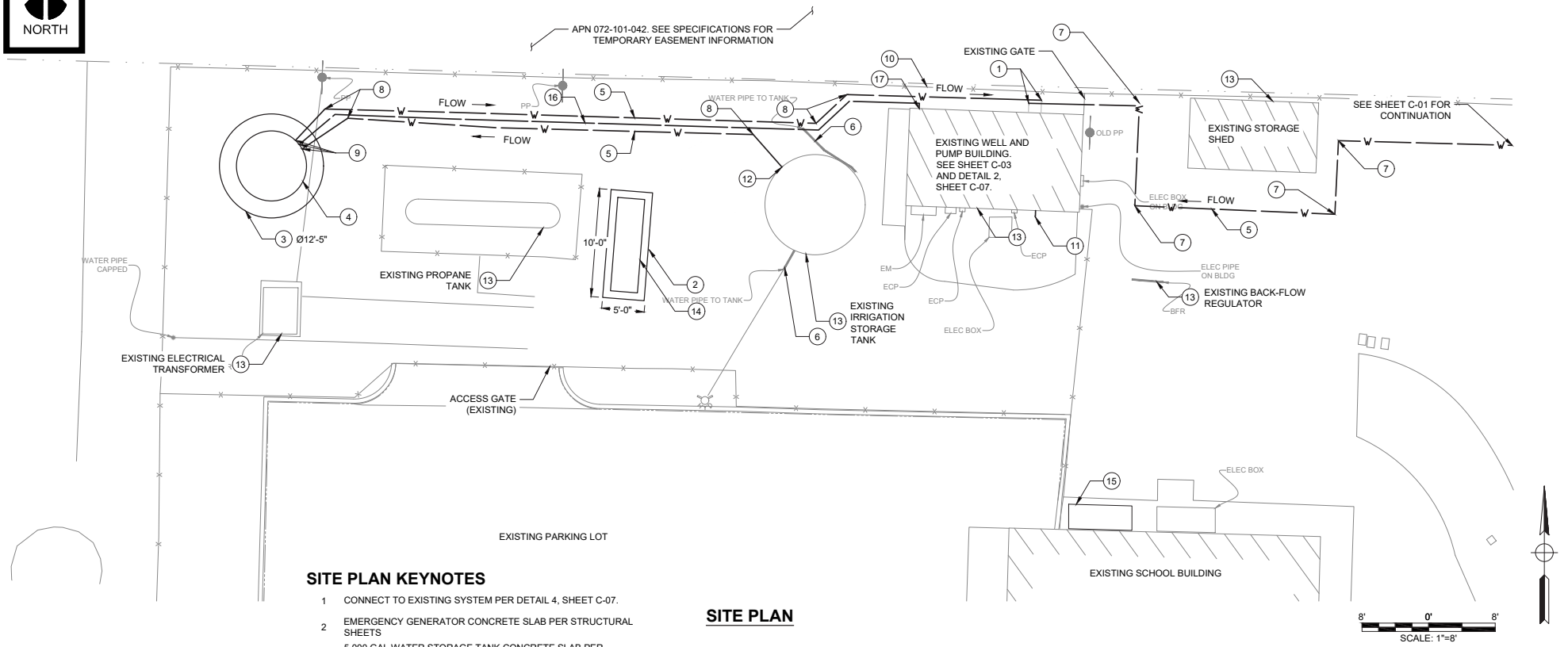
Figure
5b



SITE PLAN KEYNOTES

1	CONNECT TO EXISTING SYSTEM PER DETAIL 4, SHEET C-07.
2	EMERGENCY GENERATOR CONCRETE SLAB PER STRUCTURAL SHEETS
3	5,000 GAL WATER STORAGE TANK CONCRETE SLAB PER STRUCTURAL SHEETS
4	NEW GALVANIZED STEEL POTABLE WATER STORAGE TANK. SEE DETAIL 1, SHEET C-08.
5	2.5" PVC SCH 80 PIPE. SEE DETAIL 3, SHEET C-07.
6	EXISTING IRRIGATION STORAGE TANK CONNECTION. PROTECT IN PLACE.
7	2.5" PVC SCH 80 90-DEGREE ELBOW (SOLVENT WELD)
8	2.5" PVC SCH 80 45-DEGREE ELBOW (SOLVENT WELD)
9	CONNECT TO NEW POTABLE STORAGE TANK. SEE DETAIL 1, SHEETC-08.
10	REMOVE AND REINSTALL EXISTING FENCE AND GATE AS NECESSARY FOR PIPELINE CONSTRUCTION.
11	POTABLE WATER POINT OF CONNECTION. SEE DETAIL 2, SHEET C-07 FOR BUILDING PIPING DETAILS.
12	TIE INTO EXISTING IRRIGATION TANK CONNECTION. CONTRACTOR TO VERIFY CONNECTION LOCATION.
13	PROTECT IN PLACE
14	EMERGENCY GENERATOR PER ELECTRICAL SHEETS
15	FUTURE WATER TREATMENT EQUIPMENT, PENDING WELL WATER QUALITY RESULTS
16	SODIUM HYPOCHLORITE FEED LINE, 1/4" I.D. POLYETHYLENE TUBING IN 1" SCH 80 CPVC SECONDARY CONTAINMENT LINE. FITTINGS SHALL BE LONG SWEEP STYLE.
17	TIE INTO EXISTING SODIUM HYPOCHLORITE FEED LINE. VERIFY SIZE AND LOCATION.

SITE PLAN

Source: MNS Engineers, November 2024

Title:

Site Plan - Tank and Building

Date 11/15/2024
Scale N/A
Project 2023.82

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Figure
5c

Project Components

The Proposed Project consists of construction of a new water source well, 5,000 gallon storage reservoir, booster pump, connecting piping, electrical conduit, emergency back-up generator, and the demolition and removal of the existing well. The new well would be located on the southeastern portion of the existing parcel and would be drilled to a depth of approximately 600 feet. New electrical conduits and water pipelines would connect to the School's existing water distribution system.

The new well would potentially provide water with nitrate concentration below the nitrate MCL and would have the additional benefit of replacing the existing well and pump, which are near the end of their useful lives. If water from the new well continues to exceed the nitrate MCL, a whole-school nitrate-ion exchange system would be installed near the northern portion of the existing School. The components of the Proposed Project are described in more detail below.

Water Supply Well

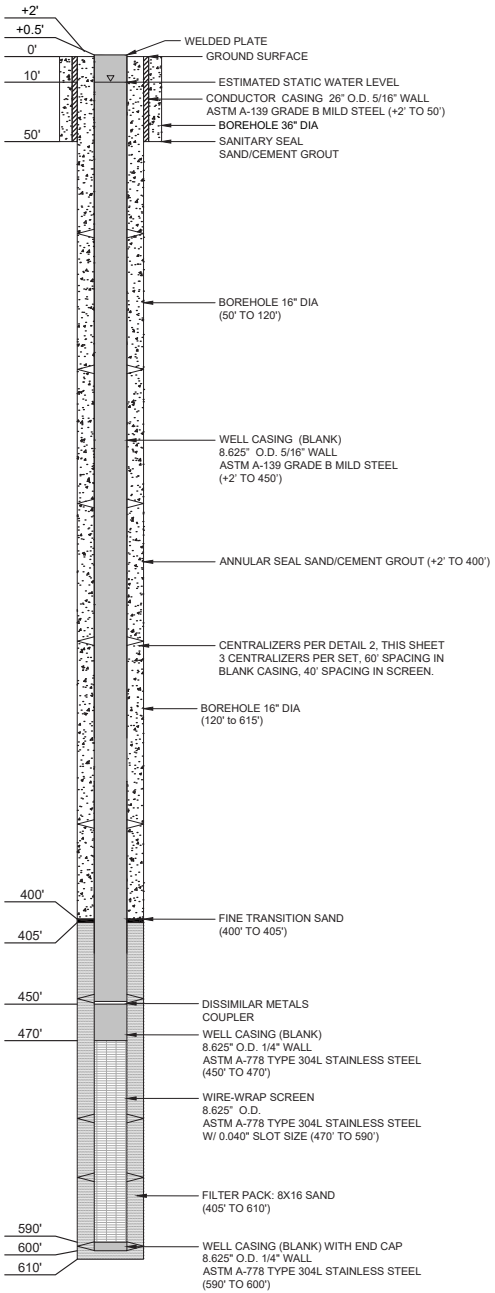
This well is anticipated to reach groundwater 600 feet below ground surface, which should contain reduced nitrate concentrations compared to the existing well (see **Appendix A**). The well would be located within a 25 by 25 foot fenced enclosure near the southeastern portion of the Proposed Project site. The electrical equipment for the well would be located above ground within this area. The location of the proposed well is shown in **Figure 5a** and a detailed site plan is provided in **Figure 5b**. The existing well would be demolished as part of the Proposed Project in accordance with California Department of Water Resources ("DWR") Bulletin Nos. 74-81 and 74-90, section 15.04.150 of the County's Municipal Code, and the permit requirements by a California State C-57 licensed contractor. A civil plan of the proposed well is provided in **Figure 6a**.

Water Pumps and Storage Tank

The existing pump and 2,500 gallon plastic water storage tank are in poor condition and would be removed and replaced as part of the Proposed Project. A new submersible well pump will be submerged in the new well casing and pump water from the well into a new 5,000-gallon bolted steel water storage tank. The location of the proposed pressure pumps and storage tank is shown in **Figure 5a** and a site plan for these components is provided in **Figure 5c**. A civil plan of the proposed water pumps is provided in **Figure 6b**, and a civil plan of the storage tank is provided in **Figure 6c**.

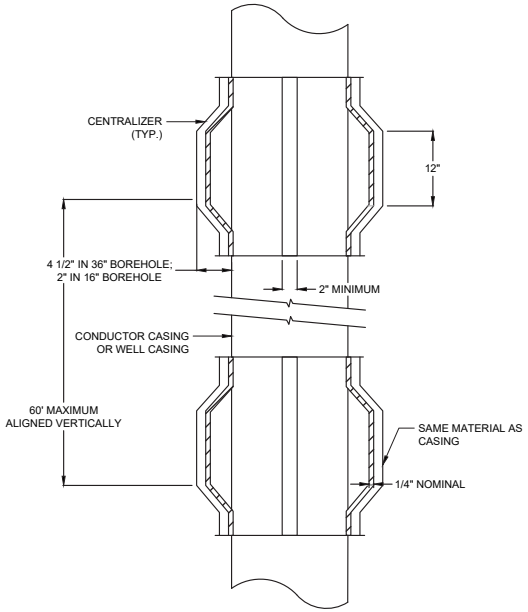
Water and Electrical Lines

A new dedicated 1,400 foot long water line of four-inch polyvinyl chloride ("PVC") will be laid to connect the new well to the existing water distribution system located at the existing well building. Where possible, components of the existing water treatment system will be retained; any components that are determined to be in poor condition would be replaced. Electrical conduit(s) would be installed in parallel to the water line to connect the new well to the School's electrical system. The electrical conduit and water pipeline would be laid at a depth of approximately four (4) feet. A propane-powered backup generator will be installed on the northwestern portion of the site to operate the new well and pump in the event of a power outage. A civil plan of the proposed pipeline components is provided in **Figure 6d**.

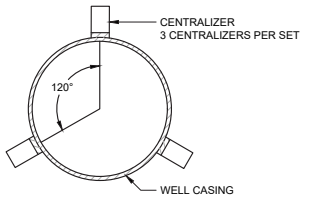


1 **PRODUCTION WELL DESIGN**

SCALE: NTS



SECTION



PLAN

2 **WELL CASING CENTRALIZERS**

SCALE: NTS

Source: MNS Engineers, November 2024

Title:

Civil Plan - Well

Date	11/15/2024
Scale	N/A
Project	2023.82

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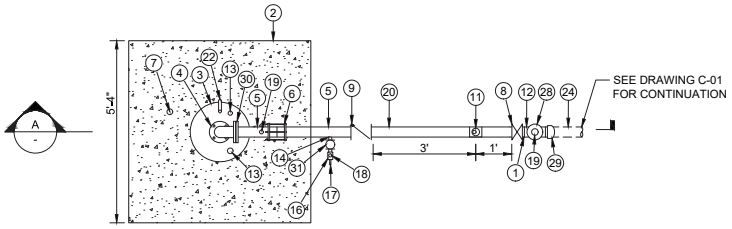
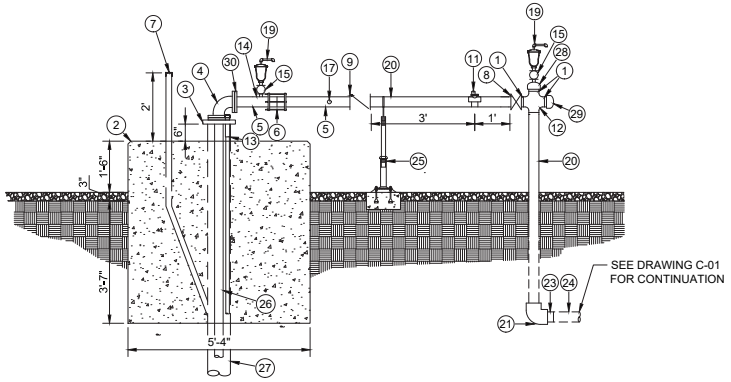
Figure

6a



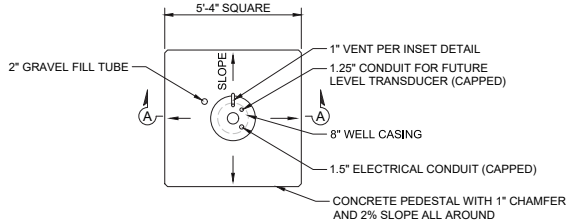
1 **WELLHEAD PLAN**
SCALE: NTS

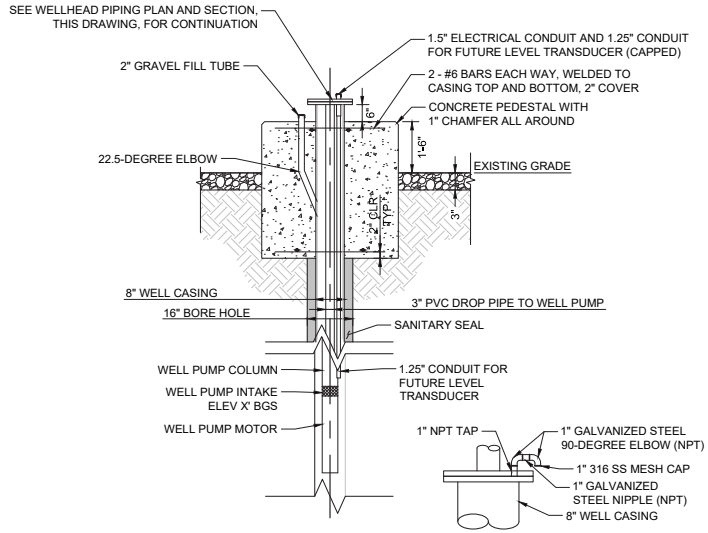


A **WELLHEAD SECTION**
SCALE: NTS

PARTS LIST

1. 2.5" Ø GRADE 316 STAINLESS STEEL THREADED NIPPLE
2. 5'-4" X 5'-4" CONCRETE PEDESTAL PER DETAIL 2, THIS SHEET
3. GRADE 316 STAINLESS STEEL WELL DISCHARGE PLATE
4. 3" GRADE 316 STAINLESS STEEL DISCHARGE WELL PUMP HEAD (FLG)
5. 2.5"Ø GRADE 316 STAINLESS STEEL SPOOL (MPT X PE)
6. 2.5" RESTRAINED COUPLING
7. 2" GRAVEL FILL TUBE PER DETAIL 2, THIS SHEET
8. 2.5" GATE VALVE (FPT)
9. 2.5" GRADE 316 STAINLESS STEEL SWING CHECK VALVE (FPT)
10. NOT USED
11. STAINLESS STEEL MCCROMETER MCPROPELLOR OR EQUAL
12. 2.5" GRADE 316 STAINLESS STEEL CROSS (FPT)
13. ELECTRICAL CONDUITS PER DETAIL 2, THIS SHEET
14. 1" GRADE 316 STAINLESS STEEL THREADOLET CONNECTION
15. (2) 1" GRADE 316 STAINLESS STEEL NIPPLES (NPT), (1) 1" GRADE 316 STAINLESS STEEL ISOLATION BALL VALVE (NPT), AND (1) 1" X 1/2" GRADE 316 STAINLESS STEEL REDUCER (NPT)
16. 1" GRADE 316 STAINLESS STEEL TEE (NPT)
17. 1" X 3/10" BUSHING AND 3/10" THREADLESS SAMPLE TAP
18. 1" X 3/8" BUSHING AND 3/8" PRESSURE GAUGE (NPT)
19. 1/2" AIR VACUUM RELEASE VALVE (NPT) WITH GRADE 316 STAINLESS STEEL MESH SCREEN ON DISCHARGE OUTLET.
20. 2.5"Ø GRADE 316 STAINLESS STEEL SPOOL (MPT)
21. 2.5" GRADE 316 STAINLESS STEEL 90-DEGREE ELBOW (FPT)
22. 1" VENT PER DETAIL 2, THIS SHEET
23. NPT X SOLVENT WELD PVC ADAPTER
24. 2.5"Ø PVC SCH 80
25. SADDLE PIPE SUPPORT PER DETAIL 1, DRAWING C-07
26. 3"Ø PVC DROP PIPE TO NEW WELL PUMP, CERTALOK OR EQUAL
27. 8"Ø WELL CASING
28. 2.5" GRADE 316 STAINLESS STEEL TAPPED END CAP (FPT)
29. 2.5" GRADE 316 STAINLESS STEEL END CAP (FPT)
30. GRADE 316 STAINLESS STEEL PIPE FLANGE REDUCER - 3" FLANGE X 2.5" FPT
31. (2) 1" GRADE 316 STAINLESS STEEL NIPPLES (NPT) AND (1) 1" GRADE 316 STAINLESS STEEL ISOLATION BALL VALVE (NPT)





2 **WELL PEDESTAL AND PUMP DETAIL**
NTS

Source: MNS Engineers, November 2024

Title:

Civil Plan - Well Components

Date	11/15/2024
Scale	N/A
Project	2023.82

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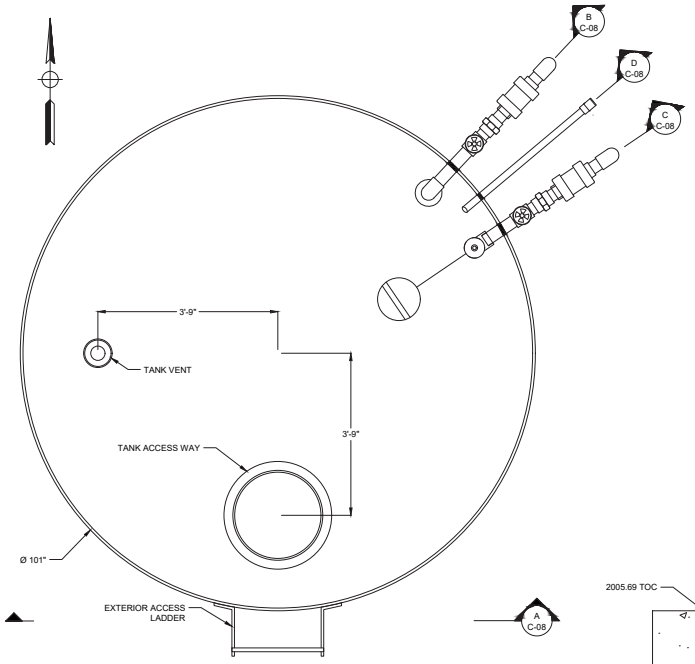
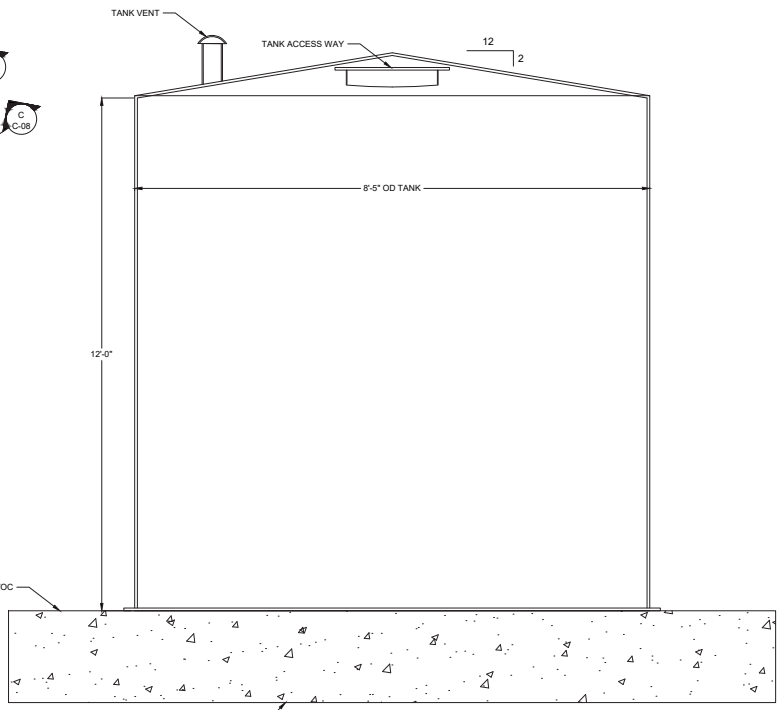
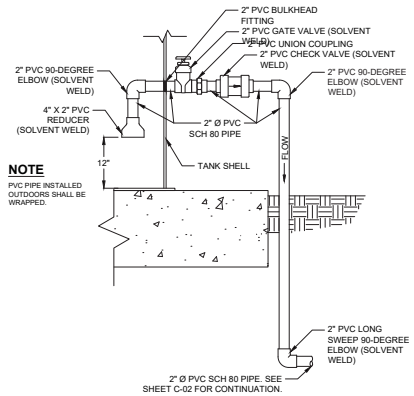
Figure
6b



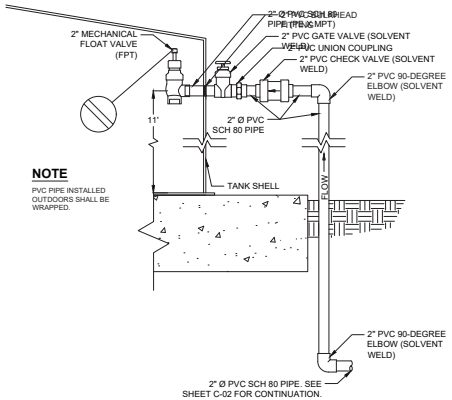


1 **POTABLE TANK PLAN AND SECTION**
SCALE: NTS

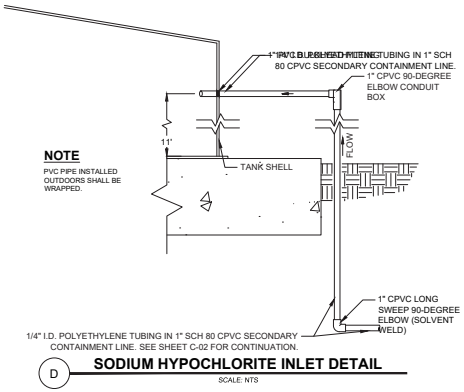
5,000 GAL GALVANIZED STEEL TANK



B **POTABLE TANK OUTLET DETAIL**
SCALE: NTS



C **POTABLE TANK INLET DETAIL**
SCALE: NTS



D **SODIUM HYPOCHLORITE INLET DETAIL**
SCALE: NTS

Source: MNS Engineers, November 2024

Title:

Civil Plan - Storage Tank

Date 11/15/2024
Scale N/A
Project 2023.82

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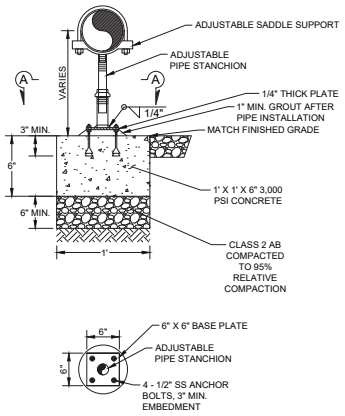
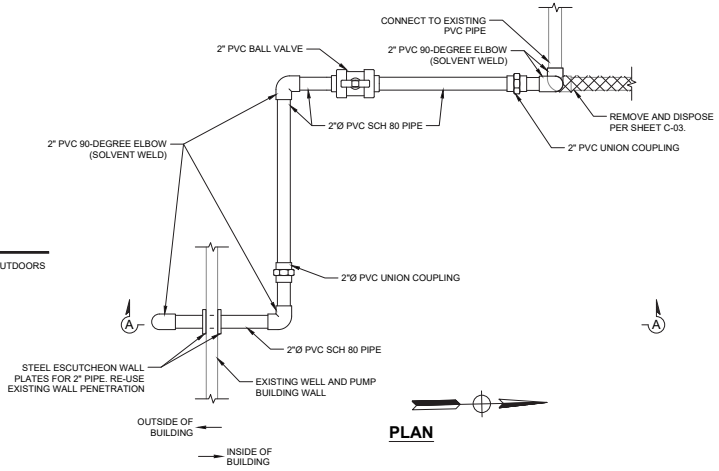
Figure
6c



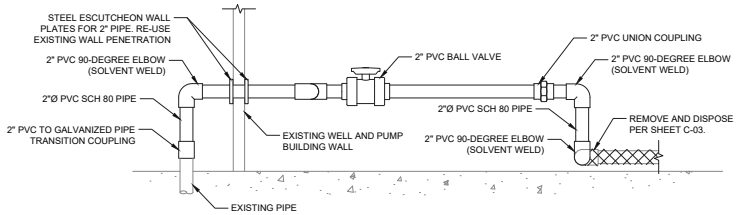
SECTION A-A

NOTES

1. PVC PIPE INSTALLED OUTDOORS SHALL BE WRAPPED.



PLAN

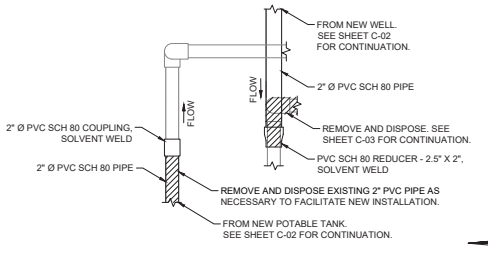


SECTION A-A

1 **SADDLE PIPE SUPPORT DETAIL**
SCALE: NTS

2 **WELL AND PUMP BUILDING PIPING**
SCALE: NTS

PHOTOGRAPH



NOTES

1. PVC PIPE INSTALLED OUTDOORS SHALL BE WRAPPED.
2. CONTRACTOR TO FIELD VERIFY CONNECTION POINTS AND EXISTING PIPES AND FITTINGS

PLAN

4 **NEW POTABLE TANK AND NEW WELL CONNECTION DETAIL**
SCALE: NTS

Source: MNS Engineers, November 2024

Title:

Civil Plan - Pipeline Components

Date	11/15/2024
Scale	N/A
Project	2023.82

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Figure
6d

Nitrate Ion Exchange System

The Proposed Project would install a whole-school nitrate ion exchange system in the event that the new well produces water that continues to exceed the 10 milligrams per liter (mg/l) nitrate MCL. This system would be designed specifically to the constraints of the project site, and may be installed in conjunction with a water softener. If required, this system would be located on the north wall of the existing main School building. The nitrate ion exchange system would operate using four (4) resin cartridges to pull nitrates from well water prior to entering the school's potable distribution system. Nitrate flows would be siphoned into the School's wastewater system and flow to the onsite septic system. Resin cartridges are anticipated to be exchanged on a monthly basis.

1.7 Project Construction

Site Preparation

The Proposed Project would cover approximately 2,786 square feet ("sf") of total area and would be located within previously disturbed areas. In addition, two (2) temporary staging areas would also be located on the School campus. One staging area would be located on the northwest corner of the site, and the other staging area would be located immediately south of the existing solar panels.

Construction

Construction would occur within previously disturbed areas. The Proposed Project would construct a new well compound on the southeastern portion of the site. The well compound would consist of a submerged well and pump on a 315 sf gravel-paved area. New electrical and water lines would be installed to connect the well compound to the existing electrical system and water distribution systems located on the site (see **Figure 5a**). The new well is anticipated to have a maximum capacity of 12,000 gallons per day.

Construction equipment is anticipated to include a concrete truck for tank foundation slab, a crane for tank installation, truck mounted drill rig for construction of the new well, a forklift used to deliver materials to the site, and an excavator for excavation, compaction and shallow trenching within the building area. An estimated 122 cubic feet ("cf") of soil fill will be imported from an offsite location. No soil cut is anticipated as part of the Proposed Project.

Demolition

The Proposed Project includes demolition of the existing well once the new well is constructed, tested, and put into service. Demolition of the existing well would occur in compliance with San Luis Obispo County Water Well Code 8.40, including retaining a Licensed C-57 well contractor, completion of a Well Destruction Permit application, and payment of application fees. The Well Destruction Permit application would be reviewed and approved by the County's Environmental Health Services department prior to issuance of a permit. Well destruction would occur according to the specific guidelines of the Well Demolition Permit. The existing well building would remain on the site.

Schedule

Construction is anticipated to occur over the course of approximately 90 construction workdays over a period of approximately 4.5 months. Construction is tentatively expected to begin December 5th, 2025.

1.8 Site Access

During construction, the project site would be accessed by State Route 58. It is currently unknown how many vehicle trips would be generated by the construction of the Proposed Project. The Proposed Project's two (2) staging areas would be located on the School's campus. One staging area would be located on the northwest corner of the site, and the other staging area would be located immediately south of the existing solar panels. No off-site staging of construction equipment would be required.

1.9 Operation and Maintenance

The Proposed Project is anticipated to be operational by April 2026. The Proposed Project would result in new aboveground components consisting of a new well, backup generator, a 5,000 gallon storage tank, and potentially a new nitrate ion exchange system. If the new nitrate ion exchange system is implemented, the Proposed Project would require monthly maintenance visits for resin cartridge exchange and other maintenance. Otherwise, maintenance of the School's water system would continue at the existing rate, including water sampling and ongoing monitoring and maintenance. The Proposed Project is not anticipated to require that the District to hire additional employees to maintain the Proposed Project.

1.10 Project Related Approvals, Permits, and Clearances

The following lists the anticipated State and Regional/Local permits and approvals that are anticipated to be required for the Proposed Project:

State

- State Water Resources Control Board, Division of Financial Assistance - State Revolving Fund Financing Approval
- Division of State Architect – Approval of project plans

Regional/Local

- County of San Luis Obispo – Well Construction Permit
- County of San Luis Obispo – Well Destruction Permit
- County of San Luis Obispo – Permit for Public Water System
- San Luis Obispo Air Pollution Control District – Authority to Construct/Permit to Operate

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Chapter 2. Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by the Proposed Project involving at least one impact that is a "potentially significant impact," as discussed in the Initial Study analysis on the following pages.

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

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Chapter 3. 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.

Signature

12/12/24

Date

Brant Lloyd, Executive Director of Bond/Facilities

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Chapter 4. Environmental Setting and Impacts

The following chapter assesses the environmental impacts associated with the Proposed Project and identifies mitigation measures to reduce potentially significant impacts to less than significant, as appropriate.

Evaluation of Environmental Impacts

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 where 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 project-specific screening analysis).
2. All answers must consider the whole action involved, including offsite as well as on-site, 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, then 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 where the incorporation of mitigation measures has reduced an effect from "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 where, pursuant to the 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 they are available for review.
   b) Impacts Adequately Addressed. Identify which effects from the above checklist were in 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 Measures Incorporated," describe the mitigation measures, which 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 information sources for potential impacts (e.g., general plans, zoning ordinances) into the checklist references. Reference to a previously prepared or outside document should, where 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 less than significance.

4.1 Aesthetics

Environmental Setting

The Proposed Project is located within the Carrizo Plains area in unincorporated San Luis Obispo County. The City of Atascadero is located approximately 34 miles west of the Proposed Project. There are no State-designated scenic highways located within the vicinity of the Proposed Project, the nearest State-designated scenic highway is State Route 1, which is a designated scenic highway and is located approximately 36 miles west of the Proposed Project (Caltrans, 2024). In addition, State Route 41/46 is listed as an eligible scenic highway, and is located approximately 28 miles northwest of the Proposed Project. There are no County-designated scenic highways or areas subject to Scenic Protection standards within the vicinity of the Proposed Project area according to the Conservation and Open Space Element of the County's General Plan (County of San Luis Obispo, May 2010).

The Proposed Project site consists of Carrisa Plains Elementary School, which currently consists of a paved parking area, three (3) educational structures, two (2) single-family residences, a well building, and grassy areas. The land uses surrounding the Proposed Project area consist of the NCER and Topaz Solar Farm to the north, east, and west, and low-density residential and agricultural uses to the south. The aesthetic quality of the site has previously been altered by the current uses described above. Vehicle traffic on State Route 58 is the primary source of public viewership for the Proposed Project. See **Figure 3. Site Photos**. The topography of the Proposed Project site and surrounding area is flat.

Construction of the Proposed Project would include trenching. Construction of the Proposed Project would not require any nighttime construction, and, therefore, construction activities would not result in any new nighttime lighting or glare. Construction is anticipated to last approximately 4.5 months.

Once operational, the new well, electrical equipment, backup generator, storage tank, and potentially the nitrate ion exchange system would be above ground and visible on the project site. All other components of the Proposed Project would not be located underground and would not be visible.

Regulatory Framework

State

***California Scenic Highways Program*:** The Legislature created the California State Scenic Highway program in 1963. This program's purpose is to preserve and protect scenic highway corridors from change that would diminish the aesthetic value of lands adjacent to highways. The program includes a list of highways that are either designated or eligible for designation as a scenic highway. The state laws governing the Scenic Highway Program are found in the Streets and Highways Code, Sections 260 through 263. A highway may be designated scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view. In San Luis Obispo County, the state's only officially designated scenic highway is portions of State Route ("SR") 1 (Caltrans, 2024). There are no officially designated State highways in the vicinity of the Proposed Project area.

Local

***San Luis Obispo County General Plan – Conservation and Open Space Element*:** The Conservation and Open Space Element of the San Luis Obispo County General Plan includes goals and policies related to the preservation of visual integrity. The following goals and policies from the Conservation and Open Space Element may apply to portions of the Proposed Project:

Goal VR-1: The natural and agricultural landscape will continue to be the dominant view in rural parts of the county.

Policy VR-1.1: ***Adopt Scenic Protection Standards*** - Protect scenic views and landscapes, especially visual Sensitive Resource Areas (SRAs) from incompatible development and land uses

Goal VR-5: Views from scenic vistas and vista points will be protected.

Goal VR-9: The visual effects of utility lines will be minimized.

San Luis Obispo County Code**:** The following aesthetics/visual codes provided by Title 22 of the San Luis Obispo County Code could be applicable to the Proposed Project**:**

Chapter 22.30.370 (C)(3) – Fencing and Screening: Public Utility Facilities shall be screened on all sides. An effective visual barrier will be established through the use of a solid wall, fencing and/or landscaping. The adequacy of the proposed screening will be determined during the land use permitting process.

Carrizo Area Plan: The Carrizo Area Plan is one of the area plans that are included in the Land Use and Circulation Element of the San Luis Obispo County General Plan. The Carrizo Area Plan further defines the goals and policies of the San Luis Obispo County General Plan as it is more specific due to the limited geographic focus. Policies in the Carrizo Area Plan are consistent with the San Luis Obispo County General Plan but are adapted to the development opportunities, constraints, and natural resources unique to that region. There are no goals or policies from the Carrizo Area Plan related to aesthetics that would apply to the Proposed Project.

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

Impact Discussion

a. Would the project have a substantial adverse effect on a scenic vista?

The only potential scenic vistas visible within the Proposed Project area would be distant views of the La Panza mountain range to the west and the Temblor mountain range to the east. The Proposed Project

site is located entirely within the existing School campus, which is developed with educational facility uses (consisting of fields, structures, paved areas, etc.), two (2) single-family residences, a well building, solar panels, and a two water storage tanks. Potential adverse effects on these scenic vistas during construction and operation of the Proposed Project are discussed below.

Construction

The Proposed Project could result in temporary construction related effects on scenic vistas. However, views from and over the project site are limited due to topography and vegetation, including tree plantings on the southern, eastern, and western portions of the site, and the site does not offer views of scenic vistas. Construction of the Proposed Project may be temporarily visible from a private residence to the southeast of the site and vehicles traveling on State Route 58. However, impacts to private views in a project's immediate vicinity are not considered under CEQA. The Proposed Project would not impact scenic vistas and is not located within a scenic corridor. The Proposed Project would have a less than significant impact on scenic vistas during construction.

Operation

The well, some electrical equipment, backup generator, potable water storage tank, and potentially the nitrate ion exchange system (if implemented) would be visible on the site following construction of the Proposed Project. All other components of the Proposed Project would be located underground and would not be visible after construction is complete. The new well would be located on a previously undeveloped area on the southeastern portion of the site, while the storage tank would be in approximately the same location as the existing storage tank. If implemented, the nitrate ion exchange system would be attached to the north wall of the existing multi-purpose building and would not be visible from off-site viewpoints. Views from and over the Proposed Project site are limited due to topography and vegetation, including tree plantings on the southern, eastern, and western portions of the site, and the site does not offer views of scenic vistas. The Proposed Project would have a less than significant impact on scenic vistas during operation.

b. Would the project substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings in a state scenic highway?

The Proposed Project is not located near a state scenic highway. The Proposed Project is approximately 36 miles east of the nearest state scenic highway (State Route 1). As a result, the Proposed Project would not substantially damage scenic resources in a state scenic highway. No impact to scenic resources in a state scenic highway would occur.

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

The existing visual character of the Proposed Project site is comprised primarily of educational uses, including fields, paved areas, and three (3) structures. In addition, the site contains two (2) single-family residences, two (2) water storage tanks, a well/pump building, a septic system, and solar panels. The site's overall visual quality is considered low due to the surrounding Topaz Solar Farm, as well as agricultural and rural residential uses. The solar farm, as well as the rural residential and agricultural land uses within the vicinity of the project site do not enhance the area's aesthetic value. Construction impacts are anticipated to include the presence of construction vehicles, equipment and materials,

stockpiles, and exposed soils. These impacts would be temporary in nature as the site would be restored to its pre-construction condition following construction, with the exception of the new well, backup generator, potable water storage tank, and potentially the nitrate ion exchange system (if implemented). These new aboveground features would consist of neutral colors in keeping with the overall visual characteristics of the site and would be sited to minimize visual impacts to the extent feasible. In addition, they would be largely screened from view by existing vegetation along the site boundaries. For these reasons, the Proposed Project would result in a less than significant impact on the existing visual character or quality of public views of the site and its surroundings.

d. Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

The Proposed Project does not propose any new sources of light or glare. The new well, backup generator, potable water storage tank, and the nitrate ion exchange system (if implemented) will be designed with non-reflective materials and would not include nighttime lighting. Other components of the Proposed Project would be located underground. Construction will not occur at night; therefore, no safety or other night lighting will be needed. The Proposed Project would have a less than significant impact resulting from light and glare during construction and operation.

4.2 Agricultural and Forestry Resources

Terminology

The California Department of Conservation ("DOC") identifies and designates important farmland throughout the State as part of the Farmland Mapping and Monitoring Program ("FMMP"). Farmland is classified as follows:

- **Prime Farmland.** Farmland with the best combination of physical and chemical features able to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. These are Class I and Class II soils.
- **Farmland of Statewide Importance.** Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.
- **Unique Farmland.** Farmland of lesser quality soils used to produce the state's leading agricultural crops. This land is usually irrigated but may include non-irrigated orchards or vineyards as found in some climactic zones in California.
- **Grazing Land.** Government Code §65570(b)(3) defines Grazing Land as: "...land on which the existing vegetation, whether grown naturally or through management, is suitable for grazing or browsing of livestock." The minimum mapping unit for Grazing Land is 40 acres. Grazing Land does not include land previously designated as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance, and heavily brushed, timbered, excessively steep, or rocky lands which restrict the access and movement of livestock.
- **Urban and Built-Up Land.** Land occupied by structures with a building density of at least one (1) unit to 1.5 acres, or approximately six (6) structures to a 10-acre parcel. This land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.

- **Other Land.** Land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas, not suitable for livestock grazing; confined livestock, poultry, or aquaculture facilities; strip mines, borrow pits; and water bodies smaller than 40 acres. Vacant and nonagricultural land surrounded by urban development and greater than 40 acres is mapped as Other Land.

California Public Resources Code §4526 and the California Board of Forestry and Fire Protection defines "Timberland" as land not owned by the federal government nor designated as experimental forest land, which is capable and available for growing any commercial tree species.

Environmental Setting

The Proposed Project is located in an area with active agriculture uses to the south. Lands located immediately to the north, east, and west of the site were previously used for agricultural purposes but are now either part of the NCER or the Topaz Solar Farm. The Proposed Project would be located entirely within the boundaries of the existing School. No agricultural activities occur on the Proposed Project site. The Proposed Project site is designated as urban and built-up land on the California Department of Conservation's Important Farmland GIS Viewer (California Department of Conservation, 2024). The Proposed Project site is not under a Williamson Act contract, nor is it zoned for agricultural use.

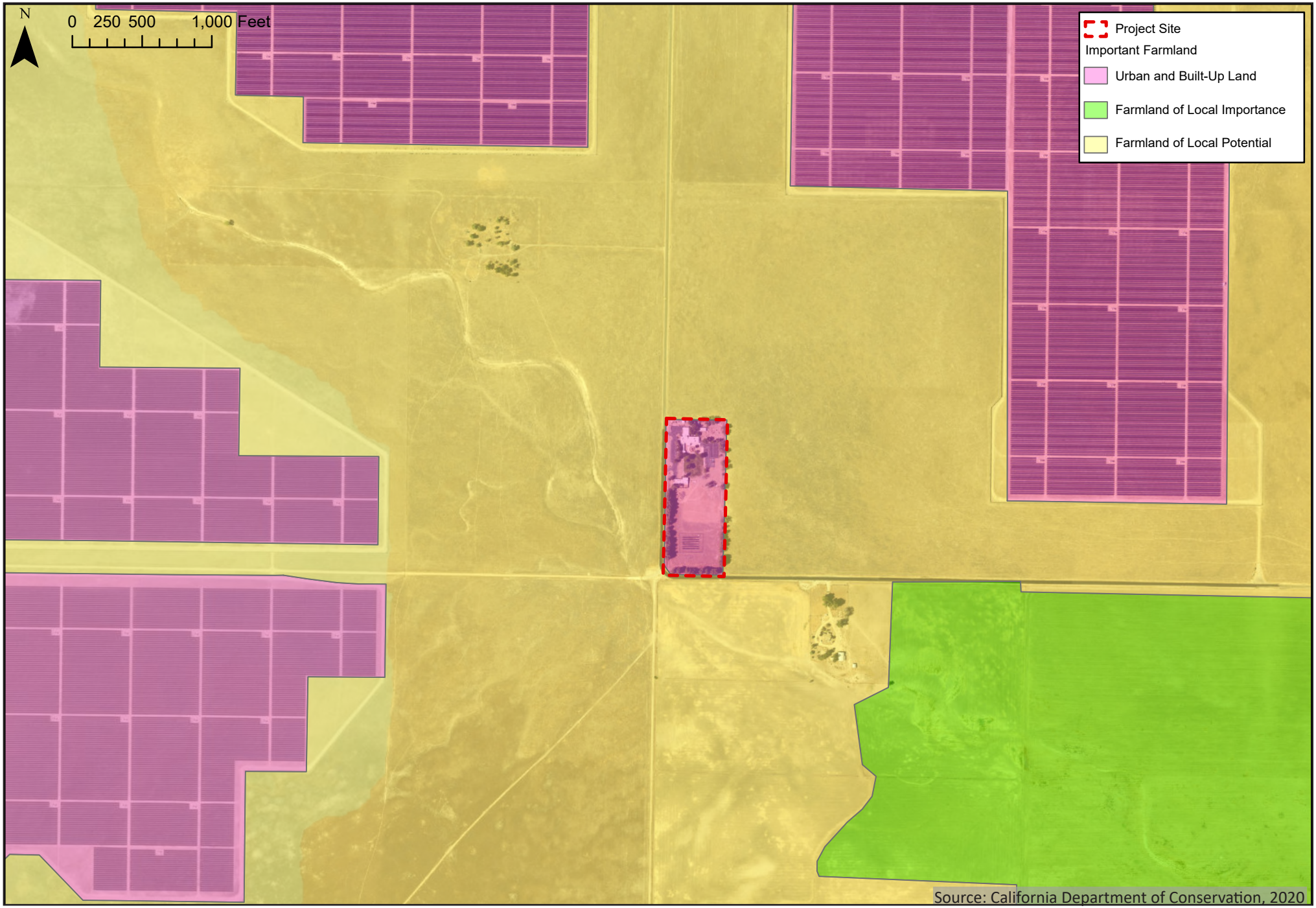
Areas to the south of the Proposed Project site are currently utilized for agriculture, along with rural residential uses. There is no prime farmland in the immediate vicinity of the Proposed Project site as depicted in **Figure 7**. Neither construction nor operation of the Proposed Project would encroach into agricultural land.

According to California Public Resources Code ("PRC") Section 12220(g), forest land is defined as land that can support ten percent (10%) of 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. Timberland is defined as land, other than land owned by the federal government and land designated by the State Board of Forestry and Fire Protection, as experimental forest land, which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees. The Proposed Project site does not support any forest land or timberland.

Regulatory Framework

Federal

***Farmland Protection Policy Act*:** The Farmland Protection Policy Act ("FPPA") seeks to reduce federal program impacts on unnecessary and irreversible conversion of farmland to nonagricultural uses. This act requires federal agencies to develop and review policies to implement the FPPA every two (2) years and comply with state and local programs and policies protecting farmland. The FPPA includes land such as forests, pasture, crop, or other land that may be used for farmland in the future. However, The FPPA does not include water or urban land. FPPA uses farmland classifications of "prime farmland," "unique farmland," and "land of statewide importance" (USDA, 2024).



Title:

Important Farmland Map

Date	7/11/2024
Scale	N/A
Project	2023.82

Monterey | San Jose
Denise Duffy and Associates, Inc.
Environmental Consultants Resource Planners
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Monterey, CA 93940
(831) 373-4341

Figure
7

State

California Land Conservation Act of 1965 ("Williamson Act"): The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, is the State's primary program aimed at conserving private land for agricultural use. The California Department of Conversation prepares countywide maps of lands enrolled in the Williamson Act contracts. The Williamson Act provides a voluntary, locally administered program offering reduced property taxes on lands whose owners place enforceable restrictions on land use through contracts between the individual landowners and local governments.

Local

***San Luis Obispo County General Plan – Agriculture Element*:** None of the goals or policies of the Agriculture Element of the San Luis Obispo County General Plan would apply to the Proposed Project.

***San Luis Obispo County Code*:** None of the codes of the San Luis Obispo County Code related to agricultural and forestry resources would apply to the Proposed Project.

***Carrizo Area Plan*:** None of the policies provided in the Carrizo Area Plan related to agricultural or forest resources are applicable to the Proposed Project.

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

Impact Discussion

a. Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

The Proposed Project site is designated as "Urban and Built-Up Land" on the Department of Conservation's Important Farmlands GIS Viewer (California Department of Conservation, 2024). Construction and operation of the Proposed Project would occur entirely within the boundaries of the School. Land designated as "Farmland of Local Importance" is located to the west of the Proposed Project, and land designated as "Farmland of Local Potential" is located to the north, east, and south of the Proposed Project. However, these areas would not be impacted by the Proposed Project. In addition, the areas located immediately to the north, west, and east of the site are no longer used for agricultural purposes as they are part of the NCER or the Topaz Solar Farm. The Proposed Project would have no impact resulting from the conversion of prime farmland, unique farmland, or farmland of statewide importance.

b. Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

The Proposed Project site is not located on land under Williamson Act contract. There is non-prime farmland enrolled under the Williamson Act located approximately 2,150 feet to the southeast of the Proposed Project. The Proposed Project would occur entirely on the existing School campus and would not interfere with the Williamson Act contract of nearby land. The Proposed Project would have no impact resulting from a conflict with existing zoning for agricultural use, or a Williamson Act contract.

c. Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)?

The Proposed Project site does not contain any forest land as defined in Public Resources Code Section 12220(g), timberland as defined by Public Resources Code Section 4526, or property zoned for Timberland Production as defined by Government Code Section 51104(g). The Proposed Project would have no impact resulting from a conflict in zoning for these land uses.

d. Would the project result in the loss of forest land or conversion of forest land to non-forest uses?

Please refer to the discussion above. The Proposed Project would not result in the loss of forest land or conversion of forest land to non-forest use. No impact would occur.

e. Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

The Proposed Project would not involve changes in the existing environment that could result in conversion of farmland or agricultural land due to their location or nature. Construction impacts adjacent to agricultural resources would occur within the existing School campus and would be temporary in nature. The Proposed Project is a water system improvement project and would not convert any land for other use. For these reasons, this is considered a less than significant impact.

4.3 Air Quality

Environmental Setting

Air Quality modeling was performed for the Proposed Project using the California Emissions Estimator Model ("CalEEMod") based on data provided by the project engineer. The results of the CalEEMod simulation are contained in **Appendix B** of this document.

The Proposed Project site is located in the South Central Coast Air Basin ("SCCAB"), which encompasses Santa Barbara, San Luis Obispo, and Ventura counties. The SCCAB is bordered by the Pacific Ocean to the west, the North Central Coast Air Basin to the north, and the San Joaquin Valley Air Basin and South Coast Air Basin to the east.

Air pollutant emissions in the SCCAB are generated primarily by stationary and mobile sources. Stationary sources can be divided into two (2) major subcategories: point and area sources. Point sources occur at a specific location and are often identified by an exhaust vent or stack. Examples include boilers or combustion equipment that produce electricity or generate heat. Area sources are widely distributed and include such sources as residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, landfills, and some consumer products. Mobile sources refer to emissions from motor vehicles, including tailpipe and evaporative emissions, and are classified as either on-road or off-road. On-road sources may be legally operated on roadways and highways. Off-road sources include aircraft, ships, trains, and self-propelled construction equipment. Air pollutants can also be generated by the natural environment, such as when high winds suspend fine dust particles. The U.S. Environmental Protection Agency ("EPA") administers National Ambient Air Quality Standards ("NAAQS") under the Federal Clean Air Act. The EPA sets the NAAQS and determines if areas meet those standards. Violations of ambient air quality standards are based on air pollutant monitoring data and evaluated for each air pollutant. Areas that do not violate ambient air quality standards are considered to have attained the standard.

Air quality in the SCCAB is regulated by San Luis Obispo County Air Pollution Control District ("SLO County APCD"), as noted above. SLO County APCD monitors air pollutant levels to ensure that air quality standards are met. SLO County APCD develops strategies to meet the air quality standards when they are not met. Depending on whether or not the standards are met or exceeded, SLO County APCD is classified as being in "attainment" or as "non-attainment." See **Table 1. SLO County APCD Attainment Status** below.

Table 1
SLO County APCD Attainment Status

Pollutant	State Designation	National Designation
Ozone (O_3)	Non-Attainment	Non-Attainment Eastern SLO County - Attainment Western SLO County*
Inhalable Particulates (PM_{10})	Non-Attainment	Unclassified**/ Attainment
Fine Particulates ($PM_{2.5}$)	Attainment	Unclassified**/ Attainment
Carbon Monoxide (CO)	Attainment	Unclassified**
Nitrogen Dioxide (NO_2)	Attainment	Unclassified**
Sulfur Dioxide (SO_2)	Attainment	Unclassified**
Lead	Attainment	No Attainment Information

* San Luis Obispo County has been designated non-attainment east of the -120.4 deg Longitude line, in areas of SLO County that are south of latitude 35.45 degrees, and east of the -120.3 degree Longitude line, in areas of SLO County that are north of latitude 35.45 degrees. Map of non-attainment area is available upon request from the APCD.
** Unclassified (EPA/Federal definition): Any area that cannot be classified on the basis of available information as meeting or not meeting the national primary or secondary ambient air quality standard for that pollutant.
Source: SLO County APCD, 2023

Plans to attain these standards already accommodate the future growth projections available at the time these plans were prepared. Any development project capable of generating air pollutant emissions exceeding regionally established criteria is considered significant for purposes of CEQA analysis, whether or not such emissions have been accounted for in regional air planning. Any project that would directly cause or substantially contribute to a localized violation of an air quality standard would generate substantial air pollution impacts. The same is true for a project that generates a substantial increase in health risks from toxic air contaminants or introduces future occupants to a site exposed to substantial health risks associated with such contaminants.

Sensitive receptors are more susceptible to the effects of air pollution than the general population. Land uses that are considered sensitive receptors include residences, schools, and health care facilities. On-site sensitive receptors would include students at the school and occupants of the two (2) single-family residences. Off-site sensitive receptors in the vicinity of the project site consist of nearby residences.

Regulatory Framework

Federal

***U.S. Environmental Protection Agency*:** At the federal level, the U.S. EPA implements national air quality programs. The Federal Clean Air Act ("FCAA"), signed in 1970, provides air quality mandates used by the U.S. EPA. Congress amended the FCAA in 1977 and again in 1990.

***Federal Clean Air Act*:** The FCAA required the U.S. EPA to establish NAAQS and set deadlines for their attainment. Two (2) types of NAAQS exist: primary standards, which protect public health, and secondary standards, which protect public welfare from non-health-related adverse effects, such as visibility restrictions. The FCAA allows states to adopt additional or more health-protective standards. **Table 2** compares the California Ambient Air Quality Standards and the NAAQS.

Table 2
Summary of Ambient Air Quality Standards

Pollutant	Averaging Time	California Standard*	National Standards (Primary)
Ozone	1-Hour	0.09 ppm	- -
Ozone	8-Hour	0.07 ppm	0.07 ppm
PM_{10}	AAM	20 µg/m^3	- -
PM_{10}	24-Hour	50 µg/m^3	150 µg/m^3
$PM_{2.5}$	AAM	12 µg/m^3	9 µg/m^3
$PM_{2.5}$	24-Hour	No standard	35 µg/m^3
Carbon Monoxide	1-Hour	20 ppm	35 ppm
Carbon Monoxide	8-Hour	9 ppm	9 ppm
Nitrogen Dioxide	AAM	0.030 ppm	53 ppb
Nitrogen Dioxide	1-Hour	0.18 ppm	100 ppb
Sulfur Dioxide	AAM	- -	0.03 ppm
Sulfur Dioxide	24-Hour	0.04 ppm	0.14 ppm
Sulfur Dioxide	3-Hour	- -	0.5 ppm (1300 µg/m^3) **
Sulfur Dioxide	1-Hour	0.25 ppm	75 ppb
Lead	30- day	1.5 µg/m^3	- -
Lead	Calendar quarter	- -	1.5 µg/m^3
Lead	Rolling 3-month	- -	0.15 µg/m^3
Sulfate	24-Hour	25 µg/m^3	No Federal Standards
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m^3)	No Federal Standards
Vinyl Chloride	24-Hour	0.01 ppm (26 µg/m^3)	No Federal Standards
Visibility Reducing Particles	8-hours	Extinction coefficient of 0.23 per kilometer —visibility of ten miles or more (0.07 — 30 miles or more for Lake Tahoe) due to particles when relative humidity is < 70%.	No Federal Standards

Source: https://ww2.arb.ca.gov/sites/default/files/2024-08/AAQS%20Table_ADA_FINAL_07222024.pdf
ppm = Parts per Million; µg/m3 = Micrograms per Cubic Meter; AAM = Annual Arithmetic Mean
*For more information on standards visit : https://ww2.arb.ca.gov/sites/default/files/2024-08/AAQS%20Table_ADA_FINAL_07222024.pdf
**Secondary Standard
Source: CARB, 2024

The FCAA also required each state to prepare an air quality control plan referred to as a State Implementation Plan ("SIP"). The 1990 FCAA Amendments required states with non-attainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. The U.S. EPA has the responsibility to review all state SIPs to determine conformance with the mandates of the FCAA and FCAA amendments. The U.S. EPA also determines if implementation will achieve air quality goals. If the U.S. EPA determines a SIP to be inadequate, a Federal Implementation Plan ("FIP") may be prepared for the non-attainment area that imposes additional control measures. Pursuant to California Clean Air Act ("CCAA") and CCAA amendments, a region must participate in the SIP if the state designates it as a maintenance region.

State

***California Air Resources Board*:** CARB is the agency responsible for coordinating and overseeing state and local air pollution control programs in California and implementing the CCAA of 1988. Other CARB duties include monitoring air quality (in conjunction with air monitoring networks maintained by air pollution control districts and air quality management districts, establishing California Ambient Air Quality Standards ("CAAQS"), which in many cases are more stringent than the NAAQS, and setting emissions standards for new motor vehicles.[2] **Table 2** summarizes the CAAQS above.

***California Clean Air Act*:** The CCAA requires all air districts in the state to endeavor to achieve and maintain CAAQS for Ozone, CO, SO_2, and NO_2 by the earliest practical date. The CCAA specifies that districts focus particular attention on reducing emissions from transportation and area-wide emission sources, and the act provides districts with authority to regulate indirect sources of emissions. Each district plan is required to either: 1) achieve a five (5) percent annual reduction, averaged over consecutive three (3)-year periods, in district-wide emissions of each nonattainment pollutant or its precursors; or 2) provide for the implementation of all feasible measures to reduce emissions. Any planning effort for air quality attainment would thus need to consider both state and federal planning requirements.

***Assembly Bills 1807 & 2588 - Toxic Air Contaminants*:** California Assembly Bill ("AB") 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics Hot Spots Information and Assessment Act of 1987) primarily regulate Toxic Air Contaminants ("TACs"). The Tanner Air Toxics Act sets forth a formal procedure for CARB to designate substances as TACs. This procedure includes research, public participation, and scientific peer review before CARB designates a substance as a TAC. Existing sources of TACs that are subject to the Air Toxics Hot Spots Information and Assessment Act are required to: 1) prepare a toxic emissions inventory; 2) prepare a risk assessment if emissions are significant; 3) notify the public of significant risk levels; and 4) prepare and implement risk reduction measures.

Local

***San Luis Obispo County Air Pollution Control District*:** The Proposed Project site is located within the SCCAB and within the jurisdiction of the SLO County APCD. Air Quality in the region is affected by its topography, meteorology, and climate. The SCCAB encompasses Santa Barbara, San Luis Obispo, and Ventura counties. The SLO County APCD is the agency primarily responsible for ensuring that NAAQS and CAAQS are not exceeded. SLO County APCD also ensures that air quality conditions are maintained in the SCCAB.

***San Luis Obispo County General Plan – Conservation and Open Space Element*:** The following air quality goals and policies provided by the Conservation and Open Space Element of the San Luis Obispo County General Plan are applicable to portions of the Proposed Project:

Goal AQ-1: Per capita vehicle-miles-traveled countywide will be substantially reduced consistent with statewide targets.

Policy AQ-1.1: ***Compact Development***: Encourage compact land development by concentrating new growth within existing communities and ensuring complete services to meet local needs.

[2] The emission standards established for motor vehicles differ depending on various factors including the model year, and the type of vehicle, fuel, and engine used.

Policy AQ-1.2: ***Reduce Vehicle Miles Travelled***: Require projects subject to discretionary review to minimize additional vehicle travel.

Goal AQ-3: State and federal ambient air quality standards will, at a minimum, be attained and maintained.

Policy AQ-3.2: ***Attain Air Quality Standards***: Attain or exceed federal or state ambient air quality standards (the more stringent if not the same) for measured criteria pollutants.

Policy AQ-3.3: ***Avoid Air Pollution Increases***: Avoid a net increase in criteria air pollutant emissions in planning areas certified as Level of Severity II or III for Air Quality by the County's Resource Management System (RMS).

Policy AQ-3.4: ***Toxic Exposure***: Minimize public exposure to toxic air contaminants, ozone, particulate matter, sulfur dioxide, carbon monoxide, nitrogen oxides, and lead.

Policy AQ-3.7: ***Reduce Vehicle Idling***: Encourage the reduction of heavy-vehicle idling throughout the county, particularly near schools, hospitals, senior care facilities, and areas prone to concentrations of people, including residential areas.

Policy AQ-3.8: ***Reduce Dust Emissions***: Reduce PM_{10} and $PM_{2.5}$ emissions from unpaved and paved County roads to the maximum extent feasible.

***San Luis Obispo County Code*:** The following air quality codes provided by Title 22 of the San Luis Obispo County Code could be applicable to the Proposed Project**:**

Chapter 22.10.030 (A) - Air Quality: Air Pollution Control District (APCD) review for projects which require a discretionary land use permit.

Chapter 22.10.030 (B) - Odors: Control noxious odors from non-agricultural land use within one-half mile of urban or village reserve line.

***Carrizo Area Plan*:** There are no policies provided in the Carrizo Area Plan related to air quality that are applicable to the Proposed Project.

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	■	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	■	☐
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?	☐	☐	■	☐

Impact Discussion

a. Would the project conflict with or obstruct implementation of the applicable air quality plan?

CEQA Guidelines §15125(b) requires an evaluation of project consistency with applicable regional plans, including the AQMP. As stated above, SLO County APCD has developed and implemented several plans to address exceedance of State air quality standards, including the 2001 Clean Air Plan ("CAP") for San Luis Obispo County (SLO County APCD, 2001). This plan addresses attainment of the State ozone standard and federal air quality standard. The CAP accommodates growth by projecting an increase in emissions based on population forecasts prepared by the San Luis Obispo Council of Governments ("SLOCOG")[3] and other indicators. The Proposed Project consists of the replacement of an existing water supply and would not result in any increase in employment, nor would the Proposed Project result in increased population growth. The Proposed Project would be consistent with the SLO County APCD 2001 CAP, as well as the updated population estimates in the *2050 Regional Growth Forecast for San Luis Obispo County* (SLOCOG, 2017). For these reasons, implementation of the Proposed Project is not anticipated to result in a substantial increase in either direct or indirect emissions that would conflict with or obstruct implementation of the 2001 CAP. This impact is considered less-than-significant.

b. Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

The SLO County APCD CEQA Air Quality Handbook contains thresholds of significance for evaluating potential air quality effects of projects subject to the requirements of CEQA. According to SLO County APCD, a project will not have a significant air quality effect on the environment, if the following criteria are met:

Construction of a project will:

- Emit (from all sources, including exhaust and fugitive dust) less than:
  - 137 pounds per day (combined) of oxides of nitrogen ("NO_x") and reactive organic gases ("ROG");
  - Seven (7) pounds per day of diesel particulate matter ("DPM"); and
  - 2.5 tons per quarter of respirable particulate matter ("PM_{10}").

Operation of a project will:

- Emit (from all project sources, mobile, area, and stationary) less than:
  - 25 pounds per day (combined) of NO_x and ROG;
  - 1.25 pounds per day of DPM;
  - 25 pounds per day of PM_{10}; and
  - 550 pounds per day carbon monoxide ("CO").

[3] The SLO County APCD suggests use of the most recent (SLOCOG, 2017) projections in place of the 2001-period data included in the CAP.

Construction

Construction of the Proposed Project would result in temporary increases in emissions of inhalable particulates ($PM_{2.5}$ and PM_{10}), ROG, DPM, and NO_x associated with construction-related activities. **Table 3. Construction Air Quality Emissions** below, provides detailed information on these construction emissions (see also **Appendix B**). Construction-related fugitive dust emissions associated with the Proposed Project would be generated from site grading and construction. In addition to construction-related fugitive dust, exhaust emissions associated with construction vehicles and equipment would also be generated.

Table 3
Construction Air Quality Emissions

	ROG/NO_x (lbs./day)	**DPM (lbs./day)**	**PM_{10} (tons/quarter)**
Significance Threshold (SLO APCD)	137	7	2.5
Emissions generated by the Project	18.59	0.9*	0.27
Exceed Threshold?	No	No	No

*DPM calculations determined by calculating combined emissions of both PM_{10}(E) & $PM_{2.5}$(E), which are emitted from vehicle exhaust.
Emissions Source: **Appendix B**
Significance Threshold Source: SLO County APCD, 2023

As described above in **Table 3**, the Proposed Project would not exceed SLO APCD's thresholds for criteria pollutant emissions during construction. However, the Proposed Project would generate fugitive dust within 1,000 feet of a sensitive receptor and would be required to implement the expanded list of fugitive dust measures as best management practices ("BMPs"):

A. Reduce the amount of the disturbed area where possible;

B. Use of water trucks or sprinkler systems, in sufficient quantities to prevent airborne dust from leaving the site and from exceeding the APCD's limit of 20% opacity for greater than 3 minutes in any 60-minute period. Increased watering frequency would be required whenever wind speeds exceed 15 mph. Reclaimed (non-potable) water should be used whenever possible. Please note that during drought conditions, water use may be a concern and the contractor or builder shall consider the use of an APCD-approved dust suppressant where feasible to reduce the amount of water used for dust control.

C. All dirt stockpile areas should be sprayed daily as needed;

D. Permanent dust control measures identified in the approved project revegetation and landscape plans should be implemented as soon as possible following completion of any soil disturbing activities;

E. Exposed ground areas that are planned to be reworked at dates greater than one month after initial grading should be sown with a fast germinating, non-invasive grass seed and watered until vegetation is established;

F. All disturbed soil areas not subject to revegetation should be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the APCD;

G. All roadways, driveways, sidewalks, etc. to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used;

H. Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site;

I. All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard (minimum vertical distance between top of load and top of trailer) in accordance with CVC Section 23114;

J. "Track-Out" is defined as sand or soil that adheres to and/or agglomerates on the exterior surfaces of motor vehicles and/or equipment (including tires) that may then fall onto any highway or street as described in California Vehicle Code Section 23113 and California Water Code 13304. To prevent Track Out, designate access points and require all employees, subcontractors, and others to use them. Install and operate a "track-out prevention device" where vehicles enter and exit unpaved roads onto paved streets. The track-out prevention device can be any device or combination of devices that are effective at preventing track out, located at the point of intersection of an unpaved area and a paved road. Rumble strips or steel plate devices require periodic cleaning to be effective. If paved roadways accumulate tracked out soils, the track-out prevention device may need to be modified.

K. Sweep streets at the end of each day if visible soil material is carried onto adjacent paved roads. Water sweepers with reclaimed water should be used where feasible;

L. All of these fugitive dust mitigation measures shall be shown on grading and building plans; and

M. The contractor or builder shall designate a person or persons to monitor the fugitive dust emissions and enhance the implementation of the measures as necessary to minimize dust complaints, reduce visible emissions below 20% opacity, and to prevent transport of dust offsite. Their duties shall include holidays and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the APCD Compliance Division prior to the start of any grading, earthwork or demolition.

The Proposed Project would result in a less than significant impact related to construction air quality emissions with implementation of standard conditions.

Operation

Operation of the Proposed Project would result in a small increase in air pollution emissions related to operation of the proposed well, as well as from vehicle trips to the site for maintenance activities (including cartridge replacement for the nitrate ion exchange system, if implemented). All components of the Proposed Project have been designed in accordance with applicable regulatory requirements limiting air quality emissions. As shown below in **Table 4**, all operational emissions of the Proposed Project would be below applicable SLO County APCD thresholds of significance.

Table 4
Operational Air Quality Emissions

	ROG/NO_x (lbs./day)	DPM (lbs./day)	PM_{10} (lbs./day)	CO (lbs./day)
Significance Threshold (MBARD)	25	1.25	25	550
Emissions generated by the Project	0.72	0.02*	0.62	2.85
Exceed Threshold?	No	No	No	No

*DPM calculations determined by calculating combined emissions of both PM_{10}(E) & $PM_{2.5}$(E), which are emitted from vehicle exhaust.
Emissions Source: **Appendix B**
Significance Threshold Source: SLO County APCD, 2023

As presented above in **Table 4**, the Proposed Project would not exceed SLO County APCD's daily thresholds for criteria pollutant emissions during construction. The Proposed Project would result in a less than significant impact related to construction air quality emissions.

c. Would the project expose sensitive receptors to substantial pollutant concentrations?

The following discussion analyzes the potential for construction and operation of the Proposed Project to result in exposure of sensitive receptors to substantial pollutant concentrations.

Construction

A "sensitive receptor" is generally defined as any residence including private homes, condominiums, apartments, or living quarters; education resources such as preschools and kindergarten through grade twelve ("k-12") schools; daycare centers; and health care facilities such as hospitals or retirement and nursing homes. The Proposed Project is located in the existing School campus that includes educational and residential sensitive receptors. In addition, off-site residential uses are located as close as 950 feet to the southeast of the project site. Therefore, impacts to sensitive receptors during Project construction could occur. However, these potential impacts would be minimized with implementation of the standard construction BMPs described above under impact b).

In addition, as identified above under impact b), the Proposed Project would not exceed applicable SLO County APCD thresholds of significance during construction. Therefore, with implementation of BMPs, construction of the Proposed Project would result in a less than significant impact related to exposure of sensitive receptors to substantial pollutant concentrations.

Operation

Operation of the Proposed Project is not anticipated to result in increased exposure of sensitive receptors to air pollutant concentrations. As described above, all operational pollutant emissions would be well below SLO County APCD thresholds of significance during operation. Operation of the Proposed Project would result in a less than significant impact related to exposure of sensitive receptors to substantial pollutant concentrations.

d. Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

There may be intermittent odors from construction associated with diesel exhaust that could be noticeable at times to sensitive residential and educational receptors in close proximity to the Proposed Project. However, given the limited construction duration, potential intermittent odors are not anticipated to result in odor complaints and would not affect a substantial number of people. Odors

from laying the water pipeline and electrical conduit would not be concentrated in a single location for long periods of time. In addition, the proposed well location, where the most intensive construction activities would occur, is located approximately 580 feet from the nearest off-site sensitive receptor and odors from this construction would not adversely impact a substantial number of people. Operation of the Proposed Project would not result in significant concentrations of odors or other emissions that would adversely affect a substantial number of people. A less than significant impact would result from other emissions, including odors.

4.4 Biological Resources

This section assesses the Proposed Project's potential impacts to biological resources. Potential effects to biological resources associated with the Proposed Project were assessed based on an evaluation of historic and current conditions in the context of the site.

Environmental Setting

The Proposed Project is located within the Carrizo Plains in unincorporated San Luis Obispo County. The survey area encompassed the entire Carrisa Plains School campus (**Figure 8**). The Proposed Project site is located adjacent to the NCER, which is a CDFW preserve dedicated to preserving habitat for special-status species in the region. The impact area for the Proposed Project is located within the northern, eastern, and southeastern portions of the Carrisa Plains School campus (**Figure 8**). The Proposed Project site consists of developed and ruderal/disturbed habitats.

Survey Methodology

DD&A Environmental Scientists Rikki Lougee and Kimiya Ghadiri conducted a reconnaissance-level survey of the Proposed Project site on April 4th, 2024, to identify any special-status plant or wildlife species or suitable habitat for these species, characterize vegetation types, and identify any sensitive habitats present within the site. Survey methods included walking the survey area using aerial maps and a Global Positioning System to map biological resources. Available reference materials were reviewed prior to conducting the field survey. DD&A used data collected during the survey to assess the environmental conditions of the survey area and its surroundings, evaluate environmental constraints at the site and within the local vicinity, and provide a basis for recommendations to minimize and avoid impacts.

DD&A surveyed the Proposed Project site for botanical resources following the applicable guidelines outlined in the U.S. Fish and Wildlife Service ("USFWS") *Guidelines for Conducting and Reporting Botanical Inventories for Federally listed, Proposed and Candidate Plants* (USFWS, 2000), the CDFW *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW, 2018), and the California Native Plant Society ("CNPS") *Botanical Survey Guidelines* (CNPS, 2001).

Title: Survey Area

Date 4/17/2024
Scale N/A
Project 2023.82

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Figure 8

Special-Status Species

Special-status species are those plants and animals that have been formally listed or proposed for listing as endangered or threatened, or are candidates for such listing, under the ESA or the CESA. Listed species are afforded legal protection under the ESA and CESA. Species that meet the definition of rare or endangered under the CEQA Guidelines Section 15380 are also considered special-status species. Animals on the CDFW's list of "species of special concern" (most of which are species whose breeding populations in California may face extirpation if current population trends continue) meet this definition and are typically provided management consideration through the CEQA process, although they are not legally protected under the ESA or CESA.

Plants listed as rare under the California Native Plant Protection Act ("CNPPA") or included in CNPS California Rare Plant Ranks ("CRPR"; formerly known as CNPS Lists) 1A, 1B, 2A, and 2B are also treated as special-status species as they meet the definitions of Sections 2062 and 2067 of the CESA and in accordance with CEQA Guidelines Section 15380.[4] In general, the CDFW requires that plant species on CRPR 1A (Plants presumed extirpated in California and Either Rare or Extinct Elsewhere), CRPR 1B (Plants rare, threatened, or endangered in California and elsewhere), CRPR 2A (Plants presumed extirpated in California, but more common elsewhere); and CRPR 2B (Plants rare, threatened, or endangered in California, but more common elsewhere) of the CNPS *Inventory of Rare and Endangered Vascular Plants of California* (CNPS, 2023) be fully considered during the preparation of environmental documents under CEQA. CNPS CRPR 4 species (plants of limited distribution) may, but generally do not, meet the definitions of Sections 2062 and 2067 of CESA, and are not typically considered in environmental documents relating to CEQA.[5] In addition, species of vascular plants, bryophytes, and lichens listed as having special-status by the CDFW are considered special-status plant species (CDFW, 2023c).

Raptors (e.g., eagles, hawks, and owls) and their nests are protected in California under Fish and Game Code Section 3503.5. Section 3503.5 states that it is "unlawful to take, possess, or destroy the nest or eggs of any such bird except otherwise provided by this code or any regulation adopted pursuant thereto." In addition, fully protected species under the Fish and Game Code Section 3511 (birds), Section 4700 (mammals), Section 5515 (fish), and Section 5050 (reptiles and amphibians) are also considered special-status animal species. Species with no formal special-status designation but thought by experts to be rare or in serious decline may also be considered special-status animal species in some cases, depending on project-specific analysis and relevant, localized conservation needs or precedence.

Sensitive Habitats

Sensitive habitats include riparian corridors, wetlands, habitats for legally protected species, areas of high biological diversity, areas supporting rare or special-status wildlife habitat, wildlife corridors, and unusual or regionally restricted habitat types. Vegetation communities considered sensitive include those listed on CDFW's California Natural Communities List (i.e., those habitats that are rare or endangered within the borders of California) (CDFW, 2023) and those that are defined as Environmentally Sensitive Habitat Areas ("ESHA") under the California Coastal Act ("CCA"). Specific habitats may also be identified as sensitive in city or county general plans or ordinances. Sensitive habitats are regulated under federal regulations (such as the Clean Water Act ["CWA"] and Executive Order ["EO"] 11990 – Protection of Wetlands), state regulations (such as CEQA and the CDFW

[4] CNPS initially created five (5) CRPR to categorize degrees of concern; however, to better define and categorize rarity in California's flora, the CNPS Rare Plant Program and Rare Plant Program Committee have developed the new CRPR 2A and CRPR 2B.
[5] Species on CRPR 3 (Plants about which we need more information - a review list) and CRPR 4 (Plants of limited distribution - a watch list) may, but generally do not, meet the definitions of Sections 2062 and 2067 of CESA, and are not typically considered in environmental documents relating to CEQA.

Streambed Alteration Program), or local ordinances or policies (such as city or county tree ordinances and general plan policies).

Existing Conditions

Vegetation Types

One (1) habitat type, ruderal/disturbed, occurs within the survey area and Proposed Project site (**Figure 9**). The following section provides an overview of the ruderal/disturbed vegetation type.

Ruderal areas are those areas which have been subject to historic and ongoing disturbance by human activities and are devoid of vegetation or dominated by non-native and/or invasive weed species. The entirety of the Proposed Project site is comprised of ruderal vegetation, consisting of the school grounds which are actively managed on a regular basis. During the survey, the school custodian indicated that a majority of the Proposed Project site is regularly mowed approximately once a month. The entirety of the Proposed Project site was highly disturbed, with compacted soils containing imported gravel in some areas. The Proposed Project site was dominated by non-native plant species including foxtail barley (*Hordeum murinum*), foxtail chess (*Bromus madritensis*), and common stork's bill (*Erodium cicutarium*); however, few native species were observed including coastal tidy tips (*Layia platyglossa*) and purple owl's clover (*Castilleja exserta*).

Ruderal areas typically provide only low-quality habitat for plants and wildlife. Common wildlife species which do well in disturbed areas include American crow (*Corvus brachyrhynchos*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), scrub jay (*Aphelocoma californica*), European starling (*Sturnus vulgaris*), western fence lizard (*Sceloporus occidentalis*), and rock dove (*Columba livia*). However, ruderal areas within the Proposed Project site may also provide burrowing habitat for Nelson's antelope squirrel and giant kangaroo rat, dispersal habitat for San Joaquin kit fox, and upland or dispersal habitat for western spadefoot.

Sensitive Habitats

No sensitive habitats were identified within the survey area.

Special-Status Species

Published occurrence data within the Proposed Project site and surrounding USGS quadrangles were evaluated to compile a table of special-status species known to occur in the vicinity of the Proposed Project site (**Appendix C**). Each of these species was evaluated for their likelihood to occur within and immediately adjacent to the Proposed Project site. The special-status species that are known to or have been determined to have a moderate to high potential to occur within or immediately adjacent to the Proposed Project site are discussed below. All other species within the table are assumed "unlikely to occur" or determined to have a low potential to occur for the species-specific reason presented in **Appendix C**.

Title: Vegetation Types

Date 4/17/2024
Scale N/A
Project 2023.82

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Figure 9

Special-Status Wildlife Species

Nelson's Antelope Squirrel: The Nelson's antelope squirrel (*Ammospermophilus nelsoni*) is a state Threatened species. This species is a permanent resident of the western San Joaquin Valley from approximately 60-360 meters in elevation (200-1,200 feet) on dry, sparsely vegetated, loam soils. This species is found from southern Merced County south to Kern, Kings, and Tulare Counties, and also occurs in portions of eastern San Luis Obispo and Santa Barbara Counties. Threats to the species include habitat loss due to cultivation and agriculture, overgrazing, and effects of rodenticides. Nelson's antelope squirrel feeds primarily on insects, green vegetation, seeds, and occasionally small vertebrates depending on seasonal availability of food sources. This species digs burrows, utilizes kangaroo rat burrows, or uses cover provided by rocks and other topographic features. Nelson's antelope squirrel is frequently found in areas with sandy loam soils and widely spaced alkali scrub vegetation or dry washes. Habitats include generally flat areas with widely scattered shrubs, annual forbs and grasses, and broken terrain with small gullies and washes.

The CNDDB reports 19 occurrences of this species within the quadrangles reviewed, the nearest located approximately two (2) miles from the Proposed Project site. Poor quality habitat is present within the Proposed Project site; however, higher quality habitat is present directly adjacent to the Proposed Project site within the NCER. Over one dozen small mammal burrows were observed within the Proposed Project site and could provide suitable habitat for this species. Therefore, Nelson's antelope squirrel has a moderate potential to occur within the Proposed Project site.

Giant Kangaroo Rat: The giant kangaroo rat (*Dipodomys ingens*) is a federal and state Endangered species. This species is a small, burrowing mammal found only in the Central Valley of California. Giant kangaroo rats occur in the San Joaquin Valley, the Carrizo and Elkhorn Plains, and the Cuyama Valley in gentle sloping hills, grasslands, and scrub habitats. This species is highly adapted to the dry environment in which it lives and is rarely found in areas with summer precipitation. Optimal habitat for giant kangaroo rat includes annual grassland with low vegetative growth and few or no shrubs on gentle slopes not prone to flooding during winter months. Although giant kangaroo rats typically have strong habitat preferences, they are more generalized during dispersal events. Food sources for this species primarily consist of seeds, but other food sources include invertebrates and green plant material. Kangaroo rats are fossorial and crepuscular, spending a majority of their lives underground in burrows and actively foraging above ground during sunrise and sunset. Burrows typically contain two (2) to four (4) openings and consist of a shallow underground system of complex tunnels. Burrow openings are approximately five (5) centimeters in diameter. This species requires friable soils deep enough to support burrow construction. This species is solitary and typically does not share burrows or food resources, and many show aggression and territorial behavior toward members of the same species.

The maximum dispersal distance documented for giant kangaroo rat has been estimated as 2.25 kilometers (1.4 miles); however, long-distance dispersal is uncommon, and it is estimated that most individuals are more likely to disperse within only 700 meters (0.4 mile) from its natal den.

The CNDDB reports eight occurrences of this species within the quadrangles reviewed; however, only one (1) occurrence (#200) is reported in the last 20 years. No CNDDB occurrences are located within 2.25 km of the Proposed Project site; however, CDFW has documented that this species is present within the NCER surrounding the Proposed Project site. Soils within the Proposed Project site are relatively compacted and the vegetation is actively managed, as described above. These factors result in poor quality habitat for giant kangaroo rat within the project site; however, high quality habitat is present within the NCER directly adjacent to the Proposed Project site. Additionally, over a dozen small mammal burrows were observed within the Proposed Project site which may provide suitable habitat

for this species. Therefore, this species has a moderate potential to occur within the Proposed Project site.

San Joaquin Kit Fox: The San Joaquin kit fox (*Vulpes macrotis mutica*) is a federal Endangered and state Threatened species. Its present range extends from the southern end of the San Joaquin Valley, north to Stanislaus County along the east, and along the interior Coast Range valleys and foothills to central Contra Costa County. The kit fox typically inhabits valley alkaline scrub, valley and foothill grasslands, and open oak woodlands of low to moderate relief. Kit foxes are known to occupy human-altered habitats, such as vineyards, orchards, and petroleum fields, where denning opportunities and suitable prey are available. Man-made features, such as culverts in roadbeds and pipes, are frequently used in developed landscapes in the southern range of the kit fox. Kit foxes are thought to be weak excavators and largely dependent on rodent burrows, which they enlarge as den sites. Studies of kit fox in the northern part of their range support this presumption, as kit foxes are largely dependent on California ground squirrel (*Spermophilus beecheyi*) burrows for the creation of den sites. In the course of a year, up to 70 different dens may be used by a single individual. Mating occurs from December to February with pups born between February and late March. Pups emerge above ground, and are fed primarily by the male adult, at approximately one month old. Pups are fed four (4) to five (5) months, after which, the pups begin to forage independently. Juveniles disperse as far as 19 kilometers away from natal dens. Home ranges vary in size, depending on prey availability. Average home range is approximately 500 hectares.

The San Joaquin kit fox ("SJKF") is one (1) of two (2) subspecies of kit fox, (*Vulpes macrotis*), which is the smallest canid species in North America. SJKF are primarily nocturnal and exhibit obligate use of subterranean dens. Dens are used for temperature regulation, reproduction, and escape from predators. The subspecies is endemic to the San Joaquin Valley and some of the adjacent valleys of central California. Extensive land conversions of native habitat in the Central Valley, beginning as early as the mid-1800s, has resulted in almost 95 percent of the former range being converted to irrigated agriculture, industrial, or urban land uses.

Presently, the range of SJKF is restricted to the San Joaquin Valley in south-central California, as well as the Carrizo Plain, Panoche Valley, and adjacent smaller valleys in the Coast Range. The largest extant populations of kit foxes are in western Kern County on and around the Elk Hills, Buena Vista Valley, and in the Carrizo Plain Natural Area [now the Carrizo Plain National Monument] of San Luis Obispo County. The USFWS *Recovery Plan for Upland Species of the San Joaquin Valley* (1998) defines three distinct core populations of SJKF: Western Kern County, Carrizo Plain, and Ciervo-Panoche. 13 satellite populations are also described in the remaining fragmented landscapes of the species range. Movement of foxes between these populations is important for maintaining gene flow and avoiding inbreeding effects.

Vegetation communities inhabited by SJFK include valley sink scrub, valley saltbush scrub, upper Sonoran subshrub scrub, annual grassland, and other grassland communities. Within these communities, optimal habitat for the subspecies is sparsely vegetated communities on gentle slopes. SJKF can also be found in human altered habitats such as grazed grasslands, petroleum fields, solar farms, and urban areas. Tall or dense vegetation generally is less optimal for foxes as such conditions make it difficult for foxes to detect approaching predators or capture prey. Kit foxes also tend to avoid rugged steep terrain; predation risk is higher for foxes under such topographic conditions. In general, kit fox dens are found in flat or gently rolling terrain with slopes of less than ten (10) degrees, with a large majority of dens occurring on slopes of less than 30 percent. Suitable habitat must also include friable soils to allow for excavation of dens. Kit fox dens are primarily found in loose textured soils but will also occupy areas where soils have a high clay content where they modify burrows dug by other animals. Kit

foxes are also known to den in human-made structures, or "atypical dens," such as culverts, pipes, and other artificially created dens.

The preferred prey of SJKF is kangaroo rats, but their diet varies geographically, seasonally, and annually based on temporal and spatial variation in abundance of potential prey. They are also known to feed on rabbits and hares, ground squirrels, pocket mice, deer mice, and insects. In developed areas, such as Bakersfield, kit fox also feed on house mice and anthropogenic food resources. A study of kit foxes in western Merced County indicated that prey availability, particularly the presence and abundance of kangaroo rats, appeared to be a potential factor in the patterns of kit fox distribution and abundance.

Estimates of kit fox density vary greatly throughout its range and have been reported as low as 0.03 kit fox per square mile and as high as two (2) to three (3) per square mile. Home range size varies widely but generally an individual or pair will need one (1) to two (2) square miles in optimal habitat and considerably more when incorporating lower-quality habitat. Adult pairs remain together all year, sharing the home range but not necessarily the same den. During September and October, adult females begin to clean and enlarge natal or pupping dens which often have multiple openings. Mating and conception take place between late December and March. The median gestation period is estimated to range from 48 to 52 days. Litters of two (2) to six (6) pups are born sometime between February and late March. The female is rarely seen hunting during the time she is lactating. During this period, the male provides most of the food for her and the pups. The pups emerge above ground at slightly more than one (1) month of age. After four (4) to five (5) months, usually in August or September, the family bonds begin to dissolve, and the young begin dispersing. Occasionally, juveniles will remain with the family group beyond the first summer.

The CNDDB reports 50 occurrences of this species within the quadrangles reviewed, including one occurrence (#973) that encompasses the entire project site and multiple others within close proximity to the Proposed Project site. Additionally, CDFW tracking collar data indicates the presence of SJKF in the general vicinity of the Proposed Project site throughout the NCER. The Proposed Project site provides suitable dispersal habitat for this species; however, the entirety of the Proposed Project site is surrounded by chain link fencing, which may serve as a barrier for SJKF and other larger mammals from entering the Proposed Project site. Further, the highly compacted and disturbed soils likely provide only low-quality denning habitat for this species and would limit the presence of its prey (kangaroo rats and other small mammals). High quality habitat for SJKF is present surrounding the Proposed Project site throughout the NCER; therefore, there is low potential for SJKF to utilize the site as dispersal habitat, but unlikely for this species to utilize the Proposed Project site as foraging or denning habitat.[6]

Western Spadefoot: The western spadefoot toad (*Spea hammondii*) was proposed for listing as threatened under the ESA on December 5th, 2023 (88 FR 84252) and is a CDFW species of special concern. Western spadefoot toads are distributed throughout the Central Valley and adjacent foothills and are typically quite common where they occur. In the Coast Ranges, this species is found from Point Conception in Santa Barbara County, south to the Mexican border. Elevations of occurrence extend from near sea-level to 1,360 meters. Rarely found on the surface, spadefoot toads spend most of the year in underground burrows, which they may construct themselves or may improve (from small mammals). Breeding and egg laying occur almost exclusively in shallow, temporary pools formed by heavy winter rains. Egg masses are attached to plant material or the upper surfaces of submerged rocks. Tadpoles consume planktonic organisms and algae but are also carnivorous and may consume dead aquatic larvae of amphibians (including cannibalism). Recently metamorphosed juveniles seek refuge in the immediate

[6] SJKF was determined to have a low potential to occur within the project site; however, it is included in this analysis due to the known presence of this species within the vicinity of the project site and its listing status.

vicinities of breeding ponds. The maximum dispersal distance that has been recorded for western spadefoot is 605 meters (1,985 ft); however, dispersal distances for this species are highly dependent on rainfall.

The CNDDB reports 46 occurrences of this species within the quadrangles reviewed, none of which are located within the dispersal distance (605 meters) of the project site. Poor quality upland habitat is present within the Proposed Project site; however, no suitable breeding habitat is present. High quality habitat is present adjacent to the Proposed Project site within the NCER, where the species is known to occur. Therefore, this species has moderate potential to disperse within the Proposed Project site; however, there is only low potential the species would utilize the Proposed Project site as upland habitat.

Raptors and Other Protected Avian Species: Raptors and their nests are protected under California Fish and Game Code. While the life histories of these species vary, overlapping nesting and foraging similarities (approximately February through August) allow for their concurrent discussion. Most raptors are breeding residents throughout most of the wooded portions of the state. Stands of live oak, riparian deciduous, or other forest vegetation types, as well as open grasslands, are used most frequently for nesting. Breeding occurs February through August, with peak activity May through July. Prey for these species includes small birds, small mammals, and some reptiles and amphibians. Many raptor species hunt in open woodland and habitat edges. Various common raptor species (such as red-tailed hawk [*Buteo jamaicensis*], red-shouldered hawk, great horned owl [*Bubo virginianus*], and turkey vulture [*Cathartes aura*]) have a potential to nest within any of the trees present within and adjacent to the project site.

Special-Status Plant Species

DD&A conducted a botanical survey within the Proposed Project site during the appropriate blooming period to identify special-status plant species or habitat for these species within the Proposed Project site in April 2024. DD&A did not observe any special-status plant species during the spring survey. In addition, DD&A determined that no late-blooming species have potential to occur within the Proposed Project site for the species-specific reasons presented in **Appendix C**.

Regulatory Environment

Federal

***Federal Endangered Species Act*:** Provisions of the Federal Endangered Species Act ("ESA") of 1973 (16 USC 1532 et seq., as amended) protect federally Listed Threatened or Endangered species and their habitats from unlawful take. Listed species include those for which proposed and final rules have been published in the Federal Register. The ESA is administered by the USFWS or National Marine Fisheries Service ("NMFS"). In general, NMFS is responsible for the protection of ESA-Listed marine species and anadromous fish, whereas other listed species are under USFWS jurisdiction.

Section 9 of the ESA prohibits the take of any fish or wildlife species listed under the ESA as endangered or threatened. Take, as defined by the ESA, is "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." Harm is defined as "any act that kills or injures the fish or wildlife…including significant habitat modification or degradation that significantly impairs essential behavioral patterns of fish or wildlife." In addition, Section 9 prohibits removing, digging up, and maliciously damaging or destroying federally listed plants on sites under federal jurisdiction. Section 9 does not prohibit take of federally listed plants on sites not under federal jurisdiction. If there is the potential for incidental take of a federally listed fish or wildlife species, take of

listed species can be authorized through either the Section 7 consultation process for federal actions or a Section 10 incidental take permit process for non-federal actions. Federal agency actions include activities that are on federal land, conducted by a federal agency, funded by a federal agency, or authorized by a federal agency (including issuance of federal permits).

***Migratory Bird Treaty Act*:** The Migratory Bird Treaty Act ("MBTA") of 1918 prohibits killing, possessing, or trading migratory birds except in accordance with regulation prescribed by the Secretary of the Interior. Most actions that result in taking or in permanent or temporary possession of a protected species constitute violations of the MBTA. The USFWS is responsible for overseeing compliance with the MBTA and implements Conventions (treaties) between the United States and four (4) other countries for the protection of migratory birds – Canada, Mexico, Japan, and Russia. The USFWS maintains a list of migratory bird species that are protected under the MBTA, which was updated in 2023 (USFWS, 2023).

State

***California Endangered Species Act*:** The California Endangered Species Act ("CESA") was enacted in 1984. The California Code of Regulations (Title 14, §670.5) lists animal species considered Endangered or Threatened by the State. Section 2090 of the CESA requires State agencies to comply with endangered species protection and recovery and to promote conservation of these species. Section 2080 of the Fish and Game Code prohibits "take" of any species that the commission determines to be an Endangered species or a Threatened species. "Take" is defined in Section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." A Section 2081 Incidental Take Permit from the CDFW may be obtained to authorize "take" of any State Listed species.

***California Native Plant Protection Act*:** The CNPPA of 1977 directed the CDFW to carry out the legislature's intent to "preserve, protect and enhance rare and Endangered plants in the State." The CNPPA prohibits importing rare and Endangered plants into California, taking rare and Endangered plants, and selling rare and Endangered plants. The CESA and CNPPA authorized the Fish and Game Commission to designate endangered, threatened, and rare species and to regulate the taking of these species (§2050-2098, Fish and Game Code). Plants listed as rare under the CNPPA are not protected under CESA; however, these plants may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research.

***California Fish and Game Code*:** Section 3503 of the Fish and Game Code states that it is "unlawful to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Section 3503.5 prohibits the killing, possession, or destruction of any birds in the orders Falconiformes or Strigiformes (birds-of-prey). Section 3511 prohibits take or possession of fully protected birds. Section 3513 prohibits the take or possession of any migratory nongame birds designated under the federal Migratory Bird Treaty Act. Section 3800 prohibits take of nongame birds.

The California Department of Fish and Wildlife ("CDFW") maintains a list of wildlife "species of special concern." Although these species have no legal status, the CDFW recommends considering these species during the analysis of project impacts to protect declining populations and avoid the need to list them as endangered in the future.

Local

***San Luis Obispo County General Plan – Conservation and Open Space Element*:** The following biological resources goals and policies of the Conservation and Open Space Element of the San Luis Obispo County General Plan would apply to portions of the Proposed Project:

Goal BR-1: Native habitat and biodiversity will be protected, restored, and enhanced.

Policy BR-1.1 ***Protect Sensitive Biological Resources***: Protect sensitive biological resources such as, wetlands, migratory species of the Pacific flyway, and wildlife movement corridors through: 1) environmental review of proposed development applications, including consideration of cumulative impacts, 2) participation in comprehensive habitat management programs with other local and resource agencies, and 3) acquisition and management of open space lands that provide for permanent protection of important natural habitats.

Policy BR-1.2 ***Limit Development Impacts***: Regulate and minimize proposed development in areas that contain essential habitat for special-status species, sensitive natural communities, wetlands, coastal and riparian habitats, and wildlife habitat and movement corridors as necessary to ensure the continued health and survival of these species and protection of sensitive areas.

Policy BR-1.3 ***Environmental Review***: Require environmental review of development applications pursuant to CEQA and County procedures to assess the impact of proposed development on native species and habitat diversity, particularly special-status species, sensitive natural communities, wetlands, and important wildlife nursery areas and movement corridors

Policy BR-1.4 ***No Net Loss***: Require that development projects are approved with conditions and mitigation measures to ensure the protection of sensitive resources and to achieve "no net loss" of sensitive habitat acreage, values, and function. Give highest priority to avoidance of sensitive habitat. When avoidance is not feasible, require provision of replacement habitat onsite through restoration and/or habitat creation. When onsite mitigation is not feasible, provide for offsite mitigation that reflects no net loss.

Policy BR-1.9 ***Preserve Ecotones***: Require that proposed discretionary development protects and enhances ecotones, or natural transitions between habitat types because of their importance to vegetation and wildlife. Ecotones of particular concern include those along the margins of riparian corridors, baylands and marshlands, vernal pools, and woodlands and forests where they transition to grasslands and other habitat types.

Policy BR-1.10 ***Identify and Protect Ecologically Sensitive Areas***: Protect and enable management of ecologically sensitive areas to the maximum extent feasible.

Policy BR-1.11 ***Protect Wildlife Nursery Areas and Movement Corridors***: Identify, protect, and enable the management of connected habitat areas for wildlife movement. Features of particular importance to wildlife for movement may include, but are not limited to, riparian corridors, shorelines of the coast and bay, and ridgelines. Identification and designation of wildlife corridors will not interfere with agricultural uses on private lands. (Refer to AGP 29 in the Agriculture Element).

Policy BR-1.12 ***Development Impacts to Corridors***: Ensure that important corridors for wildlife movement and dispersal are protected as a condition of discretionary permits. Provide linkages and corridors as needed to connect sensitive habitat areas such as woodlands, forests, and wetlands.

Goal BR-2: Threatened, rare, endangered, and sensitive species will be protected.

Policy BR-2.2 ***Promote Early Consultation with Other Agencies***: Require applicants to consult with all agencies with review and/or permit authority for projects in areas supporting wetlands and special-status species at the earliest opportunity.

Policy BR-2.6 ***Development Impacts to Listed Species***: Ensure that potential adverse impacts to threatened, rare, and endangered species from development are avoided or minimized through project siting and design. Ensure that proposed development avoids significant disturbance of sensitive natural plant communities that contain special-status plant species or provide critical habitat to special-status animal species. When avoidance is not feasible, require no net loss of sensitive natural plant communities and critical habitat areas.

Policy BR-2.7 ***Fire Suppression and Sensitive Plants and Habitats***: Balance the need for fire suppression and/or vegetation (fuel) management with the need to protect sensitive biological resources. Where possible, design land divisions and development so that fuel-breaks, vegetation, or fuel modification areas that are needed to reduce fire hazards do not disrupt special-status plant communities or critical habitat for special-status animal species. Fuel-breaks and vegetation or fuel modification areas shall be located on the development side of required setbacks from sensitive features, and shall be in addition to the required setbacks.

Policy BR-2.8 ***Invasive Plant Species***: Promote and support efforts to reduce the effects of noxious weeds on natural habitats. The County will work with local resource and land management agencies to develop a comprehensive approach to controlling the spread of non-native invasive species and reducing their extent on both public and private land.

Policy BR-2.9 ***Promote Use of Native Plant Species***: Landscaping for proposed development will use a variety of native or compatible non-native, non-invasive plant species as part of project landscaping to improve wildlife habitat values

***San Luis Obispo County Code*:** There are no codes or regulations provided in the San Luis Obispo County Code related to biological resources that are applicable to the Proposed Project.

***Carrizo Area Plan*:** There are no policies provided in the Carrizo Area Plan related to biological resources that are applicable to the Proposed Project.

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

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

Impact Discussion

a. Would the project 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 Game or U.S. Fish and Wildlife Service?

Nesting raptors and other protected avian species have the potential to occur within the Proposed Project site. If present within the site, construction of the Proposed Project could result in direct and/or indirect impacts to these species. Construction of the Proposed Project could result in direct and/or indirect impacts to raptors and other nesting avian species (e.g., wildlife harassment or mortality and nest abandonment) associated with construction activities (e.g., noise, dust, vegetation removal, erosion and sedimentation, and hazardous material spills). No impacts to these species would occur during operation of the Proposed Project. This is considered a less than significant impact with mitigation incorporated, see **Mitigation Measures BIO-1a** and **BIO-1b** below.

SJKF has the potential to occur within the Proposed Project site. Construction activities, including vegetation removal and excavation, could result in impacts such as crushing animals in occupied dens, injury or mortality to animals sheltering under equipment or material stockpiles, or entrapment in trenches or deep excavations. Foxes within occupied dens, if present, could be disturbed by noise and ground vibrations, which may in turn negatively affect breeding behavior, distress young pups, cause den abandonment, or cause kit foxes to avoid the area. This would be a potentially significant impact that can be reduced to a less-than-significant level with implementation of **Mitigation Measures BIO-1a**, **BIO-2a**, and **BIO-2b**. No impacts to these species would occur during operation of the Proposed Project. This is considered a less than significant impact with mitigation incorporated.

Western spadefoot has the potential to occur within the project site. Construction activities, including vegetation removal and excavation, could result in impacts such as crushing animals in occupied burrows, injury or mortality to animals sheltering under equipment or material stockpiles, or entrapment in trenches or deep excavations. Individuals within occupied burrows, if present, could be disturbed by noise and ground vibrations, which may in turn negatively affect breeding behavior, or cause animals to avoid the area. This would be a potentially significant impact that can be reduced to a less-than-significant level with implementation of **Mitigation Measures BIO-3a** through **BIO-3c**. No impacts to these species would occur during operation of the Proposed Project. This is considered a less than significant impact with mitigation incorporated.

Giant kangaroo rat and Nelson's antelope squirrel have a moderate potential to occur within the Proposed Project site. Construction activities, including vegetation removal and excavation, could result in impacts such as crushing animals in occupied burrows, injury or mortality to animals sheltering under equipment or material stockpiles, or entrapment in trenches or deep excavations. Individuals within occupied burrows, if present, could be disturbed by noise and ground vibrations, which may in turn negatively affect breeding behavior, or cause animals to avoid the area. The Proposed Project would include **Mitigation Measures BIO-1a, BIO-4** to reduce impacts to giant kangaroo rats and Nelson's antelope squirrels to a less than significant level. No impacts to these species would occur during operation of the Proposed Project. This is considered a less than significant impact with mitigation incorporated.

Mitigation Measure BIO-1a: Prior to construction activities, the Proposed Project proponent shall retain a qualified biologist to conduct an Employee Education Program for the construction crew. The biologist shall meet with the construction crew at the Proposed Project site at the onset of construction to educate the construction crew on the following: a) a review of the Proposed Project boundaries; b) all special-status species that may be present, their habitat, and proper identification; c) the specific mitigation measures that will be incorporated into the construction effort; d) the general provisions and protections afforded by the regulatory agencies; and e) the proper procedures if a special-status animal is encountered within the Proposed Project site.

Mitigation Measure BIO-1b: Construction activities that may directly (e.g., vegetation removal) or indirectly affect (e.g., noise/ground disturbance) nesting raptors and other protected avian species shall be timed to avoid the breeding and nesting seasons (February 1 through September 15).

If construction activities must occur during the breeding and nesting season (February 1 through September 15), a qualified biologist shall conduct pre-construction surveys for nesting raptors and other protected avian species within 300 feet of the proposed construction activities. Preconstruction surveys should be conducted no more than 7 days prior to the start of the construction activities during the early part of the breeding season (February through April) and no more than 14 days prior to the initiation of these activities during the late part of the breeding season (May through August).

If raptors or other protected avian nests are identified during the pre-construction surveys, the qualified biologist would notify the Proposed Project proponent and an appropriate no-disturbance buffer would be imposed within which no construction activities or disturbance would take place (generally 300 feet in all directions for raptors; other avian species may have species-specific requirements) until the young of the year have fledged and are no longer reliant upon the nest or parental care for survival, as determined by a qualified biologist.

Mitigation Measure BIO-2a: San Joaquin kit fox pre-construction surveys shall be conducted not more than 14 days prior to the beginning of ground disturbance and/or construction associated with

the Proposed Project to determine if potential or occupied dens are present on-site or within 250 feet of the project site. If an occupied den is located on-site, an avoidance buffer shall be established as follows:

- Potential den: 50 feet – demarcated with flagged stakes,
- Atypical den: 50 feet – demarcated with flagged stakes,
- Known den: 100 feet – demarcated with orange construction fencing that fully encircles the den, but allows for passage of kit foxes should they be present,
- Natal/pupping den: at least 500 feet – USFWS must be contacted.

Essential vehicles may operate on existing roads and necessary foot traffic will be permitted. All other construction, vehicle operation, material storage, or any other type of surface-disturbing activity shall be prohibited within avoidance buffer(s). A qualified biologist will monitor the den site to determine when the den site has been vacated. Once it has been confirmed that SJKF are no longer present, the avoidance buffer may be removed, and construction may proceed.

Mitigation Measure BIO-2b: The following avoidance and minimization measures shall be implemented during implementation of the Proposed Project. These measures are adapted from the USFWS Standard Recommendations for Protection of the San Joaquin Kit Fox Prior to or During Ground Disturbance:

- Kit foxes are attracted to den-like structures such as pipes and may enter stored pipes and become trapped or injured. All construction pipes, culverts, or similar structures with a diameter of 4-inches or greater that are stored at a construction site for one or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the USFWS has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped.
- Kit foxes are attracted to den-like structures such as pipes and may enter stored pipes and become trapped or injured. All construction pipes, culverts, or similar structures with a diameter of 4-inches or greater that are stored at a construction site for one or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the USFWS has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped.
- All food-related trash items such as wrappers, cans, bottles, and food scraps should be disposed of in securely closed containers and removed at least once a week from a construction or Project site.
- No pets, such as dogs or cats, should be permitted on the Project site to prevent harassment, mortality of kit foxes, or destruction of dens.
- Use of rodenticides and herbicides in the project site should be restricted. This is necessary to prevent primary or secondary poisoning of kit foxes and the depletion of prey populations on which they depend. All uses of such compounds should observe label and

other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and Federal legislation, as well as additional Project- related restrictions deemed necessary by the USFWS. If rodent control must be conducted, zinc phosphide should be used because of a proven lower risk to kit fox.

- In the case of trapped animals, escape ramps or structures should be installed immediately to allow the animal(s) to escape, or the USFWS should be contacted for guidance.
- Any contractor, employee, or military or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox should immediately report the incident to their representative. This representative should contact CDFW immediately in the case of a dead, injured or entrapped kit fox. The CDFW contact for immediate assistance is State Dispatch at (916) 445-0045. They will contact the local warden or the wildlife biologist at (530) 934- 9309. The USFWS should be contacted at Endangered Species Division, 2800 Cottage Way, Suite W2605, Sacramento, CA 95825, (916) 414-6620 or (916) 414-6600.
- The Sacramento Fish and Wildlife Office and CDFW should be notified in writing within three working days of the accidental death or injury to a San Joaquin kit fox during Project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information.
- New sightings of kit fox should be reported to the CNDDB. A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the USFWS at the address listed above.
- Fencing of the project site, if proposed, shall incorporate wildlife-friendly fencing design. Fencing plans may use one of several potential designs that would allow SJKF to pass through the fence while still providing for Project security and exclusion of other unwanted species (i.e. domestic dogs and coyotes). Raised fences or fences with entry/exit points of at least 6 inches in diameter spaced along the bottom of the fence to allow species such as San Joaquin kit fox access into and through the Project site would be appropriate designs.
- All project lighting shall be directed downward and towards the interior of the Project site, thus avoiding light pollution into adjacent open areas. Use of lighting shall be the minimum necessary to achieve safety and security on the site.

Mitigation Measure BIO-3a: A USFWS approved biologist shall survey the work sites where suitable habitat has been identified no more than 30 days before the onset of construction. Adult individuals detected during the surveys shall be relocated out of the area of disturbance by a USFWS approved biologist.

Mitigation Measure BIO-3b: Areas beneath construction equipment and vehicles shall be inspected daily, prior to operation, for presence of western spadefoot under tracks/tires and within machinery by a USFWS approved biologist until the biologists determines a designated contractor is sufficiently trained to monitor. A USFWS approved biologist will ensure that this individual receives training consistent with USFWS requirements. A USFWS approved biologist will be on-call to come to the site if western spadefoot are found.

Mitigation Measure BIO-3c: Exclusion fencing shall be installed between construction areas and suitable habitat to prevent animals from entering the Proposed Project site prior to the start of construction activities (inclusive of staging for construction materials and equipment).

Mitigation Measure BIO-4: Pre-activity surveys shall be conducted by a CDFW-approved biologist to identify occupied or potentially occupied active burrows. All occupied or potentially occupied burrows identified by the biologist shall be avoided to the greatest extent feasible. If occupied or potentially occupied burrows cannot be avoided, a CDFW-approved biologist shall delineate a work exclusion zone of at least 30 feet and remain on site as a biological monitor during implementation of construction. If the biologist cannot stay onsite during implementation of construction, then the biologist shall delineate a work exclusion zone of 50 feet around the burrow(s).

If work must proceed inside a work-exclusion zone (i.e., within occupied or potentially occupied burrows), the Proposed Project proponent will consult with CDFW to determine if an Incidental Take Permit (Section 2081) under CESA, is required.

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

The Proposed Project site does not contain riparian habitat or other sensitive natural communities identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service; therefore, no impact would result to these natural communities from implementation of the Proposed Project.

c. Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

There are no state or federally protected wetlands on or directly adjacent to the Proposed Project site; therefore, no impact to wetlands would result from implementation of the Proposed Project.

d. Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

The Proposed Project site is located adjacent to the NCER, which includes wildlife corridors for movement of wildlife species. The Proposed Project would be located on the existing Carrisa Plains School campus and no work would occur within the NCER. The Carrisa Plains School is fenced off from the surrounding properties and does not act as a wildlife corridor for movement of native or migratory wildlife species. There are no waterways on the Proposed Project site that would facilitate the migration of fish species. As a result, the development of the Proposed Project would not 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. This represents a less than significant impact and no mitigation is required.

e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The Proposed Project does not conflict with the natural resource/biological guidelines described in the Framework for Planning (Inland) Element of the County's General Plan. There are no policies related to biological resources in the Carrizo Area Plan. The Proposed Project will not result in the removal of trees. Therefore, no impacts to local policies or ordinances protecting biological resources are anticipated as a result of the Proposed Project.

f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

There are no adopted HCPs or NCCPs within the Proposed Project area. The Proposed Project is located adjacent to the NCER. However, the Proposed Project would occur entirely within the existing Carrisa Plains School campus and would not involve work on lands protected under the NCER. Therefore, no impacts are anticipated as a result of the Proposed Project.

4.5 Cultural Resources

Achasta Archaeological Services ("Achasta") prepared a Phase I Archaeological Assessment for the Proposed Project in August 2024 (**Appendix D**).[7] The Phase I Archaeological Assessment includes the results of background research and field reconnaissance of the Proposed Project's Area of Potential Effect ("APE"). The APE is defined as the locations where a project may result in impacts to cultural resources, including, but not limited to, the project site and staging areas. Achasta conducted background research including a records search from the Central Coast Information Center ("CCIC"), a Sacred Lands File ("SLF") search with the Native American Heritage Commission ("NAHC"), and Native American consultation in support of consultation under AB 52. Achasta performed a field reconnaissance pedestrian survey of the APE on March 28th, 2024, which investigated the potential for cultural and Tribal cultural resources on the Project site.

Environmental Setting

The Carrizo Plain, located at the intersection of the California Coast Range and the San Joaquin Valley, is an approximately 50-mile-long and 15-mile-wide northwest to southeast trending valley bounded by the Temblor and Caliente mountain ranges on the east and the La Panza Range on the west. The valley floor generally ranges in elevation from 2,100-ft msl in the northern end of the valley, west of Yeguas Mountain, to 2,700-ft msl in the southeastern end, west of Elkhorn Hills. Known faults bounding the valley include the San Andreas Fault Zone in the Temblor Range in the east and the San Juan and Big Springs Faults in the La Panza Range in the west.

A search of the CCIC did not identify any previous studies within the Proposed Project APE. One previous study was reported within a ½ mile of the Proposed Project APE for the Topaz Solar Farm. This study did not include the Proposed Project APE. The CCIC records search did not identify any cultural resources within the Proposed Project APE. Additionally, no resources were reported within a ½ mile radius of the Proposed Project APE. There are no documented historical resources within the Proposed Project APE.

Achasta's pedestrian survey of the Proposed Project APE did not encounter evidence of archaeological deposits or other potential cultural resources. The SLF records search for cultural sensitivity within the Proposed Project APE was negative (Achasta, 2024).

Regulatory Environment

Federal

National Historic Preservation Act. Section 106 of the National Historic Preservation Act of 1966 (54 U.S.C. § 300301 et seq.), as amended, requires that a federal agency with direct or indirect jurisdiction over a proposed federal or federally assisted undertaking, or issuing licenses or permits, consider the effect of the proposed undertaking on historic properties. A historic property may include a prehistoric

[7] This report may discuss locations of specific archaeological sites and is confidential. For this reason, it is not included in this Initial Study. Qualified personnel, however, may request a copy of the report from the Lead Agency.

or historic-era building, structure, object, site or district included in, or eligible for inclusion in, the National Register maintained by the U.S. Secretary of the Interior. Federal agencies must also allow the ACHP to comment on the proposed undertaking and its potential effects on historic properties. The implementing regulations for Section 106 of the NHPA (36 CFR 800) require consultation with the SHPO, the ACHP, federally recognized Indian tribes and other Native Americans, and interested members of the public throughout the compliance process. The four (4) principal steps are:

- Initiate the Section 106 process, including consultation with interested parties (36 CFR 800.3);
- Identify historic properties, i.e., resources included in or eligible for inclusion in the National Register (36 CFR 800.4);
- Assess the effects of the undertaking on historic properties within the area of potential effect (36 CFR 800.5); and
- Resolve adverse effects (36 CFR 800.6).

Adverse effects on historic properties are often resolved through preparation of a Memorandum of Agreement or Programmatic Agreement developed in consultation between the federal agency, the SHPO, Indian tribes, and interested members of the public. The ACHP is also invited to participate. The agreement describes stipulations to mitigate adverse effects on historic properties listed in or eligible for the National Register (36 CFR 60).

National Register of Historic Places. The National Historic Preservation Act established the National Register as "an authoritative guide to be used by federal, state, and local governments, private groups and citizens to identify the Nation's historic resources and to indicate what properties should be considered for protection from destruction or impairment" (36 CFR Section 60.2). The National Register recognizes both historic-era and prehistoric archaeological properties that are significant at the national, state, and local levels.

To be eligible for listing in the National Register, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Buildings, structures, objects, sites or districts of potential significance must meet one or more of the following four established criteria (NPS, 1990):

A. Are associated with events that have made a significant contribution to the broad patterns of our history;

B. Are associated with the lives of persons significant in our past;

C. Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. Have yielded, or may be likely to yield, information important in prehistory or history.

Unless the property possesses exceptional significance, it must be at least 50 years old to be eligible for National Register listing (NPS, 1990). In addition to meeting the criteria of significance, a property must have integrity. Integrity is defined as "the ability of a property to convey its significance" (NPS, 1990). The National Register recognizes seven qualities that, in various combinations, define integrity. To retain historic integrity a property must possess several, and usually most, of these seven (7) aspects. Thus, the retention of the specific aspects of integrity is paramount for a property to convey its significance. The seven factors that define integrity are location, design, setting, materials, workmanship, feeling, and association.

Although the National Register standards for historic integrity are high, the National Register accepts that a property "must also be judged with reference to the particular criteria under which a resource is proposed for eligibility." Most archaeological properties are evaluated under Criterion D; the most applicable qualities of integrity under this criterion are those of location, materials, and association.

Integrity also defines the research potential of a resource. To possess research potential, archaeological data must have integrity in the form of what has been called "focus" (Deetz, 1977). Focus, in this context, means the accuracy with which the archaeological remains represent a situation or condition. When focus is absent or inadequate because of disturbance, a resource does not retain integrity. Remains that represent several activities or have materials that cannot be separated from one another into discrete contexts may also lack focus and therefore integrity.

State

California Environmental Quality Act: CEQA requires regulatory compliance for projects involving historic resources throughout the State. Under CEQA, public agencies must consider the effects of their actions on historic resources (Public Resources Code, Section 21084.1). The CEQA Guidelines define a significant resource as any resource listed in or determined to be eligible for listing in the California Register of Historical Resources ("California Register") [see Public Resources Code, Section 21084.1 and CEQA Guidelines Section 15064.5 (a) and (b)].

California Public Resources Code: Several sections of the California PRC protect cultural resources located on public land. Under PRC Section 5097.5, no person shall knowingly and willfully excavate upon, or remove, destroy, injure, or deface, any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site (including fossilized footprints), inscriptions made by human agency, rock art, or any other archaeological, paleontological, or historical feature situated on public lands, except with the express permission of the public agency that has jurisdiction over the lands. Violation of this section is a misdemeanor.

PRC Section 5097.98 states that if Native American human remains are identified within a project area, the landowner must work with the Native American Most Likely Descendant as identified by the NAHC to develop a plan for the treatment or disposition of the human remains and any items associated with Native American burials with appropriate dignity. These procedures are also addressed in Section 15064.5 of the State CEQA Guidelines. California Health and Safety Code Section 7050.5 prohibits disinterring, disturbing, or removing human remains from a location other than a dedicated cemetery. Section 30244 of the PRC requires reasonable mitigation for impacts on paleontological and archaeological resources that occur because of development on public lands.

California Health and Safety Code: California Health and Safety Code Section 7050.5 regulates the treatment of human remains. In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site, or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined that the remains are not subject to his or her authority. If the coroner recognizes the human remains to be those of a Native American or has reason to believe that they are those of a Native American, he or she shall contact the NAHC by telephone within 24 hours.

California Assembly Bill 52: AB 52, in effect since July 2015, provides CEQA protections for Tribal cultural resources. All lead agencies approving projects under CEQA are required, if formally requested by a culturally affiliated California Native American Tribe, to consult with such Tribe regarding the potential impact of a project on tribal cultural resources before releasing an environmental document.

Under California Public Resources Code Sec. 21074, tribal cultural resources include site features, places, cultural landscapes, sacred places, or objects that are of cultural value to a Tribe and that are eligible for or listed on the California Register of Historic Resources or a local historic register, or that the lead agency has determined to be of significant tribal cultural value.

Local

***San Luis Obispo County General Plan – Conservation and Open Space Element*:** The following policies of the Conservation and Open Space Element of the San Luis Obispo County General Plan could be applicable to the Proposed Project.

Goal CR-4: The county's known and potential Native American, archaeological, and paleontological resources will be preserved and protected.

Policy CR-4.1: ***Non-development Activities***: Discourage or avoid non-development activities that could damage or destroy Native American and archaeological sites, including off-road vehicle use on or adjacent to known sites. Prohibit unauthorized collection of artifacts.

Policy CR-4.2 ***Protection of Native American Cultural Sites***: Ensure protection of archaeological sites that are culturally significant to Native Americans, even if they have lost their scientific or archaeological integrity through previous disturbance. Protect sites that have religious or spiritual value, even if no artifacts are present. Protect sites that contain artifacts, which may have intrinsic value, even though their archaeological context has been disturbed.

Policy CR-4.4 ***Development Activities and Archaeological Sites***: Protect archaeological and culturally sensitive sites from the effects of development by avoiding disturbance where feasible. Avoid archaeological resources as the primary method of protection.

***San Luis Obispo County Code*:** The following cultural resources codes provided by Title 22 of the San Luis Obispo County Code may be applicable to the Proposed Project:

Chapter 22.10.040 Archaeological Resources: In the event archeological resources are unearthed or discovered during any construction activities, the following standards apply:

22.10.040(A) Construction activities shall cease, and the Department shall be notified so that the extent and location of discovered materials may be recorded by a qualified archaeologist, and disposition of artifacts may be accomplished in accordance with state and federal law.

22.10.40(B) In the event archeological resources are found to include human remains, or in any other case when human remains are discovered during construction, the County Coroner shall be notified in addition to the Department so proper disposition may be accomplished.

***Carrizo Area Plan*:** There are no policies provided in the Carrizo Area Plan related to cultural resources that are applicable to the Proposed Project.

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource 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 dedicated cemeteries?	☐	■	☐	☐

Impact Discussion

a. Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

CEQA Guidelines Sec. 15064.5 defines a historical resource as one being listed in or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources. Public Resources Code Section 21084.1 states that a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment. The Proposed Project would not cause a substantial change in the significance of a historical resource as defined by CEQA Guidelines Sec. 15064.5. There are no documented historical resources within the Proposed Project APE (Achasta, 2024). The Proposed Project site does not contain any historic resources listed in the California Inventory of Historical Resources, California Historical Landmarks, or the National Register of Historic Places ("NRHP or National Register"). Therefore, the Proposed Project would not have an impact on a historical resource.

b. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Section 21083.2 of the Public Resources Code requires lead agencies to assess potential impacts to archaeological resources and determine whether a project may cause a substantial adverse change in the significance of an archaeological resource. Achasta conducted a records search at the CCIC, an SLF search with the NAHC, and completed a site survey and visual inspection of the Proposed Project APE. Additionally, Achasta reviewed the Proposed Project site geology and soil characterizations within the APE. Achasta did not observe archaeological resources during the site survey. In addition, no cultural resources had been previously recorded within the Proposed Project APE. Achasta determined that the Proposed Project APE did not contain precontact site indicators or historic-era site indicators. However, records showed that tribal stakeholders provided responses to previous cultural resources studies in the vicinity of the Proposed Project APE. As a result, unrecorded archaeological resources could be present below ground surface and such resources could be exposed or damaged during construction. As a result, construction of the Proposed Project could potentially result in a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5. The Proposed Project would implement **Mitigation Measures CUL-1** and **CUL-2** to reduce potential impacts to less than significant.

> **Mitigation Measure CUL-1**: The District shall retain a qualified archaeologist to lead a cultural resource sensitivity training for all construction personnel prior to any ground-disturbing activities. The training shall include the regulatory contexts guiding the Proposed Project and governing the protection of cultural resources, guidance for identifying cultural resources, protocols to follow in

case of inadvertent discoveries, and contact information for all key Project personnel, the lead agency, and the San Luis Obispo County Sheriff-Coroner. Copies of the training materials and a sign-in sheet from the training shall be provided to the District to ensure compliance.

Mitigation Measure CUL-2. In the event cultural resources are impacted during construction, all work shall stop within 150-feet of the find until a qualified archaeologist contracted with the District and with requisite professional experience in San Luis Obispo County has an opportunity to evaluate the find and provide treatment recommendations. If the resource is considered significant and/or unique, ground disturbance shall be halted until an archaeological consultant has been retained, and a comprehensive Archaeological Research Design and Treatment Plan developed by the archaeological consultant and approved by the Lead Agency. The District shall notify all tribes that have expressed interest in the Proposed Project of any potential cultural resources finds during the course of construction.

c. Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

No known human remains, including those interred outside of dedicated or formal cemeteries, are known to occur on the Proposed Project site. Additionally, Native American Tribes were consulted during the preparation of the Cultural Resources Report (see **Section 4.18 Tribal Cultural Resources**). The SLF search for the Proposed Project APE produced negative results (no resources expected) and the Proposed Project APE is not anticipated to contain tribal resources, including Native American remains. While the likelihood of encountering human remains, including those interred outside of a formal cemetery, on the Proposed Project site is low, it is possible that previously unknown human remains may be present on the site and be inadvertently discovered during construction. To minimize potential impacts to less than significant, mitigation is provided. The implementation of the following mitigation measure would ensure potential adverse impacts would be reduced to less than significant.

Mitigation Measure CUL-3*:* In the event that human remains are encountered during construction activities, ground disturbing activities on site shall immediately halt. The remains shall be covered with steel plates (where feasible) and the location shall be kept confidential among Project personnel to prevent vandalism and additional disturbance. The San Luis Obispo County Sheriff-Coroner shall be notified immediately, and no work shall resume in within a 150-foot radius of the find until a Most Likely Descendent ("MLD") has been assigned to the Project and provided the Project proponent with treatment recommendations. Photographs of remains shall be prohibited, unless requested by the coroner and permitted by the MLD. The District shall notify all tribes that have expressed interest in the Proposed Project of any potential finds of human remains during the course of construction.

4.6 Energy

Environmental Setting

Beginning in 2023, San Luis Obispo County-based customers, including the School, began to receive their electricity from Central Coast Community Energy ("3CE"). 3CE is a community choice energy agency that has committed to providing its customers with 100 percent carbon-free energy by the year 2030 (3CE, 2024). Community choice energy agencies allow local governments to procure power on behalf of their residents, businesses, and municipal accounts from an alternative supplier while still receiving transmission and distribution service from their existing utility provider. This is typically an attractive option for communities that want more local control over their electricity sources, more clean energy than their default utility offers, and/or lower electricity prices. Per Public Utilities Code Section 366.2,

customers have the right to opt-out of the community choice energy program and continue to receive service from Pacific Gas & Electric ("PG&E"), the incumbent utility provider.

Regulatory Environment

State

***California Renewable Energy Standards*:** In 2002, California established their Renewables Portfolio Standard Program, with the goal of increasing the percentage of renewable energy in the State's electricity mix to 20 percent of retail sales by 2017 through enactment of Senate Bill ("SB") 1078 (CPUC, 2023). In 2006, SB 107 revised previous elements of the Public Utilities Code so the amount of renewable energy generated per year and sold to retail customers would amount to 20 percent by 2010 (SB 107, 2006). In 2008, the governor issued Executive Order S-14-08 and requires that retail sellers of electricity serve 33 percent of their load with renewable energy by 2020 (Governor Schwarzenegger, 2008). In October 2015, Governor Brown signed SB 350 to codify California's climate and clean energy goals. A key provision of SB 350 requires retail sellers and publicly owned utilities to procure 50 percent of the State's electricity from renewable sources by 2030 (CPUC, 2023).

***California Building Codes*:** At the State level, the California Legislature established the Energy Efficiency Standards for Residential and Nonresidential Buildings, as specified in Title 24, Part 6, of the California Code of Regulations (Title 24), in 1978 in response to a legislative mandate to reduce California's energy consumption. Title 24 is updated approximately every three (3) years. Compliance with Title 24 is mandatory at the time new building permits are issued by city and county governments. The California Green Building Standards Code ("CalGreen") establishes mandatory green building standards for all buildings in California. The code covers five (5) categories: planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and indoor environmental quality. Title 24 was last updated in 2022.

Local

San Luis Obispo County General Plan – Conservation and Open Space Element: The following policies and goals from the Conservation and Open Space Element of the San Luis Obispo County General Plan could be applicable to the Proposed Project:

Goal E-3: Energy efficiency and conservation will be promoted in both new and existing development.

Policy E-3.2: ***Energy Efficient Equipment***: Require the use of energy-efficient equipment in all new development, including but not limited to Energy Star appliances, high-energy efficiency equipment, heat recovery equipment, and building energy management systems.

Policy E-3.3: ***Use of Renewable Energy for Water and Wastewater***: Promote the use of renewable energy systems to pump and treat water and wastewater.

Goal E-4: Green building practices will be integrated into all development.

Policy E-4.2: ***Green Building Incentives:*** Offer incentives to encourage green building practices in all development projects, including retrofits of existing buildings.

Goal E-5: Waste reduction, reuse, and recycling will achieve as close to zero waste as possible.

Policy E-5.1: ***Source Reduction and Waste Diversion***: Offer incentives to encourage green building practices in all development projects, including retrofits of existing buildings.

Policy E-5.4: ***Construction and Demolition Waste***: Continue to reduce construction and demolition waste in accordance with the County's Construction and Demolition Debris Recycling Ordinance. Support increased diversion rates over time.

San Luis Obispo County Code: There are no codes provided in the San Luis Obispo County Code related to energy that are applicable to the Proposed Project.

Carrizo Area Plan: None of the policies provided in the Carrizo Area Plan related to energy are applicable to the Proposed Project.

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	■	☐

Impact Discussion

a. Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Electricity for the Proposed Project site is provided by 3CE via infrastructure owned and operated by PG&E. In addition, this energy is supplemented via solar energy generated by the existing solar panels on the site. The anticipated construction schedule assumes that the Proposed Project would be built out over a maximum of 4.5 months. The construction phase would require energy for the preparation of the site (e.g., excavation, trenching, and grading), and the actual construction of the facilities. Petroleum based fuels such as diesel fuel and gasoline would be the primary sources of energy for these tasks. The overall construction of the Proposed Project is designed to be energy-efficient in order to avoid excess fuel and rental equipment costs. During operation, the Proposed Project would consume energy in the form of electricity primarily from operation of the well for pumping water. However, energy use from operation of the proposed well would be offset due to the removal of the existing on-site well. The Proposed Project will not consume large amounts of energy outside the functions commonly found within water systems. Based on the discussion above, the Proposed Project would result in a less than significant impact during the construction and operational phases related to energy use.

b. Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

The Proposed Project would comply with existing state energy standards and would not conflict with or obstruct a state or local plan for renewable energy or energy-efficiency. The Proposed Project would be designed to comply with the California Green Building Code, Title 24 energy efficiency requirements, and current California Building Energy Standards requirements. The Proposed Project would result in a less than significant impact resulting from conflict or obstruction with a state or local plan for renewable energy or energy efficiency.

4.7 Geology and Soils

Environmental Setting

The Proposed Project is located within the Carrizo Plains, a grassland plain located east of the City of Atascadero and west of the Temblor Mountain Range (USDA, 2003). The Temblor Mountain Range is the result of the San Andreas Fault, which is located to the east of the Proposed Project site. The Carrizo Plain is underlain by a Pleistocene-era alluvium known as the Paso Robles Formation, covered by a layer of younger alluvium in most areas. Sediment in the Carrizo Plains was historically deposited by streams and floodwaters washing materials from the surrounding mountains.

California's broad system of strike-slip faulting has had a long and complex history. Some of these faults may present a seismic hazard to the proposed development. The nearest fault to the site is the San Andreas Fault located approximately five (5) miles to the northeast of the site (Department of Conservation, 2024).

A discussion of the geological setting of the Proposed Project site is provided below.

Topography

The Proposed Project site is located on the Carrizo Plains east of the City of Atascadero. The site is relatively flat.

Site Soils

The County's GIS database indicates that the soils at the Proposed Project site are Quaternary alluvium, undivided (County of San Luis Obispo, 2024). Soils at the Proposed Project site are anticipated to consist of clay, silt, sand, and gravel (US Geological Service, 2013).[8]

Surface Fault Ground Rupture Hazard

The nearest mapped active or potentially active fault trace (of the San Andreas Fault) is located approximately five (5) miles to the northeast of the site (Department of Conservation, 2024). The Proposed Project is not located on or near a mapped fault and is not anticipated to be exposed to surface fault rupture during its design life.

Seismic Shaking Hazard

Seismic shaking at the site will be intense during the next major earthquake along local fault systems, particularly the San Andreas Fault northeast of the site. The Proposed Project may be exposed to strong seismic ground shaking during its lifetime.

Liquefaction and Lateral Spreading

Liquefaction induced lateral spreading occurs when a liquefied soil mass fails toward an open slope face or fails on an inclined topographic slope. The site is depicted as being within a moderate liquefaction hazard zone on the San Luis Obispo County's GIS Database (County, 2024).

[8] https://pubs.usgs.gov/of/2005/1231/GeoUnitDesc.htm

Regulatory Environment

Federal

***National Earthquake Hazards Reduction Program*:** Implemented by FEMA, the National Earthquake Hazards Reduction Program ("NEHRP") pursues research, development, and implementation of earthquake mitigation measures. Passed in 1977, NEHRP is a collaborative effort between federal, state, local governments, universities, research centers, professional societies, trade associations, and businesses. FEMA is the primary agency implementing the research and development of earthquake measures and safety materials. Implementation of these measures and materials is accomplished through the following:

- Providing federal grant programs for states and local governments to implement earthquake mitigating measures;
- engaging businesses, through the QuakeSmart program;
- providing Multi-State National Earthquake Assistance grants for public education of mitigation activities;
- collaborating with universities and non-profit organizations to encourage enforcement of building codes and use of seismic rehabilitation at a regional level;
- training for earthquake readiness and mitigation through National Earthquake Technical Assistance Program;
- providing educational materials and research reports through the FEMA Library.

NEHRP has no regulatory authority and therefore cannot enforce national earthquake standards. All the program's provisions are incumbent upon the state, local government, and business to adopt as appropriate (FEMA, 2023; Locascio, 2023).

State

***Alquist-Priolo Earthquake Fault Zoning Act*:** The Alquist-Priolo Earthquake Fault Zoning Act, passed in 1972, seeks to mitigate surface faulting's hazard to structures for human occupancy. In accordance with this act, the State Geologist established regulatory zones, called "earthquake fault zones," around the surface traces of active faults and published maps showing these zones. In these zones, buildings for human occupancy cannot be constructed across the surface traces of active faults. Because many active faults are complex and consist of more than one branch, each earthquake fault zone extends approximately 200 to 500 feet on either side of the mapped fault trace.

Title 14 of the CCR, Section 3601(e), defines buildings intended for human occupancy as those that would be inhabited for more than 2,000 hours per year. The Proposed Project does not cross an Alquist-Priolo Earthquake Fault Zone. Therefore, these provisions of the Act do not apply to the Proposed Project.

Seismic Hazards Mapping Act: The purpose of the Seismic Hazards Mapping Act of 1990 (PRC Sections 2690–2699.6) is to reduce damage resulting from earthquakes. The Seismic Hazards Mapping Act addresses earthquake-related hazards, including strong ground shaking, liquefaction, and seismically induced landslides. The state is charged with identifying and mapping areas at risk of strong ground shaking, liquefaction, landslides, and other corollary hazards. Cities and counties are required to regulate development in mapped Seismic Hazard Zones. Under the Seismic Hazards Mapping Act, permit review is the primary mechanism for local regulation of development. Specifically, cities and counties

are prohibited from issuing development permits for sites in Seismic Hazard Zones until appropriate site-specific geologic and/or geotechnical investigations have been conducted and measures to reduce potential damage have been incorporated into the development plans.

Local

***San Luis Obispo County General Plan – Safety Element*:** The following policies from the Safety Element of the San Luis Obispo County General Plan could be applicable to the Proposed Project.

Goal S-5*:* Minimize the potential for loss of life and property resulting from geologic and seismic hazards.

Policy S-17: ***Fault Information***: Information on faults and geologic hazards in the County should continue to be updated. The County will enforce the General Plan and applicable building codes that require developments, structures, and public facilities to address geologic and seismic hazards through the preparation and approval of geotechnical and geologic reports. Appointment of a County Geologist will improve implementation of the goals, policies, programs and standards of this Element by assuring more objective review and consistent enforcement of hazard mitigation measures county-wide than is possible under the present system of project review.

Policy S-18: ***Fault Rupture Hazards***: Locate new development away from active and potentially active faults to reduce damage from fault rupture. Fault studies may need to include mapping and exploration beyond project limits to provide a relatively accurate assessment of a fault's activity. The County will enforce applicable regulations of the Alquist-Priolo Earthquake Fault Zoning Act pertaining to fault zones to avoid development on active faults.

Policy S-19: ***Reduce Seismic Hazards***: The County will enforce applicable building codes relating to the seismic design of structures to reduce the potential for loss of life and reduce the amount of property damage.

Policy S-20: ***Liquefaction and Seismic Settlement***: The County will require design professionals to evaluate the potential for liquefaction or seismic settlement to impact structures in accordance with the currently adopted Uniform Building Code.

***San Luis Obispo County General Plan – Conservation and Open Space Element*:** The following policies from the Conservation and Open Space Element of the San Luis Obispo County General Plan could be applicable to the Proposed Project.

Goal SL-1: Soils will be protected from wind and water erosion, particularly that caused by poor soil management practices.

Policy SL-1.1: ***Prevent Loss of Topsoil in All Land Uses***: Minimize the loss of topsoil by encouraging broad-based cooperation between property owners, agricultural operators, agencies, and organizations that will lead to effective soil conservation practices on all lands, including County-controlled properties.

Policy SL-1.2: ***Promote Soil Conservation Practices in All Land Uses***: Require erosion and sediment control practices during development or other soil-disturbing activities on steep slopes and ridgelines. These practices should disperse stormwater so that it infiltrates the soil rather than running off, and protect downslope areas from erosion.

Policy SL-1.3: ***Minimize Erosion Associated with New Development***: Avoid development, including roads and driveways, on the steeper portions of a site except when necessary to avoid flood hazards, protect prime soils, and protect sensitive biological and other resources. Avoid grading and site disturbance activities on slopes over 30%. Minimize site disturbance and protect existing vegetation as much as possible.

***San Luis Obispo County Code*:** The following geology and soils codes provided by Titles 19 and 22 of the San Luis Obispo County Code are applicable to portions of the Proposed Project:

Chapter 19.12.030 - Permits Required: Except as specified in Titles 22 (Land Use Ordinance) and 23 (Coastal Zone Land Use Ordinance) of the County Code, no person shall do any grading without first having obtained a grading permit from the building official.

Chapter 22.52.060 - Grading: Require a grading permit, unless the project qualifies for an exemption, constitutes agricultural grading, or unless the project goes through the alternative review process.

***Carrizo Area Plan*:** None of the policies provided in the Carrizo Area Plan related to geology and soils are applicable to the Proposed Project.

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	■	☐
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 risks to life or property?	☐	☐	■	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	■

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Directly or indirectly destroy a paleontological resource or site or unique geologic feature?	☐	☐	■	☐

Impact Discussion

a. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

a.i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?

Although the Proposed Project site is in a region with several active faults, it is not mapped within an Alquist-Priolo Earthquake Fault Zone. The nearest active fault is the San Andreas Fault, located approximately five (5) miles to the northeast of the site according to the California Earthquake Hazards Zone Application ("EQ Zapp") provided by the California Department of Conservation (Department of Conservation, 2024). There are no mapped faults on or near the site. The Proposed Project does not include any habitable structures and would not result in injury or death as a result of rupture of a known earthquake fault. In addition, the Proposed Project would be subject to standard construction standards and seismic requirements. This is considered a less than significant impact.

a.ii)Strong seismic ground shaking?

Seismic ground shaking is influenced by the proximity of the site to an earthquake fault, the intensity of the seismic event, and the underlying soil composition. As described above, the Proposed Project site is located within five (5) miles of the San Andreas Fault. The majority of development and infrastructure projects within the State of California would potentially be subject to strong seismic ground shaking during their lifetime. The Proposed Project would be subject to standard construction standards and seismic requirements, therefore, potential impacts from strong seismic ground shaking would be less than significant.

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

Liquefaction tends to occur in loose, saturated and fine-grained cohesionless sands, coarse silts or clays with a low plasticity. In order for liquefaction to occur there must be the proper soil type, soil saturation, and cyclic accelerations of sufficient magnitude to progressively increase the water pressures within the soil mass. Non-cohesive soil shear strength is developed by the point-to-point contact of the soil grains. As the water pressures increase in the void spaces surrounding the soil grains the soil particles become supported more by the water than the point-to-point contact. When the water pressures increase sufficiently, the soil grains begin to lose contact with each other resulting in the loss of shear strength and continuous deformation of the soil where the soil appears to liquefy.

Based on a review of the County's GIS database, the project site is considered to have a moderate potential for liquefaction. Liquefaction induced lateral spreading occurs when a liquefied soil mass fails toward an open slope face or fails on an inclined topographic slope. The risk of lateral spreading is also considered to be low due to the relatively flat topography of the Proposed Project site. The Proposed Project does not include any habitable structures and would not result in injury or death as a result of

liquefaction. The Proposed Project would result in a less than significant impact resulting from its potential to cause substantial adverse effects involving seismic-related ground failure, including liquefaction.

a.iv) Landslides?

The Proposed Project site and immediate vicinity are relatively flat and the County's GIS database indicates that the potential for landsliding at the site is low (County of San Luis Obispo, 2024). The potential for landsliding to occur and adversely affect the proposed development is considered negligible and no impact would occur.

b. Would the project result in substantial soil erosion or the loss of topsoil?

According to the United States Department of Agriculture's Soil Survey, the soils at the Proposed Project site are described as Yeguas-Pinspring complex, 0 to 2 percent slopes (USDA, 2024). Yeguas soils occur at elevations ranging from 1,900 to 2,500-feet msl on alluvial plains, alluvial fan and alluvial flats. The Proposed Project would require some grading and earthwork. Construction activities may result in wind driven and, to a lesser degree, water driven soil erosion. BMPs would be implemented by the construction contractor during construction to reduce soil erosion. Applicable measures may include the following:

- Stockpiling and disposing of demolition debris, concrete, and soil;
- Protecting existing storm drain inlets and stabilizing disturbed areas;
- Hydroseeding/re-vegetating disturbed areas;
- Minimizing areas of impervious surfaces;
- Implementing runoff controls (e.g., percolation basins and drainage facilities);
- Properly managing construction materials;
- Managing waste, aggressively controlling litter, and implementing sediment controls, and;
- Limiting grading to the minimum area necessary for construction and operation of the proposed project.

With implementation of these BMPs, as applicable, the Proposed Project would have a less than significant impact related to soil erosion and the loss of topsoil.

c. Would the project 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?

See impact discussions for a.i-a.iv above. Any impact resulting from unstable soil would be temporary, as construction is anticipated to last 4.5 months. Risks to life and property would not occur during operation because the Proposed Project would not create habitable structures that would be affected by ground shaking, liquefaction, lateral spreading, or other geologic hazards. The Proposed Project contractor would fully comply with all state, federal, and other laws, rules, regulations to ensure worker safety during construction. This represents a less than significant impact.

d. Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

The soils at the Proposed Project site are finely grained and have a slight plasticity (USDA, 2003). These soils are considered to have a low potential for expansion. Additionally, construction of the Proposed

Project would be required to comply with the most recent regulatory requirements, which would ensure the protection of structures and occupants from geo-seismic hazards, such as expansive soils; therefore, impacts would be less than significant.

e. Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

The Proposed Project is a water system improvements project and does not propose any septic tanks or alternative wastewater disposal systems. The Proposed Project would not interfere with operation of the existing septic system serving the School. No impact would occur.

f. Would the project directly or indirectly destroy a paleontological resource or site or unique geologic feature?

The USDA identifies the project site as being underlain by Quaternary alluvium (County of San Luis Obispo, 2024). The age of the Quaternary alluvium underlaying the project site has not been conclusively determined whether to be of Pleistocene or Holocene age. If it is of Pleistocene age, it would be considered to be of high sensitivity, but if it is Holocene age, it would be considered to be low sensitivity. According to previous studies of paleontological resources conducted for the adjacent Topaz Solar Farm, the project region is considered to potentially be sensitive for paleontological resources, although vertebrate fossils have not been documented in the area (US Department of Energy, 2011). The pipeline and electrical conduits would require excavation to a maximum depth of four (4) feet. Therefore, installation of these project components is unlikely to impact paleontological resources. The proposed project would drill a well with a depth of 600 feet. However, no paleontological resources have been previously recorded on the Proposed Project site, and given the small area of impact for drilling of the proposed well, the Proposed Project would be unlikely to impact previously undiscovered paleontological resources. Therefore, potential impacts to a unique paleontological resource or site, or unique geologic feature would be less than significant.

4.8 Greenhouse Gas Emissions

Environmental Setting

Greenhouse gases ("GHGs") are gases that absorb and re-emit infrared radiation in the atmosphere. The gases that are widely seen as the principal contributors to human-induced climate change include carbon dioxide ("CO_2"), methane ("CH_4"), nitrous oxide ("N_2O"), fluorinated gases such as hydrofluorocarbons ("HFCs") and perfluorocarbons ("PFCs"), and sulfur hexafluoride ("SF_6"). Water vapor is excluded from the list of GHGs because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

GHGs are emitted by both natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Emissions of CO_2 are largely by-products of fossil fuel combustion, whereas CH_4 results from off-gassing associated with agricultural practices and landfills.

The Proposed Project is located in the SCCAB, where air quality is regulated by SLO County APCD. On March 28, 2012, SLO County APCD (SLO County APCD, 2023) approved thresholds of significance for the evaluation of project-related increases of GHG emissions. The SLO County APCD's significance thresholds include both qualitative and quantitative threshold options, which include a qualitative threshold that is consistent with the AB 32 scoping plan measures and goals and a quantitative bright-line threshold of 1,150 metric tons of carbon dioxide equivalent ("$MTCO_2e$") per year. The GHG significance thresholds

are based on AB 32 GHG emission reduction goals, which take into consideration the emission reduction strategies outlined in the California Air Resources Board's Scoping Plan. Development projects located within these jurisdictions that would exceed these thresholds would be considered to have a potentially significant impact on the environment, which could conflict with applicable GHG-reduction plans, policies, and regulations. Projects with GHG emissions that do not exceed the applicable threshold would be considered to have a less-than-significant impact on the environment and would not be anticipated to conflict with AB 32 GHG emission reduction goals.

Regulatory Environment

Federal

***Federal Regulation and the Clean Air Act - Executive Order 13514*:** Executive Order 13514 is focused on reducing GHGs internally in federal agency missions, programs, and operations. Additionally, the executive order directs federal agencies to participate in the Interagency Climate Change Adaptation Task Force, which is engaged in developing a national strategy for adaptation to climate change.

On April 2nd, 2007, in Massachusetts v. U.S. EPA, 549 U.S. 497 (2007), the Supreme Court found that GHGs are air pollutants covered by the FCAA and that the U.S. EPA has the authority to regulate GHG. The Court held that the U.S. EPA Administrator must determine whether emissions of GHGs from new motor vehicles cause or contribute to air pollution which may be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision.

On December 7th, 2009, the U.S. EPA Administrator signed two (2) distinct findings regarding GHGs under Section 202(a) of the Clean Air Act:

- Endangerment Finding: The Administrator found that the current and projected concentrations of the six (6) key well-mixed GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6) in the atmosphere threaten the public health and welfare of current and future generations.
- Cause or Contribute Finding: The Administrator found the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution which threatens public health and welfare.

Although these findings did not impose any requirements on industry or other entities, this action was a prerequisite to finalizing the U.S. EPA's *Proposed Greenhouse Gas Emission Standards for Light-Duty Vehicles* published on September 15th, 2009. On May 7th, 2010, the final *Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards* was published in the Federal Register.

U.S. EPA and the National Highway Traffic Safety Administration ("NHTSA") are taking coordinated steps to enable the production of a new generation of clean vehicles with reduced GHG emissions and improved fuel efficiency from on-road vehicles and engines. These next steps include developing the first-ever GHG regulations for heavy-duty engines and vehicles and additional light-duty vehicle GHG regulations. President Obama outlined these steps in a Presidential Memorandum on May 21st, 2010.

The final combined U.S. EPA and NHTSA standards making up the first phase of this national program apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. The standards require these vehicles to meet an estimated combined average emissions level of 250 grams of CO_2 per mile (the equivalent to 35.5 miles per gallon if the automobile industry were to meet this CO_2 level solely through fuel economy improvements). Together, these standards will cut GHG emissions by an estimated 960 million metric tons ("MMT") and 1.8 billion

barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016). On August 28th, 2012, U.S. EPA and NHTSA issued their joint rule to extend this national program of coordinated GHG and fuel economy standards to model years 2017 through 2025 passenger vehicles.

State

***Assembly Bill 32 – California Global Warming Solutions Act*:** AB 32, the Global Warming Solutions Act of 2006, codifies the State of California's GHG emissions target by directing CARB to reduce the state's global warming emissions to 1990 levels by 2020. Governor Schwarzenegger signed and passed into law AB 32 on September 27, 2006. Since that time, the CARB, the California Energy Commission ("CEC"), the California Public Utilities Commission ("CPUC"), and the Building Standards Commission ("BSC") have all been developing regulations that will help meet the goals of AB 32 and Executive Order S-3-05.[9]

A Scoping Plan for AB 32 was adopted by CARB in December 2008. It contains the State of California's main strategies to reduce GHGs from business as usual ("BAU") emissions projected in 2020 back down to 1990 levels. BAU is the projected emissions in 2020, including increases in emissions caused by growth, without any GHG reduction measures. The Scoping Plan has a range of GHG reduction actions, including direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, and market-based mechanisms such as a cap-and-trade system. This plan required CARB and other state agencies to develop and adopt regulations and other initiatives reducing GHGs by 2012.

As directed by AB 32, CARB has also approved a statewide GHG emissions limit. On December 6th, 2007, CARB staff resolved an amount of 427 MMT of CO_2e as the total statewide GHG 1990 emissions level and 2020 emissions limit. The limit is a cumulative statewide limit, not a sector-or facility-specific limit. CARB updated the future 2020 BAU annual emissions forecast because of economic downturn, to 545 MMT of CO_2e. Two (2) GHG emissions reduction measures currently enacted that were not previously included in the 2008 Scoping Plan baseline inventory were included, further reducing the baseline inventory to 507 MMT of CO_2e. Thus, an estimated reduction of 80 MMT of CO_2e is necessary to reduce statewide emissions to meet the AB 32 target by 2020.

CARB prepared an updated Scoping Plan which was released in 2017. The 2017 Scoping Plan identifies ways for California to reach the statewide 2030 climate target and next steps for reaching the 2050 target goal.

***Senate Bill 1368*:** SB 1368 is the companion bill of AB 32 and was signed by Governor Schwarzenegger in September 2006. SB 1368 required the CPUC to establish a greenhouse gas emission performance standard. Therefore, on January 25th, 2007, the CPUC adopted an interim GHG Emissions Performance Standard to help mitigate climate change. The Emissions Performance Standard is a facility-based emissions standard requiring all new long-term commitments for baseload generation to serve California consumers be with power plants that have emissions no greater than a combined cycle gas turbine plant. That level is established at 1,100 pounds of CO_2 per megawatt-hour. "New long-term commitment" refers to new plant investments (new construction), new or renewal contracts with a term of five (5) years or more, or major investments by the utility in its existing baseload power plants. Additionally, the CEC established a similar standard for local publicly owned utilities that cannot exceed the greenhouse gas emission rate from a baseload combined-cycle natural gas fired plant. On July 29th, 2007, the Office of Administrative Law disapproved the CEC's proposed Greenhouse Gases Emission Performance Standard rulemaking action and subsequently, the CEC revised the proposed regulations.

[9] Note that AB 197 was adopted in September 2016 to provide more legislative oversight of CARB.

SB 1368 further requires that all electricity provided to California, including imported electricity, must be generated from plants that meet the standards set by the CPUC and CEC.

***Senate Bill 350 – Clean Energy and Pollution Reduction Act*:** In September 2015, the California Legislature passed SB 350 (de Leon 2015), which increases the State's Renewables Portfolio Standard Program for content of electrical generation from the 33 percent target for 2020 to a 50 percent renewables target by 2030.

***Executive Order S-03-05*:** On June 1st, 2005, Governor Schwarzenegger signed Executive Order S-03-05, the purpose of which was to implement requirements for the California Environmental Protection Agency ("CalEPA") to provide ongoing reporting on a biennial basis to the State Legislature and Governor's Office on how global warming is affecting the state. Required areas of impact reporting include public health, water supply, agriculture, coastline, and forestry. The CalEPA secretary is required to prepare and report on ongoing and upcoming mitigation designed to counteract these impacts.

***Executive Order B-30-15*:** On April 15th, 2015, Governor Brown signed Executive Order B-30-15, the purpose of which is to establish a GHG reduction of 40 percent below 1990 levels by 2030. The Executive Order intended to help the state work towards a further emissions reduction target of 80 percent below 1990 levels by the year 2050. The order directed state agencies to prepare for climate change impacts through prioritization of adaptation actions to reduce GHG emissions, preparation for uncertain climate impacts through implementation of flexible approaches, protection of vulnerable populations, and prioritization of natural infrastructure approaches.

***Executive Order B-55-18 and SB 100 – 100 Percent Clean Energy Act of 2018*:** On September 10th, 2018, Governor Brown signed both SB 100 – 100 Percent Clean Energy Act of 2018 and Executive Order B-55-18 to Achieve Carbon Neutrality. SB 100 sets California on course to achieving carbon-free emissions from the electric power production sector by 2045. SB 100 also increases the required emissions reduction generated by retail sales to 60 percent by 2030, an increase of 10 percent compared to previous goals. B-55-18 establishes a new goal of achieving statewide "carbon neutrality as early as possible and no later than 2045, and to achieve and maintain net negative emissions thereafter" (Governor Brown, 2018).

***California Building Code*:** The CBC contains standards regulating the method of use, properties, performance, or types of materials used in the construction, alteration, improvement, repair, or rehabilitation of a building or other improvement to real property. The CBC is adopted every three (3) years by the BSC. In the interim, the BSC also adopts annual updates to make necessary mid-term corrections. The CBC standards apply statewide. However, a local jurisdiction may amend a CBC standard if it makes a finding the amendment is reasonably necessary due to local climatic, geological, or topographical conditions.

Local

***San Luis Obispo County General Plan – Conservation and Open Space Element*:** The following policies from the Conservation and Open Space Element of the San Luis Obispo County General Plan could be applicable to the Proposed Project.

Goal AQ-4: Greenhouse Gas Emissions from County Operations and Communitywide Sources will be Reduced from Baseline Levels by a Minimum of 15% by 2020.

Policy AQ-4.2: ***Identify Greenhouse Gas Emissions***: Quantify, reduce, and mitigate greenhouse gas emissions.

Policy AQ-4.4: ***Development Projects and Land Use Activities***: Reduce greenhouse gas emissions from development projects and other land use activities.

Policy AQ-4.5: ***Carbon Sequestration***: Reduce net carbon emissions through the preservation, protection, and enhancement, as appropriate, of the county's terrestrial and aquatic carbon sequestration resources, including the county's lakes, soils, and native forests, trees, and plants.

***San Luis Obispo County Code*:** There are no codes provided in the San Luis Obispo County Code related to greenhouse gas emissions that are applicable to the Proposed Project.

***Carrizo Area Plan*:** None of the policies provided in the Carrizo Area Plan related to greenhouse gas emissions are applicable to the Proposed Project.

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

Impact Discussion

a. Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Construction of the Proposed Project would generate construction GHG emissions. The construction period would generate approximately 93.4 MT of CO_2e per year (**Appendix B**), which is below SLO County APCD's threshold of 1,150 MT of CO_2e per year. In addition, these emissions would cease upon conclusion of construction. Limited vehicular trips to the site will be required intermittently for maintenance. Operational GHG emissions would total 93.1 MT annually (**Appendix B**) and would not exceed SLO County APCD's threshold of 1,150 MT of CO_2e per year. Implementation, construction, and operation of the Proposed Project would not exceed established thresholds for GHG emissions, as discussed above. This is considered a less than significant impact.

b. Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

As stated above, the Proposed Project is located in the SCCAB, where air quality is regulated by SLO County APCD. The County adopted the EnergyWise Plan in November 2011 to reduce local GHG emissions through goals, measures and actions. According to the EnergyWise Plan, the biggest sources of GHG emissions in the County are transportation, commercial and industrial energy, agriculture, and residential energy. The Proposed Project would result in GHG emissions during construction and operation as identified above. The Proposed Project would not exceed SLO County APCD's adopted GHG thresholds. Construction GHG emissions would be temporary; in addition, construction equipment would comply with all state and local regulations related to GHG emissions. Once operational, the Proposed Project would generate GHG emissions associated with regular maintenance trips and

occasional operation of the backup generator due to power outages. However, maintenance trips would occur approximately one (1) to two (2) times per month and would not generate substantial GHG emissions that would conflict with applicable regulations. Similarly, operation of the propane generator would only occur for regular maintenance and in the event of a power outage, and would not represent a substantial source of GHG emissions. The Proposed Project would not conflict with applicable plans, policies, or regulations adopted for the purpose of reducing GHG emissions. This represents a less than significant impact.

4.9 Hazards and Hazardous Materials

Environmental Setting

Hazardous materials, as defined by the California Code of Regulations, are substances with certain physical properties that could pose a substantial present or future hazard to human health or the environment when improperly handled, disposed, or otherwise managed. Hazardous waste is any hazardous material that is discarded, abandoned, or slated to be recycled. Hazardous materials and waste can result in public health hazards if improperly handled, released into the soil or groundwater, or through airborne releases in vapors, fumes, or dust. Soil and groundwater having concentrations of hazardous constituents higher than specific regulatory levels must be handled and disposed of as hazardous waste when excavated or pumped from an aquifer.

Government Code Section 65962.5 requires CalEPA to develop a Cortese List that is updated at least annually. While CalEPA no longer maintains a single Cortese List, CalEPA uses the following database and list to meet the requirements of Government Code Section 65962.5.

- List of Hazardous Waste and Substances sites from Department of Toxic Substances Control ("DTSC") EnviroStor database;
- List of Leaking Underground Storage Tank ("LUST") Sites from the State Water Board's GeoTracker database;
- List of solid waste disposal sites identified by State or Regional Water Board with waste constituents above hazardous waste levels outside the waste management unit;
- List of "active" Cease and Desist Orders ("CDO") and Clean-up and Abatement Orders ("CAO") from State Water Board, and;
- List of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, identified by DTSC.

In addition to these databases, the State Water Board and the DTSC maintain databases of other hazardous material release sites with documented environmental contamination (GeoTracker, 2024 and EnviroStor, 2024). A review of these resources indicated that there are no hazardous materials release records are known to occur within the Proposed Project area. There are no LUST sites within 0.25 miles of the project site. The nearest LUST site is located approximately one (1) mile south of the project site.

Regulatory Environment

Federal

Environmental Protection Agency: The EPA is responsible for enforcing regulations at the federal level pertaining to hazardous materials and wastes. The primary federal hazardous materials and wastes laws

are contained in the Resources Conservation and Recovery Act ("RCRA") of 1976 and in the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA") of 1980.

Comprehensive Environmental Response, Compensation and Liability Act: CERCLA, more commonly known as Superfund, established the National Priorities List for identifying and obtaining funding for remediation of severely contaminated sites. Federal regulations pertaining to hazardous materials and wastes are contained in the Code of Federal Regulations (40 CFR). The regulations contain specific guidelines for determining whether a waste is hazardous, based on either the source of generation or the characteristics of the waste.

U.S. Department of Transportation: The U.S. Department of Transportation ("DOT") regulates transportation of hazardous materials by truck and rail. DOT regulations establish criteria for safe handling procedures. The California Administrative Code also includes federal safety standards.

Solid Waste Disposal Act/Federal Resource Conservation and Recovery Act**:** RCRA manages solid waste, landfills, and medical wastes. Under this act, solid wastes include hazardous materials. The act provides provisions for the generation, storage, treatment, and disposal of hazardous waste.

Toxic Substances Control Act: The Toxic Substances Control Act ("TSCA"), passed in 1976, requires the EPA to report, test, place restriction on, and keep record of chemical substances and mixtures. The EPA has authority over the use, production, importation, and disposal of specific chemicals. Some chemicals include polychlorinated biphenyls ("PCBs"), asbestos, radon, and lead paint.

State

California Environmental Protection **Agency:** The EPA has delegated much of its regulatory authority to individual states whenever adequate state regulatory programs exist. The Department of Toxic Substance Control Division of CAL EPA is the agency empowered to enforce federal hazardous materials and waste regulations in California, in conjunction with the EPA.

California hazardous materials and waste laws incorporate federal standards, but in many respects, are stricter. For example, the California Hazardous Waste Control Law, the state equivalent of RCRA, contains a much broader definition of hazardous materials and waste. The California Code of Regulations, Titles 22 and 26, contain state hazardous materials waste laws. Regulations implementing the California Hazardous Waste Control Law list hazardous chemicals; establish criteria for identifying, packaging, and labeling hazardous wastes; prescribe management of hazardous wastes; establish permit requirements for hazardous waste treatment, storage, disposal, and transportation; and identify hazardous wastes that cannot be disposed of in landfills.

Local

Regional Water Quality Control Board**:** The Central Coastal RWQCB is the lead agency responsible for identifying, monitoring, and remediating leaking underground storage tanks on the Central Coast. Local jurisdictions may take the lead agency role as a Local Oversight Program ("LOP") entity, implementing State as well as local policies.

San Luis Obispo County General Plan – Safety Element**:** The following policies from the Safety Element of the San Luis Obispo County General Plan could be applicable to the Proposed Project.

Goal S-2: Reduce damage to structures and the danger to life caused by flooding, dam inundation and tsunami.

Policy S-8: ***Flood Hazards***: Strictly enforce flood hazard regulations both current and revised. FEMA regulations and other requirements for the placement of structures in flood plains

shall be followed. Maintain standards for development in flood-prone and poorly drained areas.

Goal S-4: Reduce the threat to life, structures and the environment caused by fire.

Policy S-13: ***Pre-Fire Management***: New development should be carefully located, with special attention given to fuel management in higher fire risk areas. Large, undeveloped areas should be preserved so they can be fuel-managed. New development in fire hazard areas should be configured to minimize the potential for added danger.

Policy S-16: ***Loss Prevention***: Improve structures and other values at risk to reduce the impact of fire. Regulations should be developed to improve the defensible area surrounding habitation.

Goal S-6: Reduce the potential for harm to individuals and damage to the environment from aircraft hazards, radiation hazards, hazardous materials, electromagnetic fields, radon, and hazardous trees.

Policy S-26: ***Hazardous Materials***: Reduce the potential for exposure to humans and the environment by hazardous substances.

***San Luis Obispo County Code*:** The following hazards and hazardous materials codes provided by Title 22 of the San Luis Obispo County Code could be applicable to the Proposed Project:

Chapter 22.10.070 – Flammable and Combustible Liquids Storage: Require proper storage of flammable and combustible liquids.

***Carrizo Area Plan*:** None of the policies provided in the Carrizo Area Plan related to hazards and hazardous materials are applicable to the Proposed Project.

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	■	☐
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 in 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 Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	■

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

Impact Discussion

a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

No hazardous materials are anticipated to be stored on-site during construction other than typical construction equipment fluids, including gasoline, diesel, and lubricants for maintaining equipment. These materials would be handled and stored in compliance with all local, State, and Federal regulations pertaining to hazardous materials. Operation of the Proposed Project would not utilize or require the transport of hazardous materials. This is considered a less than significant impact.

b. Would the project 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?

There are typically two (2) types of hazardous materials releases that could occur during construction: 1) the accidental release of hazardous materials that are routinely used during construction activities; and 2) the potential for construction activities to encounter and excavate contaminated soil or groundwater that are already present at the construction site and thus release it to expose new receptors to the hazard.

Hazardous materials that could be used during construction activities include typical construction equipment fluids. Storage and use of hazardous materials at the construction site could potentially result in the accidental release of small quantities of hazardous materials, which could pose a risk to construction workers and the environment such as degradation of soil and/or surface water quality. However, as discussed in **Section 4.10 Hydrology and Water Quality**, the construction contractor would be required to comply with BMPs and County Municipal Code requirements to reduce impacts related to erosion and surface runoff. Through compliance with applicable BMPs and County Municipal Code requirements related to hazardous materials storage and storm water permitting regulations, the impacts from potential releases of hazardous materials or petroleum products during construction would be less than significant.

The greatest potential for encountering contaminated soil and groundwater during construction would be in areas where past or current land uses have resulted in soil contamination. However, the Proposed Project site is not located within 0.25 miles of any LUST sites or properties listed on the Cortese database. As a result, the probability of encountering contaminated soil is considered low.

Use of significant quantities of hazardous materials is not anticipated during operation of the Proposed Project. Any chemicals, solvents, or cleaners utilized during operation of the Proposed Project would be applied, stored, and disposed of in accordance with all manufacturer specifications and guidelines and would not be accessible to the public. This represents a less than significant impact.

c. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste in one-quarter mile of an existing or proposed school?

The Proposed Project is located entirely on the existing School campus and is, therefore, within a quarter mile of an existing school. Operation of the Proposed Project would not require the handling significant quantities of hazardous materials or result in the emission of hazardous materials. However, construction activities would require temporary handling of potentially hazardous materials. All hazardous materials would be transported, used, and disposed of in accordance with all manufacturers' recommendations during construction and operation, as described under impact a). In addition, areas under construction would be off limits to students and faculty throughout construction through the use of temporary fencing and signage. This represents a less than significant impact.

d. Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

The Proposed Project site is not on or within the vicinity of a hazardous site as designated by Government Code Section 65962.5 (i.e., Cortese List). Therefore, no impact would result.

e. Would the project, for a project located in an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

There are no private airstrips or public airports within two miles of the project area. The closest airport is Bogdan Airport, located approximately 27 miles west of the site. The Proposed Project would not affect operations of this airport or any other public airports. No impact would occur.

f. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The Proposed Project consists of a new well and water storage tank and does not include any characteristics or features that would interfere with an adopted emergency response plan or emergency evacuation plan. All components of the Proposed Project would be located on the existing School campus. For these reasons, this is considered a less than significant impact.

g. Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

The Proposed Project site is located within an area designated as a High Fire Hazard Severity Zone ("FHSZ") by the California Department of Fire and Forestry Protection. Construction activities associated with the Proposed Project could potentially result in wildland fires; however, construction equipment would be maintained and fitted with safety equipment to reduce the risk of fire. In addition, the 5,000

gallon water storage tank located on the site would be available to provide fire suppression in the event of a fire. The Proposed Project would not increase the risk of wildfires to the site during operation as the Proposed Project would not involve any equipment or activities that present a severe fire risk. The electrical components of the proposed project would be largely underground. The new well would be located within a fenced 25 foot by 25 foot enclosure that would be kept free of dry vegetation during operation. The pump would be submerged in the new well head and would not increase wildfire risk. The water storage tank would not include any mechanical or electronic equipment that could increase wildfire risk. In addition, the School has an existing fire suppression tank on site to respond to any fires that occur on the site during construction. Once operational, the Proposed Project's new 5,000 gallon water storage tank would also be available for fire suppression if needed. Implementation of the Proposed Project would not further expose people or structures to wildland fires; therefore, this is considered a less than significant impact. See also **Section 4.20 Wildfire**.

4.10 Hydrology and Water Quality

Environmental Setting

The Proposed Project is located within the Carrizo Plain Groundwater Basin ("CPGB") (3-19), which is not regulated by any local water management agencies or by the State Groundwater Management Agency ("SGMA"). Instead, the CPGB is regulated by the County. The San Luis Obispo County Integrated Regional Water Management Plan ("WMP") describes the CPGB as underlying the entirety of Water Planning Area ("WPA") 6 – Carrizo Plain (approximately 270 square miles). DWR indicated that the CPGB is "Very Low" priority in their Sustainable Groundwater Management Act 2019 Basin Prioritization. Groundwater in the CPGB is found in alluvium, the Paso Robles Formation, and the Morales Formation. The CPGB is recharged predominantly from percolation of stream flow and infiltration of precipitation and drains to Soda Lake. The School manages the only public water that is currently pumping water from the CPGB. All other pumping in the CPGB stems from individual residential and agricultural uses overlying the basin. The School's water system serves the campus and the two single family residences located on the site.

The Proposed Project would require excavation, which could result in erosion of onsite soils and potential sedimentation during heavy wind or rain events. The Proposed Project would be required to comply with all local, state, and federal requirements. In addition, the BMPs included in **Section 4.7 Geology and Soils**, would be implemented by the construction contractor to control the discharge of pollutants, including sediment from erosion into local surface water drainages.

The Federal Emergency Management Agency ("FEMA") administers the National Flood Insurance Program ("NFIP") to provide subsidized flood insurance to communities that comply with FEMA regulations limiting development in floodplains. FEMA issues flood insurance rate maps for communities participating in the NFIP. These maps delineate flood hazard zones in the community. Based on a review of the available flood insurance maps for the project area, the majority of the Proposed Project is located in Flood Zone X (unshaded) and is considered to be of low risk for flooding. Flood Zone X is described as an area of minimal flood hazard outside of the 500-year flood area and protected by levees from 100-year flood events. However, the southeastern corner of the site is located in Flood Zone A. Flood Zone A is described as an area with a one (1) percent annual chance of flooding and a 26 percent chance of flooding over a 30-year period. Flood Zone A is an area where no detailed flood analysis has been conducted and no depths or base flood elevations are provided. Flood Zone A is considered a Special Flood Zone Hazard Area ("SFHA"), which means that the southwestern portion of the site is within the floodplain of a 100-year flood event. However, the components of the Proposed Project would all be located within Flood Zone X (unshaded) and outside of the area designated as Flood Zone A.

Regulatory Environment

Federal

***National Flood Insurance Program*:** FEMA established the National Flood Insurance Program ("NFIP") to reduce flooding on private and public properties. The program provides subsidized flood insurance to communities that comply with FEMA regulations protecting development in floodplains. As part of the program, FEMA publishes Flood Insurance Rate Maps ("FIRM") that identify SFHA. An SFHA is an area that would be inundated by the one-percent annual chance flood, which is also referred to as the base flood or 100-year flood.

***Porter-Cologne Water Quality Act*:** The Porter-Cologne Act delegates authority to the SWRCB to establish regional water quality control boards. The Central Coast Area RWQCB has authority to use planning, permitting, and enforcement to protect beneficial uses of water resources in the region. Under the Porter-Cologne Water Quality Control Act (California Water Code Sections 13000 - 14290), the RWQCB is authorized to regulate the discharge of waste that could affect the quality of the state's waters, including projects that do not require a federal permit through the USACE. To meet RWQCB 401 Certification standards, all hydrologic issues related to a project must be addressed, including the following:

- Wetlands;
- Watershed hydrograph modification;
- Proposed creek or riverine related modifications, and;
- Long-term post-construction water quality.

Any construction or demolition activity that results in land disturbance equal to or greater than one (1) acre must comply with the Construction General Permit ("CGP"), administered by the SWRCB. The CGP requires the installation and maintenance of BMPs to protect water quality until the site is stabilized. The Proposed Project would disturb more than one (1) acre of soil and is required to obtain coverage under the RWQCB National Pollutant Discharge Elimination System ("NPDES") General Storm Water Permit.

State

***Statewide Construction General Permit*:** The SWRCB has implemented a NPDES CGP for the State of California. For projects disturbing one (1) acre or more, a Notice of Intent and SWPPP must be prepared by a qualified professional prior to commencement of construction. The CGP includes requirements for training, inspection, record keeping, and for projects of certain risk levels, monitoring. The general purpose of the requirements is to minimize the discharge of pollutants and to protect beneficial uses and receiving waters from the adverse effects of construction-related storm water discharges.

Local

***San Luis Obispo County General Plan – Conservation and Open Space Element*:** The Conservation and Open Space Element of the San Luis Obispo County General Plan includes goals policies related to hydrology and water quality that could apply to the Proposed Project:

Goal WR-1: The County will have a reliable and secure regional water supply (IRWM).

Policy WR-1.9: ***Discourage New Water Systems***: Enable expansion of public services by community services districts and County service areas to serve contiguous development when water

is available. Strongly discourage the formation of new water and sewer systems serving urban development at the fringe and outside of urban or village reserve lines or services lines. Strongly discourage the formation of new mutual or private water companies in groundwater basins with Resource Management System Levels of Severity I, II, or III, except where needed to resolve health and safety concerns.

Policy WR-1.14: ***Avoid Net Increase in Water Use***: Avoid a net increase in non-agricultural water use in groundwater basins that are recommended or certified as Level of Severity II or III for water supply. Place limitations on further land divisions in these areas until plans are in place and funded to ensure that the safe yield will not be exceeded.

Goal WR-2: The County will collaboratively manage groundwater resources to ensure sustainable supplies for all beneficial uses.

Policy WR-2.3: ***Well Permits***: Require all well permits to be consistent with the adopted groundwater management plans.

Goal WR-3: Excellent water quality will be maintained for the health of people and natural communities.

Policy WR-3.1: ***Prevent Water Pollution***: Take actions to prevent water pollution, consistent with federal and state water policies and standards, including but not limited to the federal Clean Water Act, Safe Drinking Water Act, and National Pollutant Discharge Elimination System (NPDES).

Policy WR-3.2: ***Protect Watersheds***: Protect watersheds, groundwater and aquifer recharge areas, and natural drainage systems from potential adverse impacts of development projects.

Goal WR-6: Damage to life, structures, and natural resources from floods will be avoided.

***San Luis Obispo County General Plan –Safety Element*:** The Safety Element of the San Luis Obispo County General Plan includes goals policies related to hydrology and water quality that could apply to the Proposed Project:

Goal S-2: Reduce damage to structures and the danger to life caused by flooding, dam inundation and tsunami.

Policy S-8: ***Flood Hazards***: Strictly enforce flood hazard regulations both current and revised. FEMA regulations and other requirements for the placement of structures in flood plains shall be followed. Maintain standards for development in flood-prone and poorly drained areas.

Policy S-12: **Dam Failure**: Minimize the risk of dam failure.

***San Luis Obispo County Code*:** The following hydrology and water resource code provided by Title 22 of the San Luis Obispo County Code could be applicable to the Proposed Project:

Chapter 22.10.180 - Water Quality: Notify the California Central Coast Regional Water Quality Control Board (RWQCB) of projects that may affect groundwater quality because of proposed methods of disposal, or large volumes of wastewater, or because of the disturbance of natural soil contours.

***Carrizo Area Plan*:** The Carrizo Area Plan states that the plan area is within an overdrafted basin where water is typically of poor quality. There are no policies provided in the Carrizo Area Plan related to hydrology and water quality that would apply to the Proposed Project.

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements 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?	☐	☐	■	☐
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?	☐	☐	■	☐
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	■	☐
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?	☐	☐	■	☐

Impact Discussion

a. Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

The Proposed Project would require on-site excavation for demolition and removal of an existing well and storage tank and construction of a new well, water pipeline, electrical conduits, a storage tank, and potentially a water treatment system, which could result in the erosion of onsite soils and sedimentation during heavy wind or rain events. However, as discussed in **Section 4.7. Geology and Soils** above, the contractor would implement BMPs to reduce erosion. Additionally, the Proposed Project would comply with the adopted standards contained within the County's Municipal Code, Section 19.12.14 (Erosion Control).[10] With implementation of BMPs and incorporation of the design

[10] https://library.municode.com/ca/san_luis_obispo_county/codes/county_code?nodeId=TIT19BUCO_CH19.12GREX_19.12.140ERCO

provisions and permit review and approval procedures identified in the County's Municipal Code, the Proposed Project would not violate water quality standards and waste discharge requirements; therefore, impacts would be less than significant.

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

The Proposed Project involves improvements to provide potable water to the School and would not impede sustainable groundwater management in the basin. While the Proposed Project would draw on groundwater to serve the School, this would be offset by the removal of the existing well. However, the Proposed Project would slightly intensify water use due to water from the basin being used in place of bottled water for potable use (drinking, cooking, etc.). The Proposed Project has been sized appropriately so that it would provide enough water to serve existing connections at the School, including the existing single-family residences. The well would be a replacement to the existing supply well with provision of adequate storage to address the existing population of the School. The Proposed Project would not add new water connections at adjacent offsite locations that could deplete groundwater from the CPGB or substantially decrease groundwater supplies.

The Proposed Project site is located within the CPGB as noted above. The Carrizo Area Plan states that the plan area is within an overdrafted basin where water is typically of poor quality. However, the DWR designated the CPGB as a "Very Low" priority groundwater basin. The Proposed Project would replace an existing well and would not represent a substantial increase in water use compared to existing and historical conditions. Therefore, the Proposed Project would not substantially decrease water supplies.

The Proposed Project would require grading of approximately 2,786 sf in overall area. The Proposed Project includes 315 sf of gravel paving, which could potentially interfere with groundwater recharge. This paved area would be surrounded by unpaved areas where groundwater infiltration would continue to occur, with water from the paved area directed to these areas. As a result, the Proposed Project would not substantially interfere with groundwater recharge. This represents a less than significant impact.

c. Would the project 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, 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 stormwater drainage systems or provide substantial additional sources of polluted runoff, or iv) impede or redirect flood flows?

The majority of the Proposed Project site is located in Flood Zone X (unshaded), as stated above, and is considered to be of low risk for flooding. While the southeastern corner of the site is located in Flood Zone A, the components of the Proposed Project are located outside this flood hazard area. The Proposed Project includes the demolition and removal of an existing well and storage tank and construction of a new well, water pipeline, electrical conduits, a storage tank, and potentially a water treatment system to serve the existing School. Construction activities for well removal and installation of the Proposed Project components would include approximately 315 sf of new impervious surfaces. Construction would be required to comply with BMPs and County Municipal Code requirements, which would reduce impacts related to erosion and surface runoff. After construction, the remainder of the Proposed Project site would be restored to its original condition. In addition, the Proposed Project

would not substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite or create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. BMPs would be implemented during construction activities to minimize runoff and erosion. Finally, the Proposed Project would not impede or redirect flood flows, since the site is located in a topographically flat area and the project components are located in Flood Zone X (unshaded), an area of minimal flood hazard. This represents a less than significant impact.

d. Would the project, in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Tsunamis or "tidal waves" are seismic waves created when displacement of a large volume of seawater occurs as a result of movement on seafloor faults. The Proposed Project site is located in an inland area outside a tsunami hazard zone. The portion of the site that would be disturbed by the Proposed Project is not located within any special flood hazard zones as defined by FEMA. Therefore, the Proposed Project would have no impact related to the risk of release of pollutants due to inundation of the Project site.

e. Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The Proposed Project is located in the CPGB, which is not an adjudicated groundwater basin. The CPGB is regulated by the County. The Carrizo Area Plan states that the plan area is within an overdrafted basin where water is typically of poor quality. However, the DWR designated the CPGB as a "Very Low" priority groundwater basin. The Proposed Project involves the replacement of an existing well. While the Proposed Project would result in a minor intensification of existing water use compared to existing conditions due to use of well water for potable use in place of bottled water, the CPGB is not overdrafted and the increase in groundwater pumping would not conflict with any adopted water quality or sustainable groundwater management plans. Therefore, the Proposed Project would have a less than significant impact related to conflicting with or obstructing applicable water quality control plans or sustainable groundwater management plans.

4.11 Land Use and Planning

Environmental Setting

The Proposed Project is located within unincorporated San Luis Obispo County, east of the City of Atascadero. The Proposed Project is located entirely within the School's campus (APNs 072-101-041 and 072-101-011). The area is governed by the Carrizo Area Plan component of the San Luis Obispo County General Plan. The Land Use Designation of the site is Public Facilities ("PF"). See **Figure 10. Land Use Map**.

Regulatory Environment

Local

***San Luis Obispo County General Plan*:** Policies from the San Luis Obispo County General Plan that are relevant to the Proposed Project are identified throughout this IS/MND.

***San Luis Obispo County Code*:** Policies from the San Luis Obispo County Code that are relevant to the Proposed Project are identified throughout this IS/MND.

Title:

Land Use Map

Date 7/11/2024
Scale N/A
Project 2023.82

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Figure
10

Carrizo Area Plan: Policies from the Carrizo Area Plan that are relevant to the Proposed Project are identified throughout this IS/MND.

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	■	☐

Impact Discussion

a. Would the project physically divide an established community?

The Proposed Project consists of a new well, pump station, storage tanks, and water distribution pipelines to serve the School. The entirety of the Proposed Project would occur within the existing School campus and the Proposed Project will not physically divide the community. No changes in land use are planned as part of the Proposed Project. The Project is located in a rural area and would not divide an established community. Therefore, the Proposed Project would not physically divide an established community and no impact would result.

b. Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

The Proposed Project would not conflict with any policy adopted for the purposes of avoiding and/or mitigating an adverse environmental effect. The Proposed Project would remove the existing well and storage tank and replace them with a new well, water pipeline, electrical conduits, and a storage tank. The replacement of an existing well would not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. As a result, potential impacts from implementation of the Proposed Project would be minimal. Where appropriate, this IS/MND has identified mitigation measures to ensure that impacts would be less than significant. The replacement of the existing well (and appurtenant structures) is consistent with the land use designations on the site and within the Project area. This is considered a less than significant impact.

4.12 Mineral Resources

Environmental Setting

There are two (2) designated mineral resource extraction sites within the Las Pilitas/Carrizo Plains area according to the County's Mining Designation Maps (County of San Luis Obispo, 2024). Site #27: Navajo Rock & Block, is located approximately 12 miles northwest of the proposed project site, and Site #54: Twisselman Gravel Mine is located approximately five (5) miles northwest of the Proposed Project site. The Proposed Project is not located within a mineral resource area and would not interfere with mineral extraction operations at the two (2) sites identified above.

Regulatory Framework

State

Surface Mining and Reclamation Act: The SMARA of 1975 and the CGS defines and maps regional significant mineral resources. The CGS delineates MRZs based on their mineral resource potential.

Local

***San Luis Obispo County General Plan – Conservation and Open Space Element*:** There are no relevant mineral resources policies in the Conservation and Open Space Element of the San Luis Obispo County General Plan that would apply to the Proposed Project.

***San Luis Obispo County Code*:** There are no mineral resources codes in the San Luis Obispo County Code that would apply to the Proposed Project**.**

Carrizo Area Plan: There are no mineral resources policies in the Carrizo Area Plan that would apply to the Proposed Project.

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	■
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?	☐	☐	☐	■

Impact Discussion

a. Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

The Proposed Project is not located within an area designated by the CGS as an MRZ. No mineral resources are known to exist on the Proposed Project area (California Department of Conservation, 2024a). No impact would occur.

b. Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

The Carrizo Area Plan does not designate the Proposed Project area as a mineral resource recovery site. No impact would occur.

4.13 Noise

Environmental Setting

Noise is generally defined as sound that is loud, disagreeable, or unexpected. Sound is mechanical energy transmitted in the form of a wave because of a disturbance or vibration. Sound levels are described in terms of both amplitude and frequency. Noise is commonly defined as unwanted sound.

Airborne sound is a rapid fluctuation of air pressure above and below atmospheric pressure. Sound levels are usually measured and expressed in decibels ("dB") with 0 decibels corresponding to the threshold of hearing. **Table 5. Definitions of Acoustical Terms Used** in this Report contains definitions of key technical terms. Most sounds consist of a broad band of frequencies, with each frequency differing in sound level. The intensities of each frequency add together to generate a sound.

Table 5
Definitions of Acoustical Terms Used in this Report

Term	Definitions
Decibel, dB	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20.
Sound Pressure Level	Sound pressure is the sound force per unit area, usually expressed in micro-Pascals (or 20 micro Newtons per square meter), where 1 Pascal is the pressure resulting from a force of 1 Newton exerted over an area of 1 square meter. The sound pressure level is expressed in decibels as 20 times the logarithm to the base 10 of the ratio between the pressures exerted by the sound to a reference sound pressure (e.g., 20 micro-Pascals). Sound pressure level is the quantity that is directly measured by a sound level meter.
Frequency, Hz	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 Hz and 20,000 Hz. Infrasonic sound are below 20 Hz and Ultrasonic sounds are above 20,000 Hz.
A-Weighted Sound Level, dBA	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Equivalent Noise Level, L_{eq}	The average A-weighted noise level during the measurement period. The hourly L_{eq} used for this report is denoted as dBA $L_{eq[h]}$.
Community Noise Equivalent Level, CNEL	The average A-weighted noise level during a 24-hour day, obtained after addition of 5 decibels in the evening from 7:00 pm to 10:00 pm and after addition of 10 decibels to sound levels in the night between 10:00 pm and 7:00 am.
Day/Night Noise Level, Ldn or DNL	The average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to levels measured in the night between 10:00 pm and 7:00 am.
Ln Values L_{01}, L_{10}, L_{50}, L_{90}	The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% of the time during the measurement period.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

The method commonly used to quantify environmental sounds consists of evaluating all the frequencies of a sound in accordance with a weighting that reflects the facts that human hearing is less sensitive at low frequencies and extreme high frequencies than in the frequency mid-range. This is called "A" weighting, and the decibel level measured is called the A-weighted sound level ("dBA"). Although the A-weighted noise level may adequately indicate the level of environmental noise at any instant in time, community noise levels vary continuously. Most environmental noise includes a conglomeration of noise

from distant sources, which creates a relatively steady background noise in which no particular source is identifiable. To describe the time-varying character of environmental noise, the statistical noise descriptors, L01, L10, L50, and L90, are commonly used. They are the A-weighted noise levels equaled or exceeded during one (1) percent, ten (10) percent, 50 percent, and 90 percent of a stated time period. A single number descriptor called the L_{eq} is also widely used and represents the average, or a weighted noise level during a stated period of time.

The Proposed Project is not located in the vicinity of a private airstrip or an airport land use plan, or within two (2) miles of a public airport or public use airport. The existing noise environment is characterized primarily by infrequent traffic along SR 58.

Regulatory Environment

State

The State of California regulates vehicular and freeway noise affecting classrooms, sets standards for sound transmission and occupational noise control, and identifies noise insulation standards and airport noise/land-use compatibility criteria.

***California General Plan Guidelines*:** The State of California General Plan Guidelines, published by the Governor's Office of Planning and Research ("OPR"), also provides guidance for the acceptability of projects in specific CNEL/Ldn contours. The guidelines also present adjustment factors that may be used to arrive at noise acceptability standards that reflect the noise control goals of the community, the community's sensitivity to noise, and the community's assessment of the relative importance of noise pollution. For multi-family land uses, the State of California General Plan Guidelines identify a "normally acceptable" exterior noise level of up to 65 dBA CNEL/Ldn. Multi-family land uses are considered "conditionally acceptable" in noise environments of 60 to 70 dBA CNEL/Ldn, "normally unacceptable" in exterior noise environments of 70 to 75 dBA CNEL/Ldn, and "clearly unacceptable" in exterior noise environments exceeding 75 dBA CNEL/Ldn. Assuming a minimum exterior-to-interior noise reduction of 25 dB, an exterior noise environment of 70 dBA CNEL/Ldn would allow for a normally acceptable interior noise level of 45 dBA CNEL/Ldn.

***California Code of Regulations*:** The California Commission of Housing and Community Development officially adopted noise insulation standards in 1974. In November 1988, the Building Standards Commission approved revisions to these standards (Title 24, Part 2, California Code of Regulations). Title 24 requires interior noise levels attributable to exterior sources must not exceed 45 dB in any habitable room. Additionally, the code specifies that multi-family residential buildings or structures that will be located in exterior CNEL (or Ldn) contours of 60 dBA, or greater, of sources such as a freeway, expressway, parkway, major street, thoroughfare, airport, rail line, rapid transit line or industrial noise source shall require an acoustical analysis showing that the building has been designed to limit intruding noise to an interior CNEL (or Ldn) of 45 dBA. Predictions must also be made for future noise levels for a period of at least ten (10) years from the time of building permit application.

Local

San Luis Obispo County General Plan – Noise Element: The Noise Element of the San Luis Obispo County General Plan provides the following goals and policies for mitigating noise impacts that could apply to the Proposed Project:

Policy 3.3.1: The noise standards in this chapter represent maximum acceptable development should minimize noise levels. New noise exposure and noise generation.

Policy 3.3.5: Noise created by new proposed stationary noise sources or existing stationary noise sources which undergo modifications that may increase noise levels shall be mitigated as follows and shall be the responsibility of the developer of the stationary noise source:

a) Noise from agricultural operations conducted in accordance with accepted standards and practices is not required to be mitigated.

b) Noise levels shall be reduced to or below the noise level standards in Table 3-2 where the stationary noise source will expose an existing noise-sensitive land use (which is listed in the Land Use element as an allowable use within its existing land use category) to noise levels which exceed the standards in Table 3-2. When the affected noise-sensitive land use is Outdoor Sports and Recreation, the noise level standards in Table 3-2 shall be increased by 10 Db.

   Where the noise source is one of the following electrical substations which is not modified so as to increase noise levels, the noise standards shall instead be fifty dB between 10 p.m. and 7 a.m. and fifty-five dB between 7 a.m. and 10 p.m., determined at the property line of the receiving land use: the Cholame, San Miguel, Templeton, Cambria, Perry, Cayucos, Baywood, Highway 1 between Morro Bay and the California Men's Colony, Goldtree, Foothill, San Luis Obispo, Oceano, Mesa, Union Oil, Callender, and Mustang electrical substations

c) Noise levels shall be reduced to or below the noise level standards in Table 3-2 where the stationary noise source will expose vacant land in the Agriculture, Rural Lands, Residential rural, Residential Suburban, Residential Single-Family, Residential Multi-Family, Recreation, Office and Professional, and Commercial Retail land use categories to noise levels which exceed the standards in Table 32.

   Where the noise source is one of the following electrical substations which is not modified so as to increase noise levels, the noise standards shall instead be fifty dB between 10 p.m. and 7 a.m. and fifty-five dB between 7 a.m. and 10 p.m., determined at the property line of the receiving land use: the Cholame, San Miguel, Templeton, Cambria, Perry, Cayucos, Baywood, Highway 1 between Morro Bay and the California Men's Colony, Goldtree, Foothill, San Luis Obispo, Oceano, Mesa, Union Oil, Callender, and Mustang electrical substations.

   This policy may be waived when the Director of Planning and Building determines that such vacant land is not likely to be developed with a noise sensitive land use.

d) For new proposed resource extraction, manufacturing or processing noise sources or modifications to those sources which increase noise levels: where such noise sources will expose existing noise-sensitive land uses (which are listed in the Land Use Element as allowable uses within their land use categories) to noise levels which exceed the standards in Table 3-2, best available control technologies shall be used to minimize noise levels. The noise levels shall in no case exceed the noise level standards in Table 3-2.

***San Luis Obispo County Code*:** The following noise code provided by Title 22 of the San Luis Obispo County Code could be applicable to the Proposed Project:

Chapter 22.10.120(A) – Exceptions to Noise Standards: The standards of this Section are not applicable to noise from the following sources.

1. Activities conducted in public parks, public playgrounds and public or private school grounds, including but not limited to school athletic and school entertainment events;

4. Noise sources associated with construction, provided such activities do not take place before 7:00 a.m. or after 9:00 p.m. on any day except Saturday or Sunday, or before 8:00 a.m. or after 5:00 p.m. on Saturday or Sunday;

7. Noise sources associated with work performed by private or public utilities in the maintenance or modification of its facilities;

***Carrizo Area Plan*:** None of the policies provided in the Carrizo Area Plan are applicable to the Proposed Project.

Would the project result in:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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 in the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, in 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?	☐	☐	☐	■

Impact Discussion

a. Would the project result in 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?

The Proposed Project would result in temporary construction-related noise and ongoing operational noise, as discussed below.

Construction Noise

Sensitive receptors in the area include on-site and off-site residences as well as students at the School. Project construction would generate a temporary increase in noise associated with the use of construction equipment. Noise generated by construction can vary greatly depending on the specific equipment selected by the construction contractor. Construction equipment associated with well demolition and construction may include excavators, loaders, dump trucks, hauling vehicles, truck mounted drill rig, forklift, and graders. Using guidance provided by the Federal Highway Administration, it is estimated that noise will reach a maximum of 85 decibels at a distance of 50 feet from construction.

Table 6 summarizes noise levels commonly associated with construction equipment. As noted in **Table 6**, instantaneous noise levels (in dBA L_{max}) generated by individual pieces of construction equipment typically range from approximately 80 dBA to 85 dBA L_{max} at 50 feet. Typical operating cycles may involve two (2) minutes of full power, followed by three (3) or four (4) minutes at lower settings. Average-hourly noise levels for individual equipment range from 73 to 82 dBA L_{eq}. Based on typical off-road equipment usage rates and assuming multiple pieces of equipment operating simultaneously in a localized area, average-hourly noise levels could reach levels of approximately 80 dBA L_{eq} at roughly 100 feet.

Table 6
Construction Equipment Noise Emission Levels

Equipment	Typical Noise Level (dBA) 50 ft from Source	Typical Noise Level (dBA) 100 ft from Source[1]	Typical Noise Level (dBA) 200 ft from Source[1]	Typical Noise Level (dBA) 400 ft from Source[1]
Air Compressor	81	75	69	63
Backhoe	80	74	68	62
Ballast Equalizer	82	76	70	64
Ballast Tamper	83	77	71	65
Compactor	82	76	70	64
Concrete Mixer	85	79	73	67
Concrete Pump	82	76	70	64
Concrete Vibrator	76	70	64	58
Dozer	85	79	73	67
Generator	81	75	69	63
Grader	85	79	73	67
Impact Wrench	85	79	73	67
Jack Hammer	88	82	76	70
Loader	85	79	73	67
Paver	89	83	77	71
Pneumatic Tool	85	79	73	67
Pump	76	70	64	58
Roller	74	68	62	56

Source: U.S. Department of Transportation, Transit Noise and Vibration Impact Assessment, 2006.
Construction generated noise levels drop off at a rate of about 6 dBA per doubling of distance between the source and receptor.

Noise impacts to nearby sensitive receptors during construction would be temporary. Construction is anticipated to last 4.5 months. Construction would occur Monday through Friday during daytime hours and no nighttime construction is proposed. Construction associated with the pipeline and electrical conduit components of the Proposed Project would occur within 30 feet of existing educational land uses at the School. However, construction activities associated with these components would not be located in a single location for extended periods of time given the linear nature of these project components. In addition, all construction noise would be temporary, lasting approximately 4.5 months, and would not result in a permanent noise increase at the site. Therefore, temporary noise increases due to construction would not be substantial, and noise impacts from construction of the Proposed Project would be less than significant.

Operational Noise

The Proposed Project would generate noise during project operation, mostly associated with the new well. However, the new well is proposed to be located approximately 600 feet from the nearest on-site

sensitive receptors and 900 feet from the nearest off-site sensitive receptors. Noise from operation of the well would not be perceptible at these nearby sensitive receptors. The storage tank would not include mechanical equipment that would generate substantial noise. The Proposed Project would result in a less than significant impact because it will not create a permanent increase in ambient noise levels.

b. Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

Construction Vibration

The Proposed Project would generate temporary groundborne vibration during the demolition and construction phases. Construction activities may generate groundborne vibration as close as 200 feet from the on-site residential receptors and immediately adjacent to the educational receptors. A vibration impact could occur where noise-sensitive land uses are exposed to excessive vibration levels. Sensitive receptors within or adjacent to the Proposed Project area could be exposed to temporary groundborne vibration or groundborne noise levels. The Federal Transit Authority has published standard vibration levels and peak particle velocities for construction equipment. **Table 7** below summarizes these standards for construction equipment.

Table 7
Vibration Velocities for Construction Equipment

Equipment	Approximate Velocity Level at 25 Feet ("VdB")	Approximate Peak Particle Velocity at 25 Feet ("inches/second")	Approximate Peak Particle Velocity at 50 feet ("inches/second")	Approximate Peak Particle Velocity at 400 feet ("inches/second")
Pile Driving (sonic)	104	0.644	N/A[1]	0.006
Pile Driver (impact)	112	1.518	N/A[1]	0.015
Large Bulldozers	87	0.089	0.031	0.001
Small Bulldozer	58	0.003	0.001	0.000
Loaded Trucks	86	0.076	0.027	0.001
Jackhammer	79	0.035	N/A[1]	0.000

Note: Data reflects typical vibration level. Source: (U.S. Department of Transportation, May 2006)

For purposes of this analysis, excessive groundborne vibration would be 0.2 inches per second (as derived from the U.S. Department of Transportation, Earthborne Vibrations Technical Advisory equation for attenuation of vibration) which is the level at which vibration could cause damage to masonry and wood buildings. Vibration levels from construction equipment attenuate as they radiate from the source. (U.S. Department of Transportation, May 2006). Sensitive receptors in the area could be exposed to groundborne vibrations of varying magnitudes depending on the type of equipment and proximity to construction activities, as shown in **Table 7**.

The nearest sensitive receptors are located as close as 25 feet from demolition, electrical conduit installation, or pipeline installation. Use of heavy machinery is not anticipated to be required for demolition, electrical conduit installation, or pipeline installation. As a result, vibration from these components of the Proposed Project at sensitive receptors would be below the threshold 0.2 inches per

second. Heavy machinery may be utilized associated with drilling the well component of the Proposed Project. However, these construction activities would occur more than 200 feet from the nearest sensitive receptor and construction vibrations from these activities would be below the threshold 0.2 inches per second. Vibration associated with the construction of the Proposed Project would be below levels that could cause damage to structures, would not result in prolonged interference for sensitive receptors, and would barely be perceptible. This represents a less than significant impact.

Operational Vibration

Once operational, the Proposed Project would not generate excessive or substantial vibration. The majority of Proposed Project components would be located underground and would not produce substantial vibrations. The aboveground components of the Proposed Project would be limited to the generator, pump and wellhead. None of these project components would result in substantial vibration during operation, with the possible exception of the generator, which would be operated on an infrequent and as-needed basis in the event of a power outage. Operation of the Proposed Project would not introduce new sources of substantial vibration. This represents a less than significant impact.

c. *For a project located in 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 be residing or working in the project area to excessive noise levels?*

There are no private airstrips or public airports within two (2) miles of the project area. The closest airport is Bogdan Airport, located approximately 27 miles west of the site. The proposed project would not be subject to excessive noise from airport operation. Therefore, no impact would occur.

4.14 Population and Housing

Environmental Setting

The current population of the County is estimated at 281,639 persons based on current U.S. Census data (U.S. Census, 2023).[11] The School is located in unincorporated San Luis Obispo County and serves a population of approximately 18 students and eight (8) faculty members.

The Proposed Project is comprised of a new well, water pipeline, electrical conduit, and storage tank. The Proposed Project is intended to be a long-term solution to elevated nitrate concentrations and would not include any new water system connections. The Proposed Project would occur entirely within the boundaries of the School campus. The Proposed Project would not displace any existing housing.

Regulatory Setting

Local

San Luis Obispo County General Plan: The various elements of the San Luis Obispo County General Plan do not contain policies related to population and housing that would apply to the Proposed Project.

***San Luis Obispo County Code*:** None of the codes of the San Luis Obispo County Code would apply to the Proposed Project.

***Carrizo Area Plan*:** None of the policies related to population and housing provided in the Carrizo Area Plan are applicable to the Proposed Project.

[11] https://www.census.gov/quickfacts/fact/table/sanluisobispocountycalifornia/PST045223

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial unplanned population growth in the 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?	☐	☐	☐	■

Impact Discussion

a. Would the project induce substantial unplanned population growth in the area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

The Proposed Project consists of the replacement of an existing water supply well and does not include new water connections that would induce population growth. The Proposed Project would be utilized solely for the existing School. Therefore, the Proposed Project would serve an existing community and would not induce substantial population growth in the area. This is a less than significant impact.

b. Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

The Proposed Project consists of the replacement of an existing water supply well that solely serves the School. The Proposed Project would be located entirely within the existing School campus. Therefore, the Proposed Project would not result in the displacement of existing people or housing, and would not necessitate the construction of replacement housing elsewhere. Therefore, no impact would result.

4.15 Public Services

Environmental Setting

Key public services to the Proposed Project area (police protection, fire protection, etc.) are provided by the following agencies.

Police

Police protection services are provided by the San Luis Obispo County Sheriff's Department. Police response to the site is provided out of the San Luis Obispo County Sheriff's Department's North County Station, located at 356 North Main Street, Templeton, CA 93456, located approximately 40 miles to the northwest from the site.

Fire

Fire protection services for the area are provided by California Department of Forestry and Fire Protection ("CAL FIRE"). CAL FIRE is responsible for fire response in areas not otherwise designated as a local responsibility area. The Proposed Project is located in a "high fire hazard severity zone". The closest CAL FIRE station is the Carrizo Plains Fire Station #42 located approximately three (3) miles

southeast of the proposed project at 13080 Soda Lake Road, Santa Margarita, CA 93453 (CAL FIRE, 2024).

Schools

The District operates the schools serving the proposed project area, including the Carrisa Plains School where the Proposed Project is located.

Parks

There are no parks in the vicinity of the Proposed Project.

Regulatory Setting

Local

San Luis Obispo County General Plan – Inland Planning Element: The Inland Planning Element of the San Luis Obispo County General Plan provides the following goals and policies for mitigating public services impacts that could apply to the Proposed Project:

Policy 4.C.1: Keep the amount, location and rate of growth allowed by the Land Use Element within the sustainable capacity of resources, public services and facilities.

Policy 4.C.3: Provide additional public resources, services and facilities in sufficient time to avoid overburdening existing resources, services and facilities while sustaining their availability for future generations.

San Luis Obispo County General Plan – Safety Element: The Safety Element of the San Luis Obispo County General Plan provides the following goals and policies for mitigating public services impacts that could apply to the Proposed Project:

Goal S-4: Reduce the threat to life, structures and the environment caused by fire.

Policy S-16: ***Loss Prevention***: Improve structures and other values at risk to reduce the impact of fire. Regulations should be developed to improve the defensible area surrounding habitation.

San Luis Obispo County Code**:** None of the public services codes of the San Luis Obispo County Code would apply to the Proposed Project.

Carrizo Area Plan: None of the policies related to public services provided in the Carrizo Area Plan are applicable to the Proposed Project.

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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:				
a) Fire protection?	☐	☐	■	☐
b) Police protection?	☐	☐	■	☐
c) Schools?	☐	☐	☐	■
d) Parks	☐	☐	☐	■
e) Other public facilities	☐	☐	☐	■

Impact Discussion

a. Would the project 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 fire protection?

The Proposed Project is a water supply project and would have no impact on the operations of CAL FIRE once operational. CAL FIRE already provides emergency response services to the site and the Proposed Project would not increase demand on emergency response services during operation. Although unlikely, CAL FIRE could be required to respond to potential construction-related emergencies. Construction is expected to be completed within approximately 4.5 months and would not significantly impact fire protection services or require the construction of new or remodeled facilities. This represents a less than significant impact.

b. Would the project 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 police protection?

The Proposed Project is a water supply project and will have no impact on the operations of the San Luis Obispo County Sheriff's Department once operational. The San Luis Obispo County Sheriff's Department already provides emergency response services to the site and the Proposed Project would not increase demand on emergency response services during operation. Although unlikely, the San Luis Obispo County Sheriff's Department could be required to respond to potential construction-related emergencies. Construction is expected to be completed within approximately 4.5 months and will not

significantly impact police protection services or require the construction of new or remodeled facilities. This represents a less than significant impact.

c. *Would the project 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 schools?*

While the Proposed Project is located on an existing school campus, the Proposed Project is a water system improvements project and would not increase demand for educational facilities. The Proposed Project would have no physical impact on schools and would not require the construction of new or remodeled educational facilities. Therefore, no impact would occur.

d. *Would the project 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 parks?*

The Proposed Project is a water system improvements project. The Proposed Project would have no physical impact on parks and would not require the construction of new or remodeled facilities. Therefore, no impact would occur.

e. *Would the project 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 other public facilities?*

The Proposed Project is a water system improvements project and would have no physical impact on other public facilities, and would not require the construction of new or remodeled facilities. Therefore, no impact would occur.

4.16 Recreation

Environmental Setting

The Proposed Project is a water system project and does not include any new or altered recreational facilities. Recreational facilities are present on the project site associated with school use, consisting of paved and grassy play areas and a climbing structure. These facilities would not be affected by the Proposed Project.

Regulatory Framework

Local

San Luis Obispo County General Plan – Parks and Recreation Element: There are no relevant parks and recreation policies in the Parks and Recreation Element of the San Luis Obispo County General Plan that would apply to the Proposed Project.

***San Luis Obispo County Code*:** None of the codes of the San Luis Obispo County Code would apply to the Proposed Project.

Carrizo Area Plan: None of the policies related to recreation provided in the Carrizo Area Plan are applicable to the Proposed Project.

Would the project:	Potentially Significant Impact	Less Than Significant With 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?	☐	☐	☐	■

Impact Discussion

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?

The Proposed Project is a water system improvements project on an existing school campus and would not result in impacts to existing neighborhood and regional parks. In addition, there are no parks within the vicinity of the site. No impact would occur.

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?

The Proposed Project is a water system improvements project on an existing school campus and does not include the construction of new recreational facilities or the expansion of existing recreational facilities that may have an adverse physical impact on the environment. No impact would occur.

4.17 Transportation

Environmental Setting

The Proposed Project is located in a rural location east of the City of Atascadero at 9640 California State Route 58, Santa Margarita. Regional access to the project site is provided from State Route 58.

The Proposed Project is located entirely within the existing school site and would not require any road closures or traffic control measures.

The Proposed Project would generate a very minor increase in vehicle trips for maintenance activities after construction. The total vehicle trips per day during Project construction is not known at this time, but is expected to be minimal given 1) the short duration of construction of approximately 4.5 months, and 2) the small scale of development, consisting of removal of existing well head and storage tank and construction of a new well and water storage tank.

Regulatory Environment

State

Senate Bill 743: SB 743 required that starting July 2020 transportation impact for projects per CEQA be based on a project's Vehicle Miles Traveled ("VMT"). CEQA Guidelines Section 15064.3, subdivision

(b)(1) calls for the evaluation of transportation impacts of projects based on VMT. CEQA uses the VMT metric to evaluate a project's transportation impacts. The publication *Technical Advisory on Evaluating Transportation Impacts in CEQA, State of California Governor's Office of Planning and Research*, December 2018, suggests that a significant environmental impact would occur if a project would generate more than 110 trips per day.

Local

San Luis Obispo County General Plan – Inland Planning Element: There are no relevant transportation policies in the Inland Planning Element of the San Luis Obispo County General Plan that would apply to the Proposed Project.

***San Luis Obispo County Code*:** None of the codes of the San Luis Obispo County Code would apply to the Proposed Project.

Carrizo Area Plan: None of the policies related to transportation provided in the Carrizo Area Plan are applicable to the Proposed Project.

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☐	■

Impact Discussion

a. Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

The Circulation Element of the County of San Luis Obispo's Framework for Planning (Inland) contains goals and policies addressing the circulation system, including transit, bicycle, and pedestrian facilities. The Proposed Project would generate only minimal and infrequent vehicle trips once operational, associated with maintenance for the new well (and possibly replacement of the resin cartridges for the nitrate ion exchange system, if implemented). The Proposed Project would result in a temporary increase in traffic during construction. Construction-related vehicle trips would include workers traveling to and from the construction site and trucks associated with equipment and material deliveries. The total vehicle trips per day during construction is not known at this time but is expected to be minimal. Construction of the Proposed Project would occur entirely within the existing School campus and would not require any road closures or off-site traffic controls. The temporary increase in traffic from

construction of the Proposed Project would be minimal compared to existing traffic conditions along State Route 58.

There are no dedicated bicycle or pedestrian facilities along State Route 58 in the vicinity of the Proposed Project; therefore, construction of the Proposed Project would not impact these facilities. Construction is a short-term, temporary activity and construction trips would account for a relatively small portion of existing traffic on area roadways. The Project would not conflict with the Circulation Element or any other program, plan, ordinance or policy addressing the circulation system. Therefore, traffic generated during construction and operation of the Proposed Project would be less than significant.

b. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

An assessment of VMT requires estimating or measuring the full length of trips people take by purpose as work trips, deliveries, shopping, etc. The Governor's Office of Planning and Researched prepared a Technical Advisory on Evaluating Transportation Impacts (OPR, 2018) to provide guidance on conducting analyses consistent with SB 743 and the revised CEQA Guidelines. The roadway that provides access to the Proposed Project site is State Route 58, a two-directional, single-lane state highway that is maintained by the California Department of Transportation ("Caltrans"). The County of San Luis Obispo has developed a VMT Program as outlined in the *San Luis Obispo County Transportation Impact Analysis Guidelines* (County, June 2021). The Transportation Impact Analysis Guidelines contains a list of discretionary development project types that are considered to have a less than significant VMT impact and are not subject to VMT analysis. Specifically, the County identified a screening threshold that small discretionary development projects that are consistent with the County General Plan and that would generate fewer than 110 daily trips (consistent with trip generation associated with projects eligible for a Categorical Exemption under CEQA) are not subject to VMT analysis. The Proposed Project involves the replacement of an existing well and water storage tank and falls within this category. The Proposed Project would generate only minimal and infrequent trips once operational, associated with monthly maintenance of Project components. While the Proposed Project would result in vehicle trips associated with construction, these trips would cease after the conclusion of the approximately 4.5-month construction period and do not represent a permanent increase in VMT or daily vehicle trips. The Proposed Project would generate fewer than 110 trips per day; therefore, the Proposed Project would have a less than significant impact on the transportation system.

c. Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The Proposed Project would not substantially increase hazards due to a design feature (for example, sharp curves or dangerous intersections) or incompatible uses. The Proposed Project would generate infrequent minimal maintenance trips once operational. The Proposed Project would occur entirely within the School's campus and would not impact travel on public roadways. The Proposed Project does not include the construction of hazardous design features and would not result in incompatible uses with the surrounding developed area. This represents a less than significant impact.

d. Would the project result in inadequate emergency access?

The Proposed Project would occur entirely within the existing School campus and would not require roadway closures that would result in adequate emergency access. The Proposed Project consists of the replacement of an existing well and storage and installation of new electrical conduit and water pipelines. The Proposed Project would not affect emergency access to the site. Therefore, no impact would occur.

4.18 Tribal Cultural Resources

Achasta prepared a Phase I Archaeological Assessment for the Proposed Project in August 2024 (**Appendix D**). The Assessment includes the results of background research and field reconnaissance of the Proposed Project's Area of Potential Effect ("APE"). Background research consisted of a records search from the CCIC, an SLF search with the NAHC, and Native American consultation in support of consultation under AB 52. The field reconnaissance consisted of a pedestrian survey of the APE on March 28th, 2024, which investigated the APE for cultural and Tribal cultural resources.

Environmental Setting

Regional History

The Proposed Project area geographically lies within an area of cultural intersections between the Chumash, the Salinan, and the Yokut. The traditional way of life for the native inhabitants in the Central Coast was largely destroyed in the 1760s with the arrival of Euro-Americans. However, the Carrizo Plain lay largely outside of the mission interests with no known visits to the area. Significant changes for the region, including the opportunity to engage in international trade, began when Mexico achieved independence from Spain in 1822. Spanish land control practices were replaced with private land grants given or sold to prominent Californio families after the secularization of the California missions. Later in 1848 after the end of the Mexican-American War, the United States annexed nearly all of the territory of the present states of New Mexico, Utah, Nevada, Arizona, California, Texas, and western Colorado. Although the Californio's had, on paper, intended to grant Indigenous families mission lands during the Mexican period of secularization, those intentions were not fulfilled, and Indigenous land claims were subsequently not recognized by the American government.

The Project APE is located in the Carrizo Plain within the contemporary and ancestral boundaries of multiple Tribes, including the Cuyuma Chumash and Obispeño Chumash in the southern, central, and western Carrizo Plain, the Migueleño Salinan in the north Carrizo Plain, and the Southern Yokut in the eastern rim of the Temblor Range. However, the Chumash speaking people were the dominant linguistic group along the Central Coast and interior. One of six Chumash *idioma*, the Northern Chumash, called Obispeño after Mission San Luis Obispo de Tolosa, are indigenous to the Pacific Coast west of the Project area.

Native American Consultation

The District sent letters containing a brief project description and maps of the APE to the following groups identified by the NAHC in July 2024: the Barbareño/Ventureño Band of Mission Indians, Chumash Council of Bakersfield, Coastal Band of the Chumash Nation, Northern Chumash Tribal Council, Salinan Tribe of Monterey, San Luis Obispo Counties, Santa Ynez Band of Chumash Indians, Tule River Indian Tribe, Xolon-Salinan Tribe, and yak tityu tityu yak tiłhini – Northern Chumash Tribe. The District sent letters on July 23, 2024 to the local Native American contacts identified by the NAHC. A sample letter is provided in **Appendix E**. The District also conducted follow-up outreach via email to the listed contacts based on information provided by the NAHC. The District received a response letter from the Santa Ynez Band of Chumash Indians on August 5th, 2024, a response from the Salinan Tribe of Monterey, San Luis Obispo Counties on August 21st, 2024, and a request for the Phase I Archaeological Assessment from the Xolon-Salinan Tribe on September 10th, 2024; however, no tribal consultation was requested from either group.

Regulatory Environment

Federal

National Historic Preservation Act: Section 106 of the National Historic Preservation Act of 1966 (54 U.S.C. § 300301 et seq.), as amended, requires that a federal agency with direct or indirect jurisdiction over a proposed federal or federally assisted undertaking, or issuing licenses or permits, consider the effect of the proposed undertaking on historic properties. A historic property may include a prehistoric or historic-era building, structure, object, site or district included in, or eligible for inclusion in, the National Register maintained by the U.S. Secretary of the Interior. Federal agencies must also allow the ACHP to comment on the proposed undertaking and its potential effects on historic properties. The implementing regulations for Section 106 of the NHPA (36 CFR 800) require consultation with the SHPO, the ACHP, federally recognized Indian tribes and other Native Americans, and interested members of the public throughout the compliance process. The four (4) principal steps are:

- Initiate the Section 106 process, including consultation with interested parties (36 CFR 800.3);
- Identify historic properties, i.e., resources included in or eligible for inclusion in the National Register (36 CFR 800.4);
- Assess the effects of the undertaking on historic properties within the area of potential effect (36 CFR 800.5); and
- Resolve adverse effects (36 CFR 800.6).

Adverse effects on historic properties are often resolved through preparation of a Memorandum of Agreement or Programmatic Agreement developed in consultation between the federal agency, the SHPO, Indian tribes, and interested members of the public. The ACHP is also invited to participate. The agreement describes stipulations to mitigate adverse effects on historic properties listed in or eligible for the National Register (36 CFR 60).

National Register of Historic Places: The National Historic Preservation Act established the National Register as "an authoritative guide to be used by federal, state, and local governments, private groups and citizens to identify the Nation's historic resources and to indicate what properties should be considered for protection from destruction or impairment" (36 CFR Section 60.2). The National Register recognizes both historic-era and prehistoric archaeological properties that are significant at the national, state, and local levels.

To be eligible for listing in the National Register, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Buildings, structures, objects, sites or districts of potential significance must meet one or more of the following four (4) established criteria (NPS, 1990):

A. Are associated with events that have made a significant contribution to the broad patterns of our history;

B. Are associated with the lives of persons significant in our past;

C. Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. Have yielded, or may be likely to yield, information important in prehistory or history.

Unless the property possesses exceptional significance, it must be at least 50 years old to be eligible for National Register listing (NPS, 1990). In addition to meeting the criteria of significance, a property must

have integrity. Integrity is defined as “the ability of a property to convey its significance” (NPS, 1990). The National Register recognizes seven (7) qualities that, in various combinations, define integrity. To retain historic integrity a property must possess several, and usually most, of these seven aspects. Thus, the retention of the specific aspects of integrity is paramount for a property to convey its significance. The seven (7) factors that define integrity are location, design, setting, materials, workmanship, feeling, and association.

Although the National Register standards for historic integrity are high, the National Register accepts that a property “must also be judged with reference to the particular criteria under which a resource is proposed for eligibility.” Most archaeological properties are evaluated under Criterion D; the most applicable qualities of integrity under this criterion are those of location, materials, and association.

Integrity also defines the research potential of a resource. To possess research potential, archaeological data must have integrity in the form of what has been called “focus” (Deetz, 1977). Focus, in this context, means the accuracy with which the archaeological remains represent a situation or condition. When focus is absent or inadequate because of disturbance, a resource does not retain integrity. Remains that represent several activities or have materials that cannot be separated from one another into discrete contexts may also lack focus and therefore integrity.

State

***CEQA and California Register of Historical Resources*:** CEQA requires regulatory compliance for projects involving historic resources throughout the State. Under CEQA, public agencies must consider the effects of their actions on historic resources (Public Resources Code, Section 21084.1). The CEQA Guidelines define a significant resource as any resource listed in or determined to be eligible for listing in the California Register of Historical Resources (California Register) [see Public Resources Code, Section 21084.1 and CEQA Guidelines Section 15064.5 (a) and (b)].

The California Register of Historical Resources was created to identify resources deemed worthy of preservation and was modeled closely after the National Register of Historic Places. The criteria are nearly identical to those of the National Register, which includes resources of local, state, and regional and/or national levels of significance. Under California Code of Regulation Section 4852(b) and Public Resources Code Section 5024.1, a historical resource must be greater than 50 years old and must be significant at the local, state, or national level under one or more of the following four criteria:

1. It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States.
2. It is associated with the lives of persons important to local, California, or national history.
3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or important creative individual or possesses high artistic values.
4. It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

Properties of local significance that have been designated under a local preservation ordinance (local landmarks register or landmark districts) or that have been identified in a local historical resources inventory may be eligible for listing in the California Register and are presumed to be historical resources for the purposes of CEQA unless a preponderance of evidence indicates otherwise (Public Resources Code, Section 5024.1g; California Code of Regulations, Title 14, Section 4850).

California Code of Regulations Section 4852(c) addresses the issue of "integrity," which is necessary for eligibility for the California Register. Integrity is defined as "the authenticity of an historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance." Section 4852(c) provides that historical resources eligible for listing in the California Register must meet one of the criteria for significance defined by 4852(b) (1 through 4) and retain enough of their historic character of appearance to be recognizable as historical resources and to convey the reasons for their significance.

California Public Resources Code: Several sections of the California PRC protect cultural resources located on public land. Under PRC Section 5097.5, no person shall knowingly and willfully excavate upon, or remove, destroy, injure, or deface, any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site (including fossilized footprints), inscriptions made by human agency, rock art, or any other archaeological, paleontological, or historical feature situated on public lands, except with the express permission of the public agency that has jurisdiction over the lands. Violation of this section is a misdemeanor.

PRC Section 5097.98 states that if Native American human remains are identified within a project area, the landowner must work with the Native American Most Likely Descendant as identified by the NAHC to develop a plan for the treatment or disposition of the human remains and any items associated with Native American burials with appropriate dignity. Section 15064.5 of the State CEQA Guidelines also addresses these procedures. California Health and Safety Code Section 7050.5 prohibits disinterring, disturbing, or removing human remains from a location other than a dedicated cemetery. Section 30244 of the PRC requires reasonable mitigation for impacts on paleontological and archaeological resources that occur because of development on public lands.

California Health and Safety Code: California Health and Safety Code Section 7050.5 regulates the treatment of human remains. In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site, or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined that the remains are not subject to his or her authority. If the coroner recognizes the human remains to be those of a Native American or has reason to believe that they are those of a Native American, he or she shall contact the NAHC by telephone within 24 hours.

Native American Heritage Commission**:** The NAHC was created by statute in 1976, is a nine (9) member body appointed by the Governor to identify and catalog cultural resources (i.e., places of special religious or social significance to Native Americans and known graves and cemeteries of Native Americans on private lands) in California. The Commission is responsible for preserving and ensuring accessibility of sacred sites and burials, the disposition of Native American human remains and burial items, maintaining an inventory of Native American sacred sites located on public lands, and reviewing current administrative and statutory protections related to these sacred sites.

Assembly Bill 52: Prior to the enactment of AB 52, the State of California found current laws provided limited protection for sites, features, places, objects, and landscapes with cultural value to California Native American Tribes. These items and locations included the protection of Native American sacred places such as places of worship, religious or ceremonial sites, and sacred shrines. California Native Americans have used, and continue to use, natural settings in the conduct of religious observances, ceremonies, and cultural practices and beliefs. These resources reflect the Tribes' continuing cultural ties to the land and their traditional heritage. Many of these archaeological, historical, cultural, and sacred sites are not located in the current boundaries of California Native American reservations and rancherias, and therefore are not covered by the protectionist policies of Tribal governments. To

recognize California Native American Tribal sovereignty and the unique relationship of California local governments and public agencies with California Native American Tribal governments, and respecting the interests and roles of project proponents, the Legislature enacted AB 52 Native Americans: California Environmental Quality Act.

AB 52 formally recognizes that California Native American prehistoric, historic, archaeological, cultural, and sacred places are essential elements in tribal cultural traditions, heritages, and identities. California Native American Tribes are experts regarding their tribal history and practices for which they are traditionally and culturally affiliated. Due to this unique history, and to uphold existing rights of all California Native American Tribes to participate in, and contribute their knowledge to, environmental analysis, projects should include tribal knowledge about the land and tribal cultural resources at issue. Projects should also consider a potential significant impact on those resources. Therefore, a meaningful consultation between California Native American Tribal governments and lead agencies, respecting the interests and roles of all California Native American Tribes and project proponents, and the level of required confidentiality concerning Tribal cultural resources shall occur. Doing so will allow identification of potential tribal cultural resources onsite and incorporation of culturally appropriate mitigation measures considered by the decision-making body of the lead agency. Doing so also enables California Native American Tribes to manage and accept conveyances of, and act as caretakers of, tribal cultural resources and ultimately establishes that a substantial adverse change to a tribal cultural resource has a significant effect on the environment.

Local

***San Luis Obispo County General Plan – Conservation and Open Space Element*:** The following policies of the Conservation and Open Space Element of the San Luis Obispo County General Plan could be applicable to the Proposed Project.

Goal CR-4*:* The county's known and potential Native American, archaeological, and paleontological resources will be preserved and protected.

Policy CR-4.1*:* ***Non-development Activities***: Discourage or avoid non-development activities that could damage or destroy Native American and archaeological sites, including off-road vehicle use on or adjacent to known sites. Prohibit unauthorized collection of artifacts.

Policy CR-4.2: ***Protection of Native American Cultural Sites***: Ensure protection of archaeological sites that are culturally significant to Native Americans, even if they have lost their scientific or archaeological integrity through previous disturbance. Protect sites that have religious or spiritual value, even if no artifacts are present. Protect sites that contain artifacts, which may have intrinsic value, even though their archaeological context has been disturbed.

Policy CR-4.4: ***Development Activities and Archaeological Sites***: Protect archaeological and culturally sensitive sites from the effects of development by avoiding disturbance where feasible. Avoid archaeological resources as the primary method of protection.

***San Luis Obispo County Code*:** The following cultural resources codes provided by Title 22 of the San Luis Obispo County Code could be applicable to the Proposed Project:

Chapter 22.10.040 Archaeological Resources: In the event archeological resources are unearthed or discovered during any construction activities, the following standards apply:

22.10.040(A): Construction activities shall cease, and the Department shall be notified so that the extent and location of discovered materials may be recorded by a qualified

archaeologist, and disposition of artifacts may be accomplished in accordance with state and federal law.

22.10.40(B): In the event archeological resources are found to include human remains, or in any other case when human remains are discovered during construction, the County Coroner shall be notified in addition to the Department so proper disposition may be accomplished.

Carrizo Area Plan: None of the policies related to tribal cultural resources provided in the Carrizo Area Plan are applicable to the Proposed Project.

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) 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:				
i) 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 Section 5020.1(k), or	☐	■	☐	☐
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	■	☐	☐

Impact Discussion

a.i. and a.ii, 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: 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 Section 5020.1(k), or 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.

The Phase I Archaeological Assessment included archival research, a background records search at NWIC, an SLF search with the NAHC, a visual survey of the Proposed Project site, and a review of the site's geology and soil profiles. AB 52 consultation with Native American Tribes was also completed. The SLF search for the Proposed Project APE was negative for tribal cultural resources. The NWIC records search identified one (1) archeological study within a 1/2-mile radius of the Proposed Project site. Visual surveys did not find evidence of any potential tribal cultural resources.

The County performed tribal outreach as required pursuant to AB 52. The District did not receive any requests for consultation during or following the 30-day AB 52 window. The District provided copies of the Phase I Archaeological Assessment (Achasta, 2024) to the Xolon-Salinan Tribe and the Salinan Tribe of Monterey, San Luis Obispo Counties based on their requests, but did not receive any formal requests for consultation. The Salinan Tribe of Monterey, San Luis Obispo Counties requested notification in the event that potential unknown cultural resources are unearthed during project construction. The Proposed Project includes **Mitigation Measures CUL-1** through **CUL-3** to reduce impacts to a less than significant level (see **Section 4.5 Cultural Resources**).

4.19 Utilities and Service Systems

Environmental Setting

Water Supply

The School is currently connected to an on-site well and is not connected to infrastructure operated and maintained by a larger water utility provider. The existing well serves only the existing school and two (2) single-family residences located on the site. Well permits in San Luis Obispo County are required from the San Luis Obispo County Environmental Health Department whenever a new well is proposed for construction or an existing well is proposed for demolition. The Proposed Project will demolish and remove the existing on-site well and replace it with a new well. The Proposed Project would provide potable water to the School and existing residences for use in place of bottled water; the Proposed Project does not include additional water connections.

Wastewater

The School is currently connected to an existing septic system and is not connected to infrastructure operated and maintained by a larger wastewater treatment provider. The Proposed Project has been designed to avoid the septic system and would not impact operations of the existing septic system.

Solid Waste

Waste Management provides solid waste collection service to the School. Construction of the Proposed Project would generate materials that would need to be disposed of at a permitted solid waste facility regulated by the California Office of Environmental Health. The disposal location for construction waste has not been determined at this time. Operation of the Proposed Project would not increase generation of solid waste compared to existing conditions.

Regulatory Environment

State

***Assembly Bill 939*:** California AB 939 established the California Integrated Waste Management Board ("CalRecycle"), which required all California counties to prepare Integrated Waste Management Plans. Additionally, AB 939 required all municipalities to divert 50 percent of their waste stream by the year 2000.

***California Green Building Standards Code*:** In 2022, California adopted the most recent version of the California Green Building Standards Code, which establishes mandatory green building standards for new and remodeled structures in California. These standards include a mandatory set of guidelines and more stringent voluntary measures for new construction projects, to achieve specific green building performance levels as follows:

- Reduce indoor water use by 20 percent;
- Reduce wastewater by 20 percent;
- Recycle and/or salvage 50 percent of nonhazardous construction and demolition debris; and
- Provide readily accessible areas for recycling by occupant.

Local

San Luis Obispo County General Plan – Inland Planning Element: San Luis Obispo County General Plan – Inland Planning Element: There are no relevant utilities and service system policies in the Inland Planning Element of the San Luis Obispo County General Plan that would apply to the Proposed Project.

***San Luis Obispo County Code*:** The following utilities and service systems codes provided by Title 22 of the San Luis Obispo County Code could be applicable to the Proposed Project:

8.40.062 - Location of well installation: A new water well shall be located no closer than ten feet from any property line.

Carrizo Area Plan: The Carrizo Area Plan states that the plan area is within an overdrafted basin where water is typically of poor quality. The Carrizo Area Plan also states that individual well reliance is the only feasible source of water supply for most development in the plan area. None of the policies related to utilities and service systems provided in the Carrizo Area Plan are applicable to the Proposed Project.

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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 would cause significant environmental effects?	☐	☐	■	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	☐	☐	■	☐

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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 management and reduction statuses and regulations related to solid waste?	☐	☐	■	☐

Impact Discussion

a. Would the project 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 would cause significant environmental effects?

The Proposed Project consists of the replacement of an existing well and storage tank to provide a long-term reliable water supply for the School. The Proposed Project would not generate any additional wastewater or exceed or impact wastewater treatment requirements of the applicable Regional Water Quality Control Board. The Proposed Project would not require additional construction or relocation of storm water drainage, electric power, natural gas, or telecommunications facilities which would cause significant environmental effects. The potential adverse environmental effects associated with the replacement of the existing water infrastructure and extension of electrical infrastructure to power the proposed well are fully evaluated throughout the topical sections of this IS/MND. With implementation of mitigation measures as identified in this IS/MND construction of new water service facilities would result in a less than significant impact.

b. Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

The Proposed Project consists of the replacement of an existing well to provide for long-term reliable water supply for the School. The existing well accesses groundwater at a depth of approximately 102 feet; this water was tested and found to have elevated nitrate concentrations ranging from 11.5 to 16.4 mg/L since 2015 (see **Appendix A**). The proposed well would draw from the same groundwater basin as the existing well but would be deeper to access groundwater at a depth of approximately 600-feet, where nitrate contamination levels are anticipated to be significantly lower than closer to the surface of the groundwater basin. The Proposed Project replaces an existing well and would not represent a significant increase in groundwater pumping compared to existing and historical conditions.

Groundwater accessed by the Proposed Project would be drawn from the CPGB, which is designated as a very low priority basin by the DWR and is not designated as being critically overdrafted. Therefore, the

Proposed Project would have a less than significant impact with respect to impacting available water supplies during normal, dry, and multiple dry years.

c. Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

The School is served by an existing septic system and is not connected to wastewater conveyance infrastructure owned and/or operated by a wastewater treatment provider. The Proposed Project consists of the replacement of an existing well and storage tank to provide for long-term reliable water supply for the School. The Proposed Project would not impact operation of the existing septic system and would not require new wastewater service or expansion of existing wastewater service. The Proposed Project would result in no impact related to increasing demand on a wastewater provider.

d. Would the project 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? Would the project comply with federal, state, and local management and reduction statuses and regulations related to solid waste?

The Proposed Project would generate solid waste during construction. Construction waste would be disposed of at a permitted solid waste facility regulated by the California Office of Environmental Health. The disposal location for construction waste has not been determined at this time. The Proposed Project would not result in soil cuttings that would be required to be hauled off site. The Proposed Project would generate a small amount of debris from demolition of the existing well that would be disposed of at a permitted landfill with adequate capacity. The Proposed Project would not generate solid waste once operational. Therefore, the Proposed Project would have a less than significant impact related to generating solid waste in excess of state to local standards.

e. Would the project comply with federal, state, and local management and reduction statuses and regulations related to solid waste?

Waste disposal to landfills as a result of the Proposed Project would be minimized, and all waste would be properly disposed of in a safe, appropriate, and lawful manner in compliance with all applicable regulations of local, state (California Integrated Waste Management Act of 1989 & California Green Building Standards), and federal regulations related to solid waste. Since the Proposed Project will require compliance with all county, state, and federal regulations and conditions, there will be no violation of the regulations concerning solid waste disposal as conditions for approval. This constitutes a less than significant impact.

4.20 Wildfire

Environmental Setting

FHSZs are defined by CAL FIRE based on the presence of fire-prone vegetation, climate, topography, assets at risk (e.g., high population centers), and a fire protection agency's ability to provide service to the area (CAL FIRE, 2024). FHSZs are designated as "Very High," "High," or "Moderate." The Proposed Project is located in a state fire responsibility area that is protected by CAL FIRE. The Proposed Project site is located in a High FHSZ as designated by CAL FIRE. The Proposed Project would be located entirely within the existing School campus. The School maintains two (2) water storage tanks that are available for fire suppression.

Regulatory Setting

Local

San Luis Obispo County General Plan – Safety Element: The following goals and policies of the Safety Element of the San Luis Obispo County General Plan could be applicable to the Proposed Project:

Goal S-4*:* Reduce the threat to life, structures and the environment caused by fire.

Policy S-13: New development should be carefully located, with special attention given to fuel management in higher fire risk areas. Large, undeveloped areas should be preserved so they can be fuel-managed. New development in fire hazard areas should be configured to minimize the potential for added danger.

***San Luis Obispo County Code*:** The following fire safety codes provided by Title 22 of the San Luis Obispo County Code are applicable to portions of the Proposed Project:

Chapter 22.50 - Fire Safety:

Chapter 22.60.050 (B)(3) - Fire Department: County fire protection agencies including the County Fire Department, the various county fire protection districts and the California Department of Forestry shall be notified of all Site Plan Review, Minor Use Permit and Conditional Use Permit proposals within their respective jurisdictions.

Carrizo Area Plan: None of the policies related to wildfire provided in the Carrizo Area Plan are applicable to the Proposed Project.

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☐	■
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?	☐	☐	■	☐

a. Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

The Proposed Project would be located entirely within the existing School campus and does not include any characteristics or features that would interfere with an adopted emergency response plan or

emergency evacuation plan. The Proposed Project would not result in the closure of any roads. This represents a less than significant impact.

b. Would the project, 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?

The Proposed Project would be located entirely within the existing School campus. The site is relatively flat and the School maintains two (2) water storage tanks on site for fire suppression. The Proposed Project is located in a High FHSZ as designated by CAL FIRE. The site is located in an area with grasses and other sparse vegetation that could be susceptible to wildfire. However, the electrical components of the Proposed Project would be undergrounded to prevent fire as a result of electrical malfunction. In addition ,the well component of the Proposed Project would be located within a 25 foot by 25 foot enclosure that would be kept free of dry vegetation during operation. The Proposed Project would not increase the risk of fire on the site due to slope, prevailing winds, or exacerbation of wildfire risks. This represents a less than significant impact.

c. Would the project 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?

The Proposed Project would be located entirely within the existing School campus. Surrounding uses consist of agricultural and low density residential land uses, an ecological reserve, and a solar energy farm. The School maintains two (2) water storage tanks for fire suppression. While the Proposed Project would remove and replace one of the water storage tanks, construction of the Proposed Project would not interfere with use of the remaining water tank for fire suppression, and no additional fire suppression would be required as a result of the Proposed Project. Once operational, the School would have an increased supply of water available for fire suppression in the event of a wildfire, as the replacement storage tank would have a greater storage capacity. The electrical components of the Proposed Project would be undergrounded and therefore the Proposed Project does not include infrastructure facilities that would exacerbate fire risk. No impact would occur.

d. Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

The topography of the Proposed Project site and surrounding area is flat; therefore, the risk of exposure of people to hazards from downstream flooding or landslides as a result of post-fire conditions is considered low. In addition, the Proposed Project does not include any habitable structures. This represents a less than significant impact.

4.21 Mandatory Findings of Significance

	Potentially Significant Impact	Less Than Significant With 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 which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	■	☐	☐

Impact Discussion

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?

The Proposed Project would not 1) degrade the quality of environment, 2) substantially reduce the habitat of a fish or wildlife species, 3) cause a fish or wildlife population to drop below self-sustaining levels, 4) threaten or eliminate a plant or animal community, 5) reduce the number or restrict the range of a rare or endangered plant or animal, 6) eliminate important examples of major periods of California history or prehistory. The Proposed Project would result in temporary construction-related impacts that would be mitigated to a less than significant level through the incorporated of mitigation measures identified in this IS/MND. All operational impacts associated with the Proposed Project would also be reduced to less than significant though the incorporation and implementation of mitigation measures.

Mitigation measures are identified for potential impacts of the project to special status species (Kit Fox, nesting birds) and potential disturbance to cultural resources (buried archaeological resources and human remains) to reduce these effects to less than significant. No additional mitigation is necessary beyond that identified in each of the respective topical CEQA sections contained in this IS/MND.

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.)

The Proposed Project would not result in a cumulatively considerable adverse environmental effect. To determine whether a cumulative effect requires an EIR, the lead agency shall consider whether the impact is significant and whether the effects of the project are cumulatively considerable (CEQA Guidelines Section 15064(h)(1)). This IS/MND contains mitigation to ensure that all potential impacts are minimized to less than significant. CEQA allows a lead agency to determine that a project's contribution to a potential cumulative impact is not considerable and thus not significant when mitigation measures identified in the initial study will render those potential impacts less than considerable (CEQA Guidelines 15064(h)(2)). The Proposed Project would replace the existing water supply infrastructure serving the School with new water supply equipment that would improve water quality and comply with regulatory requirements. As discussed throughout this IS/MND, the Proposed Project would serve only the existing School and residences on the site and would not cause a cumulative effect by potentially serving future development of the surrounding area. Moreover, construction and operation of the Proposed Project would occur in previously disturbed and developed areas within the existing parcel. In addition, there are no ongoing or future projects pending approval that would result in a cumulative impact. Where construction and operational effects are identified, mitigation measures are presented to minimize these impacts to less than significant.

c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

The Proposed Project would not have a substantial adverse effect on human beings, either directly or indirectly. This IS/MND contains mitigation measures to ensure that all potential impacts would be minimized to less than significant. The Proposed Project would improve water quality for students and faculty at the Carrisa Plains School.

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Chapter 5. References

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Appendix A

Engineering Report

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RURAL COMMUNITY ASSISTANCE CORPORATION

CARRISA PLAINS ELEMENTARY SCHOOL WATER SYSTEM

ENGINEERING REPORT - DRAFT

CONSULTANT	MNS ENGINEERS, INC.
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PROJECT CONTACT	**Tyler Hunt, P.E., Principal Engineer** 805.592.2078 mobile | thunt@mnsengineers.com

February 9, 2023

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List of Abbreviations

ADD	Average Daily Demand
CART	Color Alternatives Review Table
CEQA	California Environmental Quality Act
CHG	Cleath-Harris Geologists, Inc.
County	San Luis Obispo County
District	Atascadero Unified School District
DDA	Denise Duffy & Associates
DDW	California Division of Drinking Water
DWR	California Department of Water Resource
DWSRF	State of California Drinking Water State Revolving Fund
EPA	Environmental Protection Agency
F&T	Filipponi & Thompson Pump Co.
FEMA	Federal Emergency Management Agency
ft bls	Feet below land surface
GPD	Gallons Per Day
hp	Horsepower
MCL	Maximum Contaminant Level
MDD	Maximum Daily Demand
MMDD	Maximum Average Month Daily Demand
MNS	MNS Engineers, Inc
OPC	Opinion of Probable Cost of Construction
PHD	Peak Hourly Demand
O&M	Operations and Maintenance
PSI	Pounds per Square Inch
PVC	Polyvinyl Chloride
Report	Engineering Report
RCAC	Rural Community Assistance Corporation
RO	Reverse Osmosis
School	Carrisa Plains Elementary School
SLO EHS	San Luis Obispo County Environmental Health Services
SWRCB	State Water Resources Control Board
TDS	Total Dissolved Solids
TMF	Technical, Managerial, and Financial

Section 1. Executive Summary

1.1. Project Background

The Atascadero Unified School District (District) operates a small, non-transient, non-community water system at the Carrisa Plains Elementary School (School). The District is receiving technical assistance from the State of California to coordinate and develop a project to address water quality issues. The high nitrate levels and other equipment condition issues the system is facing are discussed in Section 3. Assistance funds are being administered through the Rural Community Assistance Corporation (RCAC). RCAC has contracted with MNS Engineers, Inc. (MNS) to provide planning and design services to assist the community.

This Engineering Report (Report) provides an analysis of design alternatives and a recommended preliminary design for the overall Project. The scope of the Project includes this report and detailed design of the selected alternative.

1.2. Project Alternate Analysis

Alternatives were developed to address identified water quality issues with the School's water system. Five primary alternatives were identified to address the issues:

- **Alternative 1: Continue as-is "Bottled Water Exemption"—**Not considered feasible for the purposes of this Report due to San Luis Obispo (SLO) County Environmental Health Services' comment on a 2019 Water System Inspection Report.
- **Alternative 2: Point-of-Use Treatment System—**"Under-the-sink" and free-standing reverse osmosis units could treat domestic water before it exits individual taps.
- **Alternative 3: Whole-School Treatment System—**A centralized water softener and nitrate-specific ion exchange system could treat domestic water as it enters the potable water distribution system.
- **Alternative 4: Aquifer Isolation—**The existing well is deemed too heavily corroded to accommodate packers that could block specific sections of the well perforations with poorer water quality.
- **Alternative 5: New Well—**A new, deeper well would have the potential to produce better-quality water than that of the old well.

1.3. Selected Project

The selected project was chosen based on evaluating the advantages and disadvantages of each alternative. The selected project is Alternative 5: New Well. Because the water quality of a new well cannot be determined before drilling and sampling, the project could also include Alternative 3: Whole-School Treatment System in conjunction with construction of a new well, dependent on produced water quality.

The project includes drilling, casing, and equipping a new well on the southeast corner of the School property. Water from the new well would be piped through approximately 1,400 ft of 4-inch PVC Schedule 40 pipe and connected to the existing distribution system at the existing well building. The existing plastic potable water storage tank would be replaced with a new 10,000-gallon bolted steel storage tank, and other equipment like booster pumps would be replaced as needed.

Should water produced by the new well require further treatment, a new selective ion exchange treatment system and water softening system would also be installed.

1.4. Cost Opinions for the Selected Project

The opinion of probable implementation cost of the recommended project is $1,995,000 and is summarized Table 1-1.

Table 1-1. OPC of Selected Project

Item	Percent of Construction Cost	Cost
Project Construction	100%	$1,500,000
County Administration	3%	$45,000
Topographic and Boundary Survey	1%	$15,000
Detailed Design	10%	$150,000
Environmental Permitting	4%	$60,000
Construction Management	15%	$225,000
Total Project Cost		**$1,995,000**

1.5. Project Schedule

An anticipated project schedule has been prepared and is included in Section 8. Based on the prepared schedule, 90% project design is anticipated to be completed by August 2024. Project construction schedule is dependent on funding timelines.

Section 2. Background Project Information

The Atascadero Unified School District (District) operates a small, non-transient, non-community water system at the Carrisa Plains Elementary School (School). The School is located on the Carrizo Plain in eastern San Luis Obispo County (Figure 2-1). The location is rural, with the nearest services in the City of Atascadero, located 45 miles to the west. The system is permitted to supply drinking water for up to 65 people on one service connection and currently serves 18 students, four staff, and two residential units adjacent to the School. Historically, the largest number of students at the School is 40, plus staff and residences.

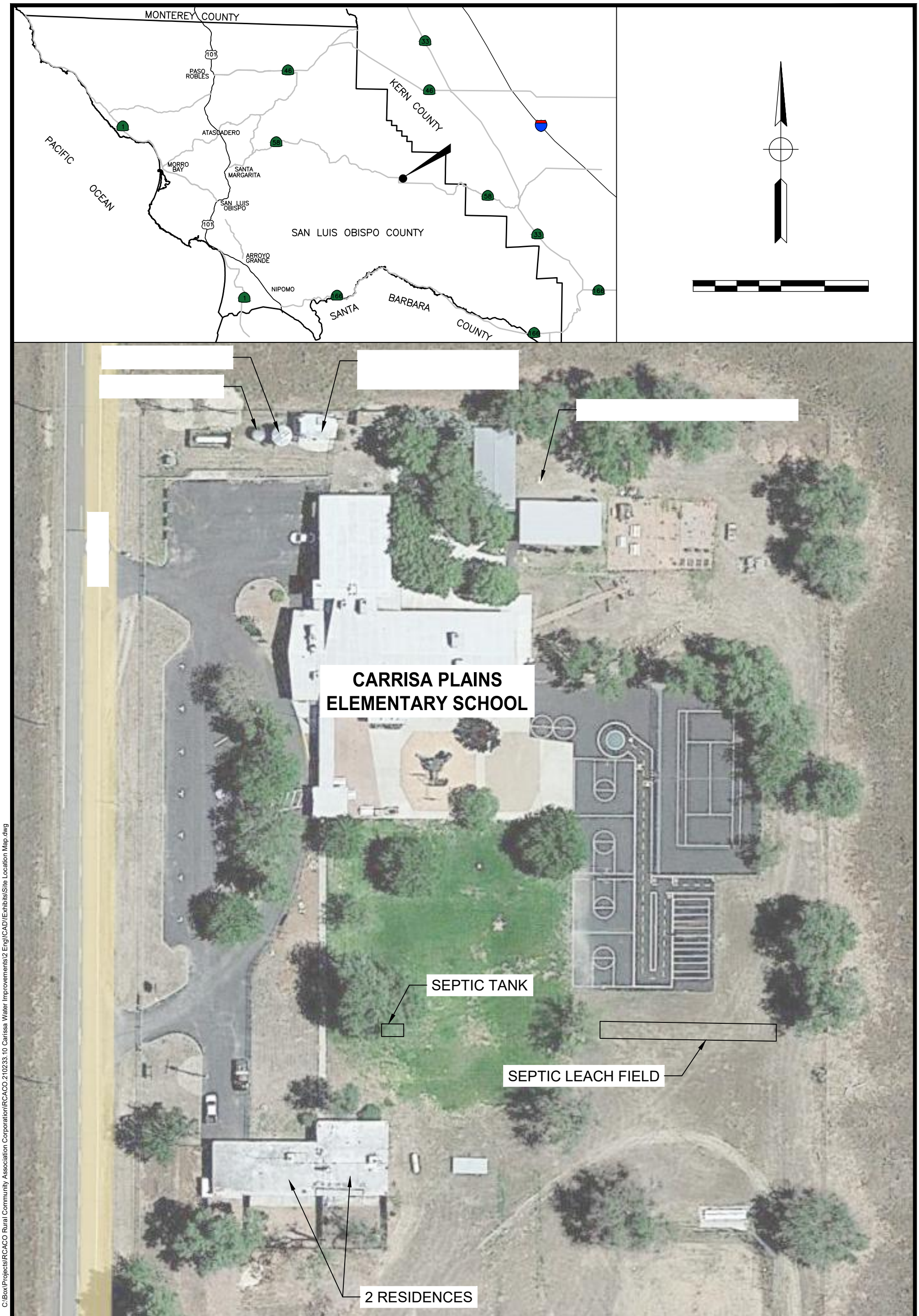
The School's only water source is a single onsite groundwater well. According to records from the local government regulatory agency for water quality and groundwater wells, San Luis Obispo County Environmental Health Services (SLO EHS), the well has discharged water containing nitrates above the Division of Drinking Water's (DDW) maximum contaminant level (MCL) since at least 2002. Due to the nitrate MCL exceedance, students, staff, and adjacent residents are currently using bottled water for potable consumption. The School system's water quality is discussed further in Section 3.2.

2.1. Project Area and Existing Facilities

The existing School potable water system consists of a single groundwater well, a 2,500-gallon plastic storage tank, and sodium hypochlorite dosing to meet domestic demands. Due to water quality issues, water from the well is not consumed. A 10,000-gallon welded steel tank is utilized for storage to meet irrigation demands. Both tanks are available for fire suppression when needed.

2.1.1. Well

The School, District, and SLO EHS have limited well construction or historical information for the onsite groundwater well. The 12-inch diameter well is believed to have been installed in 1953 to a depth of 102 feet below land surface (ft bls). A Water Well Drillers Report from the California Department of Water Resources (DWR) database, believed to be the School well, is included in Appendix A. The well is located inside a Well and Booster Pump Building. Figure 2-1 shows a general layout of the School's existing water facilities.



CARRISA PLAINS ELEMENTARY SCHOOL WATER IMPROVEMENTS ENGINEERING REPORT

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2.1.2. Distribution and Treatment

The School's water system has separate domestic and irrigation systems. Within the Well and Booster Pump Building, the distribution system consists of 2-inch diameter galvanized pipe, PVC pipe of varies sizes, three 85-gallon pressure tanks for domestic supply, a 7.5-horsepower (hp) irrigation booster pump, a 3-hp domestic booster pump, and a 100-gallon pressure tank for irrigation. For domestic water disinfection, a chemical metering pump injects 12.5% sodium hypochlorite from a 55-gallon container into the fill line of the domestic storage tank. The Well and Booster Pump Building and water system are in fair condition and function as required. The 3-hp booster pump has substantial corrosion. There are no visible leaks from pipes within the Well and Booster Pump Building. A schematic drawing of the water facilities and photo of the distribution and treatment system are presented in Figure 2-3.

2.1.3. Storage

A 2,500-gallon plastic storage tank, chlorination, and dedicated booster pump are used to meet domestic demands. A 10,000-gallon welded steel storage tank is utilized for irrigation demands. A photo of the storage facilities is shown in Figure 2-2. Both tanks are available for fire suppression when needed.

Figure 2-2. Left: Existing 2,500-gallon plastic tank (potable). Right: 10,000-gallon welded steel tank (irrigation).

2.1.4. Septic System

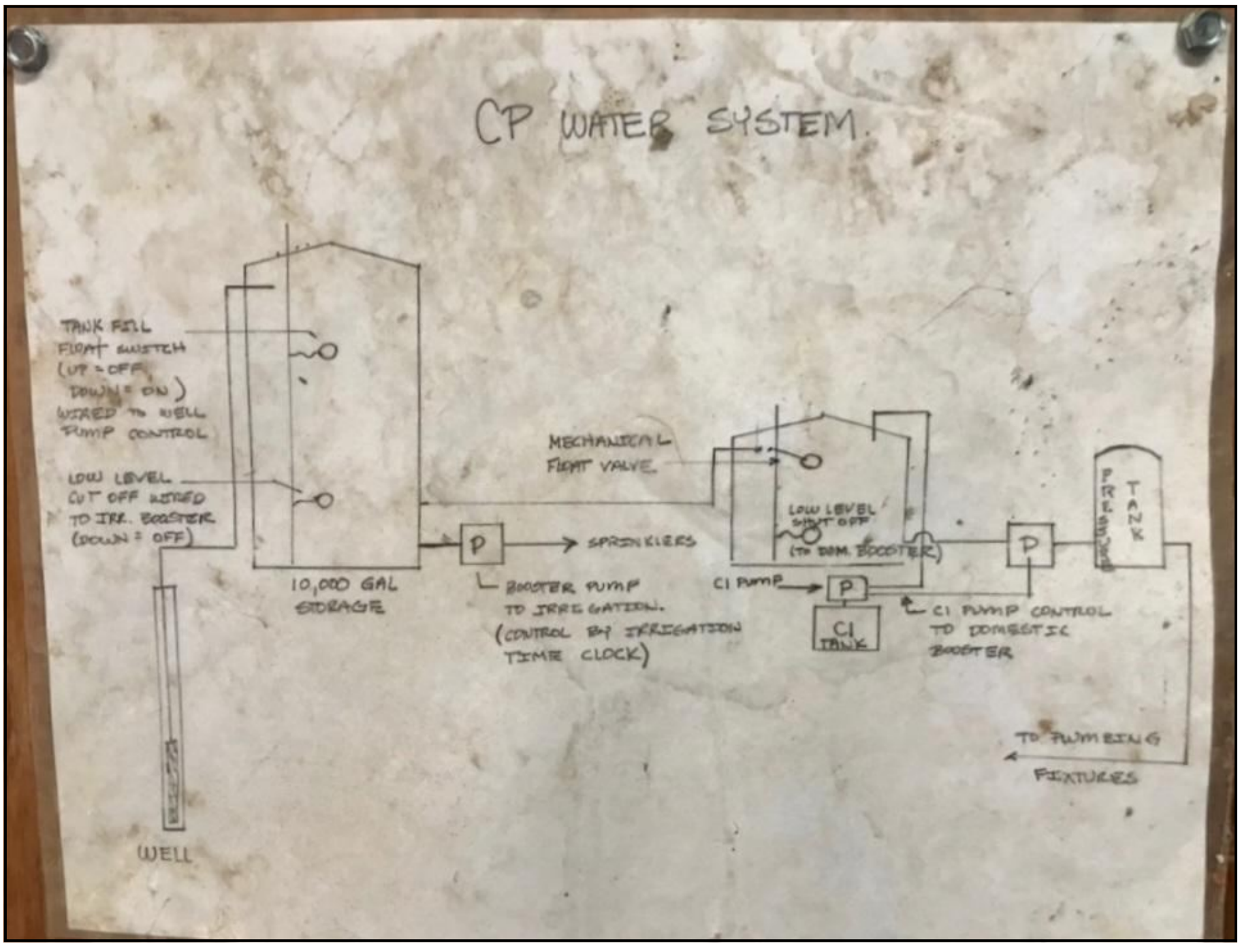
According to original construction documents, a septic system and leach field are located approximately 300 feet to the south of the existing well. The leach field consists of two 100-ft open joint drain lines spaced 6 feet apart on center. The location of the existing septic system is shown on Figure 2-1.

2.1.5. Monitoring Wells

There are three nested monitoring wells on the School property used for measuring the water level at different depths of the aquifer. The monitoring wells in the vicinity of the School were used to monitor water level changes in the area during the installation of the large, nearby solar fields. The location of the monitoring wells is shown on Figure 2-1.

PHOTOGRAPH OF EXISTING CARRISA PLAINS ELEMENTARY WATER FACILITIES

SCHEMATIC DRAWING OF EXISTING CARRISA PLAINS ELEMENTARY WATER FACILITIES



2.2. Water System Demand

Because neither the flow rate nor the total quantity of water extracted from the well have been recorded recently, School water usage is estimated based on a Pacific Institute report on commercial water use, included in Appendix B. Per the Pacific Institute report, a California elementary school requires an average of 38.5 gallons of water per student per day. Assuming a student population of 40 (equal to the School's historic maximum number of students), the School's average daily water demand (ADD) is estimated at 1,540 gallons per day (Table 2-1).

Table 2-1. Carrisa Plains Elementary School Estimated Water Demands

Demand Level	Peaking Factor	Water Demand (gallons per day) (assuming 40 students)	Water Demand (gallons per minute) (assuming 40 students)
Average Daily Demand (ADD)	1.00	1,540	1.1
Average Daily Demand of Maximum-Demand Month	1.50	2,310	1.6
Maximum Daily Demand (MDD)	2.25	3,465	2.4
Peak Hourly Demand (PHD)	3.38	5,198	3.6

As shown in Table 2-1, applying a factor of 2.25 to the ADD yields an estimated maximum daily demand (MDD) of 3,465 gallons per day. Applying a factor of 3.38 to the ADD yields an estimated peak hourly demand (PHD) of 5,198 gallons per day.

2.3. Operations and Maintenance Practices and Abilities

According to School staff, the School and the two adjacent residences have been drinking and cooking with bottled water or using point-of-use Reverse Osmosis (RO) treatment systems for at least 20 years. Chlorinated well water is used for non-consumptive domestic uses only, such as washing hands, dishes, laundry, toilets, and showers. Untreated well water is used for irrigation. The drinking fountains at the School have been removed and replaced with 3- and 5-gallon bottled water dispensers with single use cups available. Most staff and students use personal refillable water bottles. The School has previously used point-of-use RO treatment systems (under-the-sink-type systems) but stopped using them due to frequent and costly filter replacement and system maintenance. There is a flow meter on the well discharge pipe, but neither the flow rate nor the total quantity of the water extracted from the well has been tracked recently.

Robert Sorensen of Sorensen Water Operator Services operates the existing School water system. His responsibilities include taking monthly bacteriological samples quarterly well water quality samples, delivering and diluting chlorine for disinfection, and other maintenance duties as needed. Sorensen possesses T4 (treatment) and D4 (distribution) operator certification licenses.

Section 3. Problem Description

This section describes the issues identified by the School regarding their water supply and existing water system equipment.

3.1. Well

The well is functional but is in poor condition and near the end of its useful life. The concrete base around the well head is substantially cracked, and an approximate 3-inch diameter uncapped metal pipe partially filled with dirt and gravel protrudes from the concrete base. The protruding pipe does not appear to connect to the inside of the well, and its length and purpose are unknown. The wellhead is not sealed. The submersible pump and discharge column are supported at the surface by a metal plate resting on old pieces of wood around the casing. A PVC tremie pipe used for water level measurement is not capped. It is unknown if the upper annular space is sealed. The 9-inch diameter steel casing above the water table is heavily corroded, and flakes of casing are falling into the well. These surface conditions were documented in the SLO EHS Water System Inspection Report dated April 4, 2019, included in Appendix C. Photos of the surface conditions and casing are presented in Figure 3-1.

Figure 3-1. Left: Wellhead and one booster pump. Right: Inspection camera entering the heavily corroded well casing.

For the well investigation, MNS utilized subcontractor Filipponi & Thompson Pump Co. (F&T) to pull the existing pump, video the well, and collect depth-specific water samples. A downhole well video survey was performed on September 20, 2021. The survey log is included in Appendix D. The well appears to have vertical mill knife perforations irregularly spaced from approximately 50 ft bls to the bottom of well at 97 ft bls. The perforations have an opening of approximately 1 1/2” x 1/3”. There is scaling growth on the casing throughout the well, with many of the perforations partially or completely covered by the growths.

As part of the nitrate treatment investigation, depth-specific water quality samples were collected to determine if the nitrate concentration in the aquifer varies with depth. During the field investigation on September 20, 2021, F&T initially attempted to collect zonal water quality samples using a 10-foot-long zonal development tool, which has rubber discs on the top and bottom of the tool to isolate a specific zone in the perforations. A 2-inch diameter pump in the zonal tool is used to pump water from the isolated zone. When F&T attempted to install the zonal tool, pieces on the corroded casing dislodged and dropped into the well. F&T, MNS, and the District decided not to risk damaging the well with the zonal sampling tool. Instead, depth-specific grab samples were collected using a 2-inch diameter bailing tool equipped with a check valve at the bottom.

3.2. Water Quality

Water sampled from the School's well has exceeded the MCL for nitrates since at least 2002. A summary of these exceedances is presented in Table 3-1. Available water quality records are provided in Appendix E. Water quality records from before 2002 could not be located for this report. The water quality results from the depth-specific grab samples collected on September 20, 2021, showed no significant variance in the nitrate concentration at different depths of the well.

Table 3-1. Water Quality Exceedance Summary

Sample Date	Constituent	Results [mg/L]	MCL [mg/L]
2002-11-20	Nitrate (as NO_3)	67	45
2003-10-02	Nitrate (as NO_3)	71	45
2003-10-02	Iron	1700	300 ug/L
2003-10-02	Color	20 Units	15 Units
2003-10-02	Turbidity (lab)	28	5 NTU
2005-12-01	Nitrate (as NO_3)	73	45
2007-01-25	Nitrate (as NO_3)	66	45
2008-07-16	Nitrate (as NO_3)	67	45
2010-10-19	Nitrate (as NO_3)	77	45
2011-07-13	Nitrate (as NO_3)	65	45
2012-08-13	Nitrate (as NO_3)	72	45
2013-08-22	Nitrate (as NO_3)	70	45
2014-08-11	Nitrate (as NO_3)	70	45
2015-10-15	Nitrate (as N)	15	10
2016-09-06	Nitrate (as N)	1.1 no exceedance	10
2017-08-21	Nitrate (as N)	16	10
2018-01-29	Nitrate (as N)	16	10
2018-06-19	Nitrate (as N)	16.3	10
2018-08-14	Nitrate (as N)	16.3	10
2018-11-15	Nitrate (as N)	16.4	10
2019-08-13	Nitrate (as N)	14.2	10
2020-08-26	Nitrate (as N)	15.1	10

2021-09-20, Depth 55 ft bls	Nitrate (as N)	11.6	10
2021-09-20, Depth 65 ft bls	Nitrate (as N)	11.7	10
2021-09-20, Depth 75 ft bls	Nitrate (as N)	11.8	10
2021-09-20, Depth 85 ft bls	Nitrate (as N)	11.5	10
2021-10-11	Nitrate (as N)	15	10
2022-10-20	Nitrate (as N)	15	10
2023-10-25	Nitrate (as N)	14	10

In 2003, a water sample from the well was recorded to have measured iron concentrations above the MCL. This sample also showed elevated turbidity and color values. Because other exceedances of the iron MCL have not been documented since 2002, the sample is believed to be an outlier with respect to iron concentration and not representative of groundwater quality.

3.2.1. Potential Nitrate Sources

The source of the nitrates in the water produced from School's well is unknown. In general, groundwater nitrate sources can include septic systems, animal feeding operations, or fertilizer. The distance between the well and the onsite leach field is greater than the minimum requirement of 200 feet defined by the County of San Luis Obispo Department of Planning and Building Onsite Wastewater Treatment Systems Local Agency Management Program. Based on the regional flow direction of the Carrizo Plain Groundwater Basin to the southeast towards Soda Lake, the leach fields are believed to be down gradient of the well, though the local water table gradient is not known.

The area surrounding the School, the Carrizo Plains, has a long history of intermittent dryland farming and grazing. The use of fertilizers near the school is unknown. According to School staff, who have lived in the area for decades, little to no fertilizers have been used with the dry farming. There are no known feed lots or cattle containment areas close to the School.

The nitrates in the shallow groundwater may be naturally occurring. In arid environments—like the Carrizo Plains, which only receives 7 to 14 inches of annual rainfall—salts, including nitrates, become concentrated as water evaporates in the soils and on dry lake beds, like the nearby Soda Lake. The long-term leaching of nitrate from desert and arid shrubland soils can accumulate in the shallow groundwater.

SLO EHS water quality records for multiple new wells located approximately 4 miles downgradient of the School showed low nitrate concentrations, with values ranging from less than 1 mg/L to less than 5 mg/L. These wells have longer and deeper screening intervals compared to that of the School's well, with the top of the screen interval at 30 to 50 ft bls and the bottom of the screen at 117 to 200 ft bls. The School well has visible perforations from 50 to 97 ft bls.

The large crack in the concrete pad around the wellhead and unsealed wellhead could act as a conduit for contaminants into the well and aquifer. It is unknown if there is a concrete sanitary seal in the annular space on the upper section of the well.

Section 4. Consolidation Analysis

Because the School is located as far as 42 miles away from the nearest service, including potable water consolidation options, consolidation with another water system is not considered feasible for the purposes of this Report and is not discussed further.

Section 5. Alternative Analysis

The water system solution alternatives presented in this Report consider waste stream handling and disposal, capital costs, operations and maintenance efforts, and associated costs to implement each potential alternative. For each water system solution alternative analyzed, it is assumed the domestic and irrigation demands would continue to be met by two separate water systems. Keeping the domestic and irrigation systems separate would reduce the quantity of water requiring treatment and associated maintenance requirements and costs. The remoteness of the school, the small number of students and staff, and the School's and District's very limited in-house resources for maintaining a treatment system were also considered.

5.1. Solution Alternatives

The nitrate concentration in well water can be reduced using treatment processes such as ion exchange, distillation, or reverse osmosis. Mechanical filters, chemical disinfection such as chlorination, and boiling water will not remove nitrates. The five alternatives evaluated in this Report include (1) continue as-is (bottled water exemption), (2) point-of-use RO treatment, (3) whole-school treatment systems, (4) aquifer isolation, and (5) installation of a new water well. Nitrate removal via distillation is not considered feasible for the School. The costs associated with funding application preparation and permit application, if needed, are not included in the opinion of probable cost for any of the considered alternatives.

5.1.1. Alternative 1: Continue as-is "Bottled Water Exemption"

The School staff are currently satisfied with the bottled water system they are using and would prefer to keep their water system simple to minimize maintenance requirements. The 2019 SLO EHS Water System Inspection Report, included in Appendix C, informed the School that the historical "bottled water exemption" is no longer an acceptable treatment method. EHS directed the School to either provide centralized treatment or point-of-use treatment for drinking and cooking. No known action has been taken by the School or District since the 2019 SLO EHS report.

When the 3- to 5- gallon water bottles are empty, they are exchanged for full bottles. There is no waste or disposal associated with this alternative, except for some single-use cups. Though deemed no longer acceptable by SLO EHS, continuing with the as-is bottled water exemption would be the lowest-cost option and would require the least amount of maintenance of the considered alternatives.

5.1.2. Alternative 2: Point-of-Use Treatment System

Point-of-use water treatment systems filter water at the location where the water is being used. A reverse osmosis point-of-use system is recommended for reducing nitrate concentrations. The treated water produced from the RO system would only be used for drinking and cooking. The chlorinated well water would continue to be used for non-consumptive domestic uses. Untreated well water would continue to be used for irrigation. The School kitchen would need at least one point-of-use RO system. Two or three freestanding RO water dispensers could be set up on the school grounds for students and staff to fill water bottles or single use cups. The adjacent residences would require RO systems installed under the kitchen and bathroom sinks. Examples of these two types of systems are shown below. Table 2 presents the estimated quantity of point-of-use RO systems needed at the School and the two adjacent residences.

Reverse osmosis treatment requires frequent backflushing of the RO membrane and produces wastewater volumes equal to 3 to 10 times the quantity of clean water produced. Each RO system would be plumbed so wastewater would discharge to the School's or residence's wastewater pipes and into the septic systems. The School has previously used point-of-use RO treatment systems (under-the-sink-type systems) but stopped using them, according to staff, due to frequent and costly filter replacement and system maintenance.

Both types of RO systems could be standard “off-the-shelf” systems and would not need to be designed specifically for the onsite water chemistry. The proposed point-of-use systems can be installed and maintained by the existing operator. The filters would likely require monthly inspection with semi-annual filter replacement.

Five under-the-sink type RO units would be installed on the premises: one in the School kitchen, and two in each adjacent residence. Three freestanding RO water dispensers would be installed on School grounds in lieu of drinking fountains.

5.1.3. Alternative 3: Whole-School Treatment System

A whole-school treatment system would treat all domestic water entering the School and residences, while untreated well water would continue to be used for irrigation. The whole-school treatment system should be designed for the site-specific water chemistry. The preliminary design recommendation is for a portable resin exchange tank system specifically formulated for nitrates.

Like a water softener, the nitrate ion exchange system uses a strong base anion exchange resin, which is regenerated with sodium chloride, also known as table salt. Discharge from the ion exchange resin cartridges would be plumbed to the School’s wastewater system and flow into the onsite septic system.

Culligan of Santa Maria specializes in ion exchange water treatment systems. They designed, installed, and maintained the water treatment system at the Bonita Elementary School in Santa Maria, California. The Bonita Elementary School has stopped using their ion exchange system due to issues with maintaining water quality compliance. Ion exchange systems for nitrates have been known to occasionally release nitrates from the ion exchange resin. However, through the use of a special ion exchange resin selective to nitrate—such as ResinTech SIR-100-HP used by Culligan—this risk of “nitrate dumping” can be eliminated.

Culligan charges a monthly rental fee per cartridge and a fee for delivering and exchanging resin cartridges. Culligan estimates the cartridges would need to be exchanged monthly, but the exchange frequency will depend on usage and the site-specific water chemistry. To meet the flow rate demand of the School and residences, there would be four or more ion exchanges cartridges in the treatment system.

To improve the efficiency of nitrate removal and prolong the life of the equipment, it would be beneficial to soften the water with a conventional water softening system prior to nitrate treatment.

A whole-school RO water treatment system is not recommended due to the potential of the treated water leaching metals from the School’s and Residence’s water pipes. RO treatment systems produce water with low total dissolved solids (TDS); low-TDS water can leach metals out of piping, fittings, and faucets. RO water should only be used with RO-approved tubing, fittings, and faucets.

5.1.4. Alternative 4: Aquifer Isolation

As part of the investigation into feasible nitrate treatment alternatives, the well and well water were evaluated to see if an aquifer isolation system would potentially improve discharge water quality. An aquifer isolation system involves installing packers in the well to block specific sections of the well perforations with poorer water quality. The heavily corroded casing is too excessively deteriorated to accommodate a packer installation, and the depth-specific water quality samples collected in September 2021 showed no significant variance in water quality with depth in the well. For these reasons, an aquifer isolation system is not recommended.

5.1.5. Alternative 5: New Well

Cleath-Harris Geologists, Inc. (CHG) were contracted to develop a Well Siting Study to evaluate options for developing a groundwater source with lower nitrate concentrations to serve the school. Per the depth-specific water sampling conducted for the Well Siting Study, nitrate concentrations were shown to decrease as sampling depth increased. CHG recommends drilling a new well near the southeast corner of the main parcel to a depth of 600 feet to target the deepest permeable aquifer zones (below 400

feet depth). Figure 5-1 shows the location of the recommended well and sampling points used in the Well Siting Study. The full study is included in Appendix F.

This proposed location for a new well is closest in proximity to the nearby Hayes Well (well 30S/18E-3D1, shown on Figure 5-1), which has been reported to produce water with nitrate concentrations lower than the MCL of 10 mg /L. The new well would be designed, permitted, drilled, and constructed in compliance with the California Well Drillings Standards (Bulletin 74-81 and 74-90 Combined) and the San Luis Obispo County Water Well Code 8.40. As part of the well drilling process, depth-specific zonal sampling should be performed in the borehole to assess the water quality in the aquifer at different depths. The zonal sampling would be used to determine the final well design and if water treatment would be necessary. The drilling and sampling of a test well prior to the installation of a new well is deemed unnecessary due to the small size of the well, low flow requirements, minimal potential treatment requirements, and lack of other reasonable options for a School water source.

After the new well is constructed and in service, the existing well should be demolished according to the San Luis Obispo County Water Well Code 8.40.

Base Image: ESRI Satellite August 2021

FIGURE 5-1

Explanation

- Proposed Well Site
- Existing Wells
- Sampling Spigot for Irrigation Well
- Off-site Wells

Figure 1
Well and Sample Locations
Carrisa Plains Elementary School

Cleath-Harris Geologists

5.2. Design Criteria

For the discussed water system solution alternatives, County standards and School requirements were used to develop design criteria for the potential improvements.

- Well pump type: Submersible
- Well pump motor size: 7.5 horsepower
- Above-ground pipe material: 4-inch ductile iron
- Below-ground pipe material: 4-inch PVC schedule 40
- Valve type: Ball valves

5.3. Environmental Impacts

Typical environmental impacts resulting from the drilling and installation of a new well include noise, air quality, water quality, and other potential impacts to be identified during Project environmental permitting such as archaeological and paleontological impacts. Measures to reduce environmental impacts would be incorporated into the contract documents.

Environmental impacts of the selected option will be considered in more depth during preparation of a project environmental document for compliance with the California Environmental Quality Act (CEQA), and other required regulatory approvals and consultations.

MNS has contracted with Denise Duffy & Associates (DDA) to prepare an Environmental Constraints memorandum to identify required permits and technical studies, such as a Biological Assessment or Historic Properties Identification Report, for each alternative identified in this Preliminary Engineering Report. The major findings of DDA's Environmental Constraints memo will be included in this section when the memo is completed. The full memo will be included as Appendix G.

5.4. Land Requirements

All proposed alternatives would be located within the School district's property and would not necessitate land acquisition to construct.

5.5. Construction Site Considerations

Because construction activity would take place at the elementary school, appropriate measures would need to be taken to minimize adverse impact to School activity. For example, more disruptive operations such as drilling a well and trenching operations should occur during the summer or other School break.

5.6. Cost Estimate

The opinion of approximate total project implementation and maintenance costs for each feasible water system solution alternative are presented in Table 5-1.

Table 5-1. Estimated Costs for Proposed Alternatives

Alternative	Estimated Project Implementation Cost	Estimated Annual Maintenance Cost
Alternative 2: Point-of-Use Treatment (Reverse Osmosis)	$23,800	$14,940
Alternative 3: Whole-School Treatment (Portable Ion Exchange Nitrate Reduction)	$19,595*	$5,640
Alternative 4: New Well	$1,508,600	$600

*Includes the purchase of a conventional water softening system. There is no upfront cost for an ion exchange system from a company that provides treatment as a service.

Project Implementation Cost for each alternative includes replacement of the corroded 3-hp booster pump and miscellaneous piping.

5.7. Advantages and Disadvantages

This section discusses advantages and disadvantages of each considered alternative. Note that only Alternative 5—New Well—addresses the poor condition of the existing well, making Alternative 5 an essential consideration.

5.7.1. Alternative 1: Continue as-is "Bottled Water Exemption"

Advantages

Continuing as-is with the use of bottled water would be simple as a solution and require no upfront costs or additional planning.

Disadvantages

Per the SLO EHS in their 2019 Inspection Report (Appendix C), "Bottle water exemptions are no longer acceptable methods of treatment." Therefore, continuing to use bottled water as-is is not considered in this Report to be a feasible alternative.

5.7.2. Alternative 2: Point-of-Use Treatment System

Advantages

Point-of-use reverse osmosis treatment would effectively remove nitrate from the School's potable water supply. Installation of treatment units would be straightforward and relatively inexpensive, as the units do not need to be specially designed for specific operating parameters.

Disadvantages

Point-of-use treatment has been used by the School in the past, but has been discontinued due to costly replacement and maintenance. Part of the problem lies in the School's remote location, meaning that anyone servicing the RO units would have to travel a considerable distance to perform maintenance, which adds to maintenance costs.

In addition, per California Health and Safety Code Section 116552, the SWRCB shall not allow the permitted use of point-of-use treatment systems for a duration greater than three years or until funding for centralized treatment is available, whichever occurs first. For this reason, point-of-use treatment is not considered by this Report to be a feasible long-term solution.

5.7.3. Alternative 3: Whole-School Treatment System

Advantages

A whole-school treatment system would be a viable way to reduce the concentration of nitrates in the School's drinking water. Using selective ion exchange resin media would effectively eliminate the chances of re-releasing nitrate into the water supply through nitrate dumping. The treatment system could be installed and maintained by a water treatment service provider like Culligan, which could keep the School's operating efforts to a minimum.

Disadvantages

Because of the School's remote location, any whole-school treatment system deliveries or services provided by an operator would include traveling, which would increase maintenance costs.

A nitrate ion exchange system would benefit from a water softening system as pre-treatment, which would add to Project cost and complexity, should it be installed.

5.7.4. Alternative 4: Aquifer Isolation

Due to the poor condition of the existing well and the concern of further well degradation from installing packers, aquifer isolation retrofits are not considered feasible by this Report.

5.7.5. Alternative 5: New Well

Advantages

A new well has the potential to produce water with nitrate concentrations below the MCL. Because the existing well is so near the end of its useful life, a new well will be necessary for the long-term operation of the School's water system.

Disadvantages

The drilling and installation of a new well on School grounds would incur the greatest capital cost of the alternatives considered in this Report. While a new well is likely necessary for the School in the long term, the quality of water produced by a new well cannot be known with certainty until it is drilled and sampled. Should a new well prove to produce water with nitrate concentrations still above the MCL, further treatment such as a portable resin nitrate ion exchange tank system would be required.

5.8. Alternative Evaluation and Selection

Based on the advantages and disadvantages presented in Section 5.7, the following Color Alternatives Review Table (CART) shows relative qualitative criteria used in evaluating the alternatives.

Alternative Number	Alternative	Constructability	Service Life	Permitting	Operation & Maintenance	Capital Cost	Lifecycle Cost
1	Bottled Water Exemption	-	-	Infeasible	-	-	-
2	Point-of-use Treatment	Straightforward	10-15 years	Feasible for short-term only	Challenging to manage individual units	$	$$
3	Whole-School Treatment	Straightforward	15-20 years	Straightforward	Centralized treatment eases O&M efforts	$	$$
4	Aquifer Isolation	Infeasible	-	-	-	-	-
5	New Well	Straightforward	25-35 years	Straightforward	Straightforward	$$$	$

KEY: GREEN = GOOD, YELLOW = FAIR, RED = POOR

Based on this analysis and the condition of the existing well, Alternative 5, New Well, provides clear advantages over the other options/alternatives and is the selected alternative. Depending on the measured quality of the new well, Alternative 3, Whole-School Treatment, may be necessary, to provide treatment of water produced from the new well.

Section 6. Selected Project

As discussed in Section 5, the recommended project was selected based on the evaluation of improvement alternatives. Additional information and details of the recommended project are provided in this section.

6.1. Project Description

Based on the age, poor condition, and lack of surface seal of the existing well, it is recommended that a new well be constructed and the existing well destroyed. Approximately 1,400 ft of 4-inch PVC Schedule 40 piping and necessary valves laid from the new well would be tied in at the existing well building, and existing treatment and distribution equipment noted in fair condition or better would be retained. Equipment noted in poor condition, such as the corroded existing 3-hp booster pump, and galvanized steel pipe, would be replaced.

The existing 2,500-gallon plastic potable storage tank would be replaced with a new 10,000-gallon bolted steel tank, while the existing steel irrigation tank would remain.

The water quality of a new well cannot be guaranteed at this level of study, but a new well does have the potential to produce water of higher quality than that of the existing well. A Project like this would likely be designed and bid as two separate endeavors: one to drill and case a new well, and another to equip the well, furnish treatment processes (if necessary), and finalize distribution tie-ins. Should the new well continue to have water quality issues, then a nitrate-specific portable resin exchange tank system and water softening system are recommended in conjunction with the new well. The School should continue as-is using bottled water for drinking and cooking until a solution is implemented.

A backup generator would be installed to power the well pump and booster pumps to continue water service in the event of a power outage. The generator would be fueled by propane and connected to the existing propane tank on School grounds.

The existing well would be destroyed in accordance with the California Department of Water Resources (DWR) Bulletin Nos. 74-81 and 74-90, the applicable sections of the County Code, and the permit requirements by a California State C-57 licensed contractor.

6.2. Schematic and Map of the System's Proposed Facilities

The proposed new well would be constructed in the southeast corner of the School property. Figure 6-1 shows the general arrangement of the proposed new well and other proposed facilities.

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6.3. Justification

The analysis conducted in Section 5.8 indicates that the selected project is the most time and cost-effective alternative for the School and RCAC.

6.4. Operations and Maintenance Challenges

Should the newly constructed well prove to produce water with nitrate concentrations below the MCL, then no additional treatment would be required, other than the processes that exist currently. Therefore, no new operations and maintenance challenges would be expected.

Should the newly constructed well produce water requiring further nitrate mitigation, then a nitrate-specific portable resin exchange tank system and water softening system would be installed as well. These systems would be serviced by a contract operator or service company such as Culligan Water, meaning the greatest challenge would most likely be the relatively long travel distance for the systems operator during services or deliveries.

6.5. Local Planning

The project area is fully within the County of San Luis Obispo. The School property is designated as PF – Public Facility – by the County of San Luis Obispo's Department of Planning and Building. No modifications to jurisdictional boundaries would be required for the Project's construction or implementation.

6.6. Resilience Evaluation

The School currently lacks resiliency as they don't have direct access to a safe and reliable source of drinking water. Given the extreme distance to other potential water systems for consolidation, the next most practical way for the school to gain resiliency is through treatment and/or a new well. One measure of resiliency for a small water system is their ability to withstand droughts and maintain operation through inclement conditions. The existing well is shallow, contaminated, and potentially under the influence of high floodwater if the sanitary seal is compromised or non-existent. Each of these conditions would be alleviated by replacing the well with a more viable source having better protection from drought and potential sources of contamination. Currently, the school's reliance on bottled water also leaves them vulnerable to supply and delivery chain interruption. If delivery cannot be made due to inclement conditions or other events, the students won't have easy access to a potable water supply. This is also true for the two nearby residential units. To close the reliability gap, the school should establish a locally maintained source of water with the most simple and straightforward maintenance plan available. A new well is a potential alternative that will satisfy this need.

6.7. Land Acquisition

Construction of the chosen project would occur entirely on School district property and would require no land acquisition.

6.8. Technical Aspects

The system design will follow County design and construction standards for water systems as stated in Section 5.2

6.9. Demand and Capacity Analysis

The basis for estimating water demand is described in Section 2.2. Table 6-1 shows a summary of estimated demand versus capacity of the selected Project. Per the California Drinking Water State Revolving Fund (DWSRF), financed projects must be sized to meet the existing MDD.

Table 6-1. Estimated Demand and Capacity

Estimated Max Daily Demand (MDD) (gal / day)	Estimated Peak Hourly Demand (PHD) (gal / day)	Well Capacity (assuming well pump is on 2 hours / day) (gal / day)
3,465	5,198	12,000

With the recommended well production rate of 100 gallons per minute, the system will include sufficient capacity to serve peak demands of the consolidated system with a substantial factor of safety.

6.10. Estimated Useful Life

Table 6-2 shows equipment that would be used in the selected Project and its typical life expectancy. The data is provided by the California State Water Resources Control Board (SWRCB), from the United States Environmental Protection Agency (EPA) publication EPA 816-R-03-016 (*Asset Management: A Handbook for Small Water Systems*).

Table 6-2. Selected Project Equipment Typical Life Expectancy

Proposed New Equipment	Life Expectancy (Years)
Well	25 - 35
Pumping Equipment	20 - 25
Tank	30 - 60
Above-Ground Piping (Ductile Iron)	35 - 40
Below-Ground Piping (PVC schedule 40)	100
Valves	35 - 40
Backup Generator	30 - 40

Section 7. Capital and Annual Maintenance Cost

This section describes the Engineer's Opinion of Probable Cost of Construction and estimated Annual Operations and Maintenance costs for the proposed Project.

7.1. Opinion of Probable Cost of Construction

A preliminary opinion of probable cost of construction (OPC) was developed for this Project. Spreadsheets summarizing the costs associated with the various elements of the considered alternatives are included in Appendix H. The OPC for the recommended project is $1,500,000. Additional costs will be incurred as part of the Project. The additional costs are estimated based on an assumed percentage of the construction cost and included in the total project costs. A total project cost for the recommended improvements is provided in Table 7-1.

Table 7-1. Total Project Costs

Item	Percent of Construction Cost	Cost
Project Construction	100%	$1,500,000
County Administration	3%	$45,000
Topographic and Boundary Survey	1%	$15,000
Detailed Design	10%	$150,000
Environmental Permitting	4%	$60,000
Construction Management	15%	$225,000
Total Project Cost		$1,995,000

7.2. OPC Methodologies and Assumptions

The Project costs included in Appendix H are based on information obtained from a variety of resources, including cost estimate resource guidebooks, recent bid results, budgetary quotes from vendors, engineer's experience, and publicly available information. In addition, the following mark-ups were applied to the project costs:

- Division 1 Costs, including bonds and insurance: 2%
- Taxes on materials: 7.63%
- Contractor Markup for subcontractors: 12%
- Contractor Markup for overhead and profit: 12%
- Project Contingency: 30%
- Escalation of project costs attributed to inflation: 12%

7.3. Operations and Maintenance Annual Costs

Calculations of estimated annual operations and maintenance (O&M) costs for the selected Project, calculated based on vendor's proposals and available School information, are shown in Table 7-2.

Table 7-2. Annual O&M Costs for Proposed Project

Item	Annual Cost
Well and Pumps Management and Maintenance	$7,200
Nitrate Ion Exchange Resin Tank Service & Delivery	$5,640
Total Project O&M Cost	**$12,840**

Section 8. Proposed Schedule

An anticipated project schedule has been prepared and is included as Table 8-1. Based on the prepared schedule, 60% and 90% design for the Project is anticipated to be complete by end of 2024. Project construction schedule is dependent on funding timelines.

Table 8-1. Anticipated Project Schedule

Item	Target Duration	Target Date
Draft Preliminary Engineering Report		February 8, 2024
School, RCAC Review of Draft PER	2 Weeks	February 22, 2024
Final Preliminary Engineering Report	6 Weeks	**April 8, 2024**
State Review and Design Authorization	2 Weeks	April 22, 2024
60% Plans and Specifications	6 Weeks	**June 5, 2024**
School and RCAC Review of 60% Package	2 Weeks	July 19, 2024
60% Design Review Meeting	-	July 26, 2024
90% Plans and Specifications	5 Weeks	**August 2, 2024**

Section 9. Comprehensive Response to Climate Change

9.1. Vulnerability

According to the United States Environmental Protection Agency's Environmental Justice Screening Tool for vulnerabilities to climate change, the area where the School is located is at risk for several type of climate change related hazards. The school property partially resides in a Federal Emergency Management Agency's (FEMA's) 100-year flood risk zone which is included as Appendix J. In addition to flooding, the area has been deemed a high fire risk by the California Department of Forestry and Fire Protection, which is included as Appendix K. The Carrizo plains groundwater basin is identified as a "low priority" basin by DWR. Although the State has recently experienced record rainfalls leading to drought conditions being downgraded in much of the state, we have to consider the fact that California is a drought prone state. The cyclical nature of El Niño and La Niña years are especially pronounced in the West and will almost certainly bring dry conditions at some point in the future. Climate change has also presented extremes of heat and rapid rainfall that will both impact the Carrisa Plains area and Carrizo Plains basin.

9.2. Adaptation

The climate change vulnerabilities that need to be addressed for the School include floods, droughts and wildfire risks. Currently, the school operates a shallow well that they do not use for potable uses due to contamination. This operation is not feasible to maintain long term and also produces waste and greenhouse gas through required bottle deliveries. The proposed Project will establish a clean and reliable water source that can satisfy the needs for potable and irrigation water if needed. The new well will be deeper and therefore give the School access to a more reliable source of higher quality water. In addition, the new well will have a higher capacity and will have the potential to produce more water than the current well, increasing the instantaneous fire-flow capacity. For future drought years, the precedent conditions of long periods of hot and arid weather can be prepared for with a deeper well. The proposed well will add another layer of resiliency and provide a drought resistant source from a deeper zone in the aquifer. This will also provide a safer drinking water source since the higher nitrate levels seem to be found mostly in the upper aquifer.

9.3. Mitigation

The new well will be the drinking water source and will therefore replace the current source of bottled water. Bottled water is more expensive and also requires transport. The School is rurally located, so the fuel consumed transporting water is a source of greenhouse gas and contributes to climate change. Once the bottled water deliveries cease, the extra cost for deliveries and corresponding energy consumption will be eliminated. The proposed well will also have a new pump and motor which will operate more efficiently and will likely use less power per volume pumped than the existing well. This will contribute to greenhouse gas savings and generally improve the energy efficiency of the school.

Section 10. List of Permits

The Project will need to comply with State and County requirements, as well as other requirements identified during the environmental permitting process. Identified required permits are summarized in this section.

10.1. County of San Luis Obispo Well Construction Permit

A Well Construction Permit will be required for the construction of a new well. Required information for the permit includes contractor information and well information, such as boring depth and well casing size.

10.2. County of San Luis Obispo Well Destruction Permit

A Well Destruction Permit will be required for the destruction of the School's existing well. Required information for the permit includes existing well conditions, proposed destruction features, and contractor information.

10.3. County of San Luis Obispo Air Pollution Control District Authority to Construct / Permit to Operate

An Authority to Construct / Permit to Operate form will be required for the installation and operation of the backup generator. An Internal Combustion Engine Process Form will be required in the application. Required information includes generator equipment type, expected annual fuel use, and estimated emissions.

10.4. County of San Luis Obispo Permit for Public Water System

A Permit for Public Water System will be required to make changes to the School's water system. Required information for the permit includes a Technical, Managerial, and Financial (TMF) Capacity Report and a complete set of construction plans.

Appendix B

CalEEMod Air Quality Modeling

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Carrisa Plains School Water System Improvements Project Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Carrisa Plains School Water System Improvements Project
Construction Start Date	6/2/2025
Operational Year	2026
Lead Agency	Atascadero Unified School District
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.20
Precipitation (days)	15.4
Location	9640 CA-58, Santa Margarita, CA 93453, USA
County	San Luis Obispo
City	Unincorporated
Air District	San Luis Obispo County APCD
Air Basin	South Central Coast
TAZ	3301
EDFZ	6
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Southern California Gas
App Version	2022.1.1.24

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Elementary School	2.79	1000sqft	0.06	2,786	0.00	0.00	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.35	1.12	10.5	10.4	0.02	0.47	5.43	5.90	0.43	2.60	3.03	2,052	0.06	2,074
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	13.1	13.0	6.53	9.27	0.02	0.26	0.10	0.29	0.24	0.02	0.24	1,680	0.02	1,686
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.46	0.41	2.29	3.17	0.01	0.09	0.07	0.16	0.08	0.03	0.11	562	0.01	564
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.08	0.08	0.42	0.58	< 0.005	0.02	0.01	0.03	0.02	0.01	0.02	93.0	< 0.005	93.4

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	N2O	CO2e

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.35	1.12	10.5	10.4	0.02	0.47	5.43	5.90	0.43	2.60	3.03	2,052	0.06	2,074
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	13.1	13.0	6.53	9.27	0.02	0.26	0.10	0.29	0.24	0.02	0.24	1,680	0.02	1,686
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.46	0.41	2.29	3.17	0.01	0.09	0.07	0.16	0.08	0.03	0.11	562	0.01	564
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.08	0.08	0.42	0.58	< 0.005	0.02	0.01	0.03	0.02	0.01	0.02	93.0	< 0.005	93.4

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.75	1.83	0.56	6.66	0.01	0.02	0.61	0.63	0.02	0.16	0.17	856	0.03	879
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.73	1.81	0.60	6.47	0.01	0.02	0.61	0.63	0.02	0.16	0.17	834	0.03	854
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.35	0.34	0.34	2.14	0.01	0.01	0.43	0.44	0.01	0.11	0.12	548	0.02	562
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.06	0.06	0.06	0.39	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.02	90.8	< 0.005	93.1

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.35	0.32	0.40	2.85	0.01	0.01	0.61	0.62	0.01	0.16	0.16	720	0.03	733
Area	0.10	0.10	< 0.005	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.50	< 0.005	0.50
Energy	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	43.6	< 0.005	43.8
Water	—	—	—	—	—	—	—	—	—	—	—	0.40	< 0.005	0.91
Waste	—	—	—	—	—	—	—	—	—	—	—	1.95	0.00	6.83
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01
Stationary	0.29	1.41	0.14	3.67	< 0.005	0.01	0.00	0.01	0.01	0.00	0.01	89.9	0.00	94.6
Total	0.75	1.83	0.56	6.66	0.01	0.02	0.61	0.63	0.02	0.16	0.17	856	0.03	879
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.35	0.32	0.43	2.77	0.01	0.01	0.61	0.62	0.01	0.16	0.16	698	0.03	708
Area	0.08	0.08	—	—	—	—	—	—	—	—	—	—	—	—
Energy	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	43.6	< 0.005	43.8
Water	—	—	—	—	—	—	—	—	—	—	—	0.40	< 0.005	0.91
Waste	—	—	—	—	—	—	—	—	—	—	—	1.95	0.00	6.83
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01
Stationary	0.29	1.41	0.14	3.67	< 0.005	0.01	0.00	0.01	0.01	0.00	0.01	89.9	0.00	94.6
Total	0.73	1.81	0.60	6.47	0.01	0.02	0.61	0.63	0.02	0.16	0.17	834	0.03	854
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.25	0.23	0.30	1.97	< 0.005	0.01	0.43	0.44	< 0.005	0.11	0.11	501	0.02	509
Area	0.10	0.10	< 0.005	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.45	< 0.005	0.45

Energy	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	43.6	< 0.005	43.8
Water	—	—	—	—	—	—	—	—	—	—	—	0.40	< 0.005	0.91
Waste	—	—	—	—	—	—	—	—	—	—	—	1.95	0.00	6.83
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01
Stationary	< 0.005	0.02	< 0.005	0.04	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.99	0.00	1.04
Total	0.35	0.34	0.34	2.14	0.01	0.01	0.43	0.44	0.01	0.11	0.12	548	0.02	562
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.05	0.04	0.06	0.36	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.02	82.9	< 0.005	84.3
Area	0.02	0.02	< 0.005	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.07	< 0.005	0.07
Energy	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	7.22	< 0.005	7.25
Water	—	—	—	—	—	—	—	—	—	—	—	0.07	< 0.005	0.15
Waste	—	—	—	—	—	—	—	—	—	—	—	0.32	0.00	1.13
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005
Stationary	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.16	0.00	0.17
Total	0.06	0.06	0.06	0.39	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.02	90.8	< 0.005	93.1

3. Construction Emissions Details

3.1. Demolition (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.56	0.47	4.33	5.65	0.01	0.16	—	0.16	0.14	—	0.14	852	0.01	855
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.24	0.31	< 0.005	0.01	—	0.01	0.01	—	0.01	46.7	< 0.005	46.9
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.04	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	7.73	< 0.005	7.76
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.33	0.00	0.00	0.06	0.06	0.00	0.01	0.01	61.0	< 0.005	62.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	3.22	< 0.005	3.28
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.53	< 0.005	0.54
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Site Preparation (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.56	0.47	4.16	5.57	0.01	0.21	—	0.21	0.20	—	0.20	859	0.01	862
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	11.8	< 0.005	11.8
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	1.95	< 0.005	1.95
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.01	0.16	0.00	0.00	0.03	0.03	0.00	0.01	0.01	30.5	< 0.005	31.1

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.40	< 0.005	0.41
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.07	< 0.005	0.07
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.29	1.09	10.1	10.0	0.02	0.46	—	0.46	0.43	—	0.43	1,714	0.01	1,720
Dust From Material Movement	—	—	—	—	—	—	5.31	5.31	—	2.57	2.57	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.11	0.11	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	18.8	< 0.005	18.8
Dust From Material Movement	—	—	—	—	—	—	0.06	0.06	—	0.03	0.03	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	3.11	< 0.005	3.12
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	0.01	0.01	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.24	0.00	0.00	0.04	0.04	0.00	0.01	0.01	45.7	< 0.005	46.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	0.01	0.41	0.13	< 0.005	0.01	0.07	0.08	< 0.005	0.02	0.02	292	0.05	307
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.48	< 0.005	0.49
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.20	< 0.005	3.36
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.08	< 0.005	0.08

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.53	< 0.005	0.56

3.7. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.77	0.65	6.51	9.23	0.02	0.26	—	0.26	0.24	—	0.24	1,662	0.01	1,668
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.77	0.65	6.51	9.23	0.02	0.26	—	0.26	0.24	—	0.24	1,662	0.01	1,668
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.18	1.78	2.53	< 0.005	0.07	—	0.07	0.07	—	0.07	455	< 0.005	457
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.33	0.46	< 0.005	0.01	—	0.01	0.01	—	0.01	75.4	< 0.005	75.7
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	7.13	< 0.005	7.27
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	10.3	< 0.005	10.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	6.84	< 0.005	6.94
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	10.3	< 0.005	10.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.89	< 0.005	1.92
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	2.81	< 0.005	2.94
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.31	< 0.005	0.32
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.47	< 0.005	0.49
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.61	0.51	4.37	5.31	0.01	0.19	—	0.19	0.18	—	0.18	823	0.01	826
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	13.5	< 0.005	13.6
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	2.24	< 0.005	2.25
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.05	0.56	0.00	0.00	0.10	0.10	0.00	0.02	0.02	102	< 0.005	104
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.69	< 0.005	1.72
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.28	< 0.005	0.28
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	134	< 0.005	134
Architectural Coatings	12.9	12.9	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	1.83	< 0.005	1.84
Architectural Coatings	0.18	0.18	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.30	< 0.005	0.30
Architectural Coatings	0.03	0.03	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.37	< 0.005	1.39
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.02	< 0.005	0.02
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	0.35	0.32	0.40	2.85	0.01	0.01	0.61	0.62	0.01	0.16	0.16	720	0.03	733
Total	0.35	0.32	0.40	2.85	0.01	0.01	0.61	0.62	0.01	0.16	0.16	720	0.03	733
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	0.35	0.32	0.43	2.77	0.01	0.01	0.61	0.62	0.01	0.16	0.16	698	0.03	708
Total	0.35	0.32	0.43	2.77	0.01	0.01	0.61	0.62	0.01	0.16	0.16	698	0.03	708
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	0.05	0.04	0.06	0.36	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.02	82.9	< 0.005	84.3
Total	0.05	0.04	0.06	0.36	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.02	82.9	< 0.005	84.3

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	6.98	< 0.005	7.04
Total	—	—	—	—	—	—	—	—	—	—	—	6.98	< 0.005	7.04

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	6.98	< 0.005	7.04
Total	—	—	—	—	—	—	—	—	—	—	—	6.98	< 0.005	7.04
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	1.15	< 0.005	1.17
Total	—	—	—	—	—	—	—	—	—	—	—	1.15	< 0.005	1.17

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	36.6	< 0.005	36.7
Total	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	36.6	< 0.005	36.7
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	36.6	< 0.005	36.7
Total	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	36.6	< 0.005	36.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	6.06	< 0.005	6.08
Total	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	6.06	< 0.005	6.08

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.06	0.06	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.02	0.02	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.02	0.02	< 0.005	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.50	< 0.005	0.50
Total	0.10	0.10	< 0.005	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.50	< 0.005	0.50
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.06	0.06	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.02	0.02	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.08	0.08	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	< 0.005	< 0.005	< 0.005	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.07	< 0.005	0.07

Total	0.02	0.02	< 0.005	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.07	< 0.005	0.07

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	0.40	< 0.005	0.91
Total	—	—	—	—	—	—	—	—	—	—	—	0.40	< 0.005	0.91
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	0.40	< 0.005	0.91
Total	—	—	—	—	—	—	—	—	—	—	—	0.40	< 0.005	0.91
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	0.07	< 0.005	0.15
Total	—	—	—	—	—	—	—	—	—	—	—	0.07	< 0.005	0.15

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	N2O	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	1.95	0.00	6.83
Total	—	—	—	—	—	—	—	—	—	—	—	1.95	0.00	6.83
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	1.95	0.00	6.83
Total	—	—	—	—	—	—	—	—	—	—	—	1.95	0.00	6.83
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	0.32	0.00	1.13
Total	—	—	—	—	—	—	—	—	—	—	—	0.32	0.00	1.13

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.29	1.41	0.14	3.67	< 0.005	0.01	0.00	0.01	0.01	0.00	0.01	89.9	0.00	94.6
Total	0.29	1.41	0.14	3.67	< 0.005	0.01	0.00	0.01	0.01	0.00	0.01	89.9	0.00	94.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.29	1.41	0.14	3.67	< 0.005	0.01	0.00	0.01	0.01	0.00	0.01	89.9	0.00	94.6
Total	0.29	1.41	0.14	3.67	< 0.005	0.01	0.00	0.01	0.01	0.00	0.01	89.9	0.00	94.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.16	0.00	0.17
Total	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.16	0.00	0.17

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	6/2/2025	6/27/2025	5.00	20.0	—
Site Preparation	Site Preparation	6/28/2025	7/5/2025	5.00	5.00	—
Grading	Grading	7/6/2025	7/10/2025	5.00	4.00	—
Building Construction	Building Construction	7/11/2025	11/27/2025	5.00	100	—
Paving	Paving	11/28/2025	12/5/2025	5.00	6.00	—
Architectural Coating	Architectural Coating	12/6/2025	12/13/2025	5.00	5.00	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73

Demolition	Rubber Tired Dozers	Diesel	Average	1.00	1.00	367	0.40
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	2.00	6.00	84.0	0.37
Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	6.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	6.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	4.00	367	0.29
Building Construction	Forklifts	Diesel	Average	2.00	6.00	82.0	0.20
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Bore/Drill Rigs	Diesel	Average	1.00	6.00	83.0	0.50
Building Construction	Excavators	Diesel	Average	1.00	4.00	36.0	0.38
Paving	Cement and Mortar Mixers	Diesel	Average	4.00	6.00	10.0	0.56
Paving	Pavers	Diesel	Average	1.00	7.00	81.0	0.42
Paving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	10.0	8.10	LDA,LDT1,LDT2

Demolition	Vendor	—	6.90	HHDT,MHDT
Demolition	Hauling	0.00	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	5.00	8.10	LDA,LDT1,LDT2
Site Preparation	Vendor	—	6.90	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	7.50	8.10	LDA,LDT1,LDT2
Grading	Vendor	—	6.90	HHDT,MHDT
Grading	Hauling	4.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	1.17	8.10	LDA,LDT1,LDT2
Building Construction	Vendor	0.46	6.90	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	17.5	8.10	LDA,LDT1,LDT2
Paving	Vendor	—	6.90	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.23	8.10	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	6.90	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT

Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	4,179	1,393	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	0.00	—
Grading	0.00	122	3.00	0.00	—
Paving	0.00	0.00	0.00	0.00	0.01

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Elementary School	0.01	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	204	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Elementary School	54.4	0.00	0.00	14,178	862	0.00	0.00	224,805

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	4,179	1,393	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	330

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Elementary School	12,481	204	0.0330	0.0040	114,261

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Elementary School	80,785	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Elementary School	3.62	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Elementary School	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Elementary School	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

Elementary School	Stand-alone retail refrigerators and freezers	R-134a	1,430	< 0.005	1.00	0.00	1.00
Elementary School	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
Emergency Generator	CNG	4.00	2.00	8.00	20.0	0.73

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	19.7	annual days of extreme heat
Extreme Precipitation	1.00	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	41.6	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A

Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	59.9
AQ-PM	4.70
AQ-DPM	2.29
Drinking Water	61.7
Lead Risk Housing	40.5
Pesticides	73.3
Toxic Releases	48.9
Traffic	3.88
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	82.9
Haz Waste Facilities/Generators	1.80
Impaired Water Bodies	83.0
Solid Waste	42.5

Sensitive Population	—
Asthma	21.9
Cardio-vascular	8.49
Low Birth Weights	18.0
Socioeconomic Factor Indicators	—
Education	12.6
Housing	15.1
Linguistic	0.92
Poverty	29.5
Unemployment	30.9

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	60.55434364
Employed	24.62466316
Median HI	58.64237136
Education	—
Bachelor's or higher	58.50121904
High school enrollment	100
Preschool enrollment	37.95714102
Transportation	—
Auto Access	67.17567047
Active commuting	54.71577056
Social	—
2-parent households	39.11202361

Voting	88.84896702
Neighborhood	—
Alcohol availability	84.62722956
Park access	15.78339535
Retail density	0.744257667
Supermarket access	6.890799435
Tree canopy	81.20107789
Housing	—
Homeownership	80.70062877
Housing habitability	83.39535481
Low-inc homeowner severe housing cost burden	58.05209804
Low-inc renter severe housing cost burden	60.15655075
Uncrowded housing	84.29359682
Health Outcomes	—
Insured adults	67.56063134
Arthritis	0.0
Asthma ER Admissions	72.3
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	76.4
Cognitively Disabled	43.0
Physically Disabled	54.0
Heart Attack ER Admissions	83.8

Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	77.4
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	22.0
SLR Inundation Area	0.0
Children	75.0
Elderly	26.8
English Speaking	80.4
Foreign-born	5.5
Outdoor Workers	38.7
Climate Change Adaptive Capacity	—
Impervious Surface Cover	97.2
Traffic Density	1.3
Traffic Access	0.0
Other Indices	—
Hardship	29.4
Other Decision Support	—
2016 Voting	85.9

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	9.00
Healthy Places Index Score for Project Location (b)	58.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Schedule provided by MNS Engineers.
Construction: Off-Road Equipment	Additional construction equipment provided by MNS Engineers.
Construction: Paving	Per MNS Engineers, 315 sf to be concreted.
Construction: Dust From Material Movement	Material movement to only occur during site grading and not prep phase.

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Appendix C

Biological Resources Report

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Carrisa Plains Elementary School Water Systems Improvement Project

Biological Resources Report

Prepared For:

MNS Engineers, Inc.

Prepared By:

Denise Duffy & Associates, Inc.
Contact: Matt Johnson
947 Cass St. Suite 5
Monterey, California 93940

MAY 2024

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INTRODUCTION

Denise Duffy & Associates, Inc. (DD&A) was contracted by MNS Engineers, Inc. (MNS) to prepare a biological resources report for the Carrisa Plains Elementary School Water System Improvements Project (project). The project is located in unincorporated San Luis Obispo County between the La Panza and Temblor Ranges, located directly adjacent to Highway 58 (**Figure 1**). Additionally, the project site is surrounded by the North Carrizo Ecological Reserve (NCER), which is a California Department of Fish and Wildlife (CDFW) preserve dedicated to preserving habitat for special-status species in the region. The project consists of the demolition and replacement of well water pumps, storage, and distribution systems located at Carrisa Plains Elementary School.

This report describes the existing biological resources within and adjacent to the project site, including any special-status species or sensitive habitats known or with the potential to occur within and adjacent to the site. This report also assesses the potential impacts to biological resources that may result from the project, and recommends appropriate avoidance, minimization, and mitigation measures necessary to reduce those impacts to a less-than-significant level in accordance with the California Environmental Quality Act (CEQA).

Summary of Results

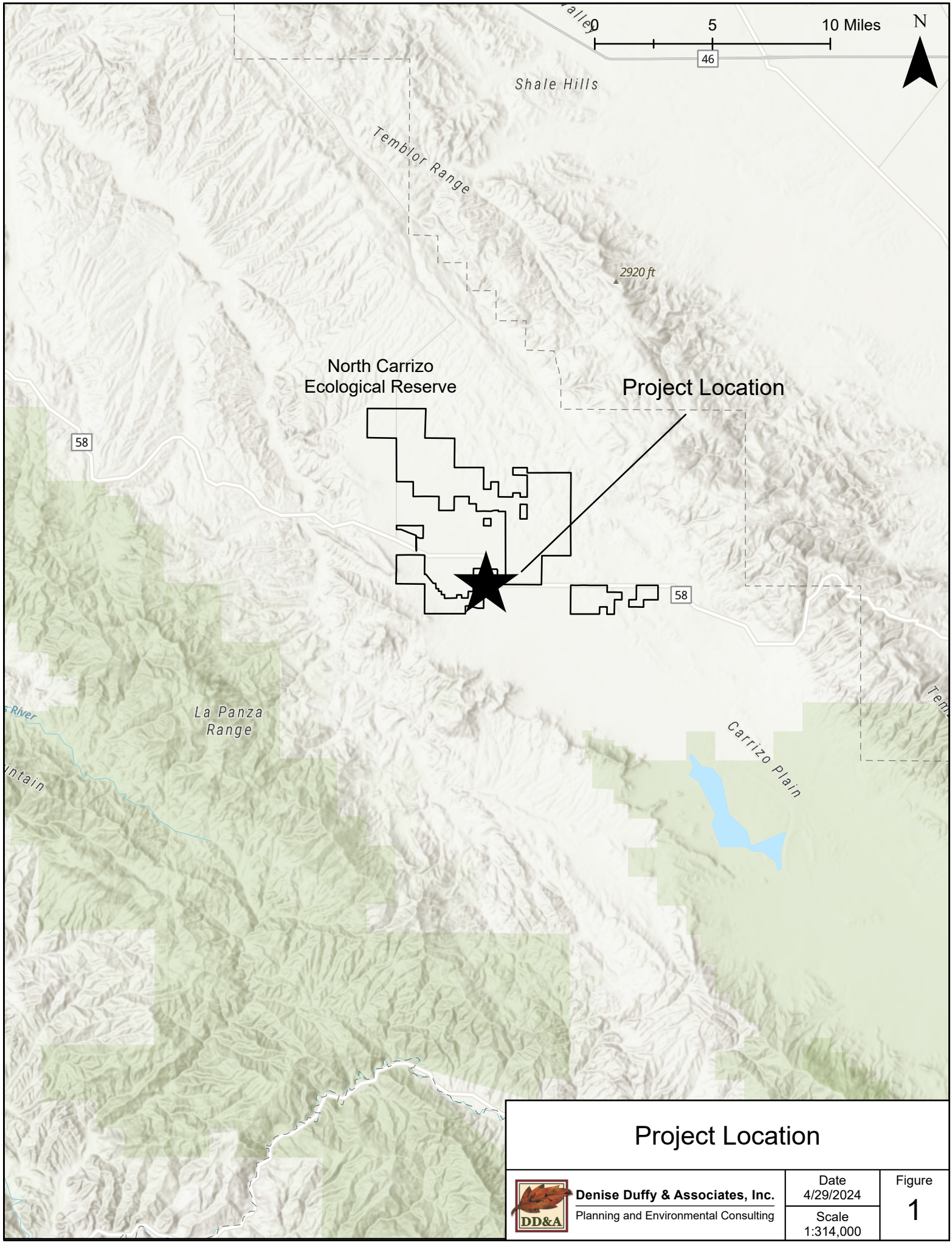
The project site was provided by MNS to encompass all impacts of the proposed project (**Figure 2**). The project site consists of one vegetation type: ruderal/disturbed. No sensitive habitats were identified within the project site.

No special-status plant species were observed during the April 2024 botanical survey or were determined to have the potential to occur for the species-specific reasons outlined in **Appendix A**. The following special-status wildlife species are known or have a moderate or high potential to occur within or immediately adjacent to the project site:

- Nelson's antelope squirrel (*Ammospermophilus nelson*) – ST[1];
- Giant kangaroo rat (*Dipodomys ingens*) – FE, SE;
- San Joaquin kit fox (*Vulpes macrotis mutica*) – FE, ST;
- Western spadefoot (*Spea hammondii*) – PT, CSC; and
- Raptors and other protected avian species.

Impacts to these special-status wildlife species and their habitats would be considered significant under CEQA; however, mitigation is provided to reduce potential impacts to a less-than-significant level, including but not limited to avoidance of nesting season, pre-construction surveys, a worker education program, and additional measures to avoid impacts to biological resources.

[1] Definitions: ST: State Threatened, FE: Federally Endangered; PT: Proposed Federally Threatened; CSC: California Species of Special Concern



Project Location

Denise Duffy & Associates, Inc. Planning and Environmental Consulting	Date 4/29/2024 Scale 1:314,000	Figure 1

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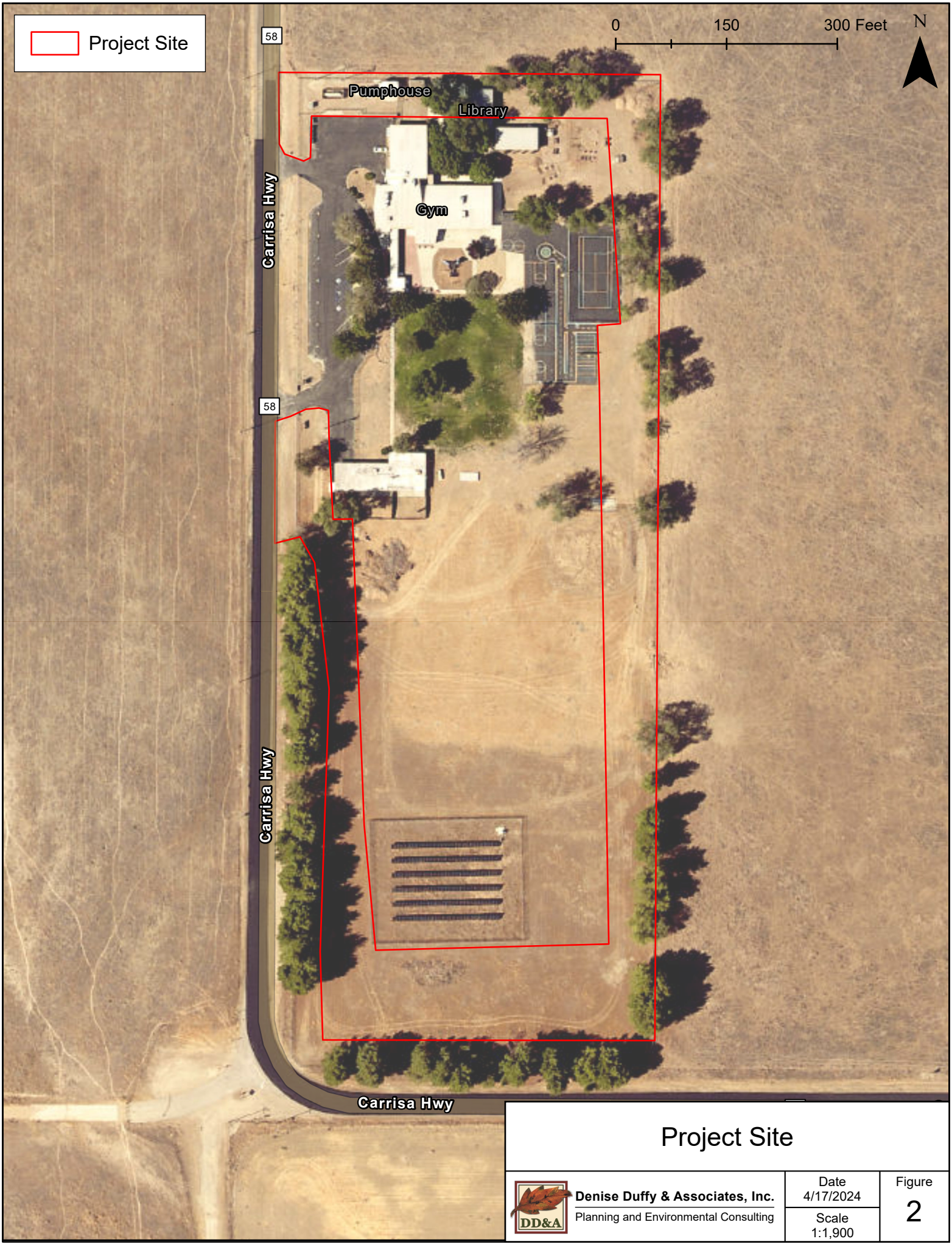

Project Site

Denise Duffy & Associates, Inc. Planning and Environmental Consulting	Date 4/17/2024 Scale 1:1,900	Figure 2

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Project Description

The project includes the following components: well and well housing building, piping and conduit, and existing well housing and demotion. These components are described in detail below.

Well and Well Housing Building:

- Drilling and construction of a new 100-gpm well.
- Construction of new 20 ft x 15 ft building to accommodate the new well, pumps, and reservoir tanks.
- Construction of a new separate reservoir for potable drinking water with a minimum capacity of 2,500 gallons.
- Possible construction of a nitrate treatment systems within the new well housing.

Piping and Conduit:

- Up to 1,400 ft of PVC schedule 40 pipe lain to connect new well to existing distribution system.
- Approximately 100 ft of propane gas line and up to 1,400 ft of electrical conduit to facilitate the backup generator in the well housing.

Existing Well Housing and Demolition:

Following the successful completion of the new well and housing:

- Existing well will be destroyed in accordance with San Luis Obispo County Water Well Code 8.40.
- Existing well housing will be demolished and removed.

METHODS

Personnel and Survey Dates

DD&A Environmental Scientists Rikki Lougee and Kimiya Ghadiri conducted a reconnaissance-level survey of the project site on April 4, 2024, to identify any special-status plant or wildlife species or suitable habitat for these species, characterize vegetation types, and identify any sensitive habitats present within the site. Survey methods included walking the survey area using aerial maps and GPS to map biological resources. Available reference materials were reviewed prior to conducting the field survey (see "Data Sources" below). Data collected during the survey were used to assess the environmental conditions of the survey area and its surroundings, evaluate environmental constraints at the site and within the local vicinity, and provide a basis for recommendations to minimize and avoid impacts.

The survey area was surveyed for botanical resources following the applicable guidelines outlined in the U.S. Fish and Wildlife Service (USFWS) *Guidelines for Conducting and Reporting Botanical Inventories for Federally listed, Proposed and Candidate Plants* (USFWS, 2000), the CDFW *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW, 2018), and the California Native Plant Society (CNPS) *Botanical Survey Guidelines* (CNPS, 2001).

Data Sources

The primary literature and data sources reviewed to determine the occurrence or potential for occurrence of special-status species within and adjacent to the survey area include:

- Current agency status information from the USFWS and CDFW for species listed, proposed for listing, or candidates for listing as Threatened or Endangered under the federal Endangered Species

Act (ESA) or the California Endangered Species Act (CESA), and those considered CDFW "species of special concern" (CDFW, 2024a);

- CDFW's California Natural Diversity Database (CNDDB) occurrence reports for the California Valley quadrangle and the eight surrounding quadrangles (Simmler, La Panza Ranch, La Panza NE, Las Yeguas Ranch, La Panza, Los Machos Hills, Branch Mountain, and Chimineas Ranch) (CDFW, 2024b; **Appendix B**);
- The USFWS's Information for Planning and Consulting (IPaC) Resource List (USFWS, 2023a: **Appendix C**);
- The CNPS *Inventory of Rare and Endangered Vascular Plants of California* (CNPS, 2024); and
- CDFW Monitoring Reports for the North Carrizo Ecological Reserve located directly adjacent to the project site (CDFW, 2014, 2015, 2017).

From these resources, a list of special-status plant and wildlife species known or with the potential to occur within and adjacent to the project site was created (**Appendix A**). The list presents these species along with their legal status, habitat requirements, and a brief statement of the likelihood to occur.

Botany

A Manual of California Vegetation (Sawyer et.al., 2009) was utilized to determine if vegetation types identified as sensitive on CDFW's *California Natural Communities List* (CDFW, 2023) are present within the survey area. Scientific nomenclature for plant species identified within this document follows *The Jepson Manual: Vascular Plants of California, Edition 2* (Baldwin et al., 2012).

Wildlife

The wildlife literature and data sources reviewed include CDFW reports on special-status wildlife (Remsen, 1978; Williams, 1986; Jennings and Hayes, 1994; Thelander, 1994), California Wildlife Habitat Relationships Program species-habitat models (Zeiner et al., 1988; and Zeiner et al., 1990), and general wildlife references (Stebbins, 1972, 1985, and 2003).

Special-Status Species

Special-status species are those plants and animals that have been formally listed or proposed for listing as Endangered or Threatened or are Candidates for such listing under ESA or CESA. Listed species are afforded legal protection under the ESA and CESA. Species that meet the definition of rare or endangered under the CEQA Section 15380 are also considered special-status species. Animals identified as "species of special concern" (most of which are species whose breeding populations in California may face extirpation if current population trends continue) on the CDFW's "Special Animals" list (CDFW, 2023b) meet this definition and are typically provided management consideration through the CEQA process, although they are not legally protected under the ESA or CESA.

Plants listed as rare under the California Native Plant Protection Act (CNPPA) or included in CNPS California Rare Plant Ranks (CRPR; formerly known as CNPS Lists) 1A, 1B, 2A, and 2B are also treated as special-status species as they meet the definitions of Sections 2062 and 2067 of the CESA and in

accordance with CEQA Guidelines Section 15380.[2] In general, CDFW requires that plant species on CRPR 1A (Plants presumed extirpated in California and Either Rare or Extinct Elsewhere), CRPR 1B (Plants rare, threatened, or endangered in California and elsewhere), CRPR 2A (Plants presumed extirpated in California, but more common elsewhere), and CRPR 2B (Plants rare, threatened, or endangered in California, but more common elsewhere) of the CNPS *Inventory of Rare and Endangered Vascular Plants of California* (CNPS, 2023) be fully considered during the preparation of environmental documents relating to CEQA.[3] In addition, species of vascular plants, bryophytes, and lichens listed as having special-status by the CDFW are considered special-status plant species (CDFW, 2023c).

Raptors (e.g., eagles, hawks, and owls) and their nests are protected in California under Fish and Game Code Section 3503.5. Section 3503.5 states that it is "unlawful to take, possess, or destroy the nest or eggs of any such bird except otherwise provided by this code or any regulation adopted pursuant thereto." In addition, fully protected species under the Fish and Game Code Section 3511 (birds), Section 4700 (mammals), Section 5515 (fish), and Section 5050 (reptiles and amphibians) are also considered special-status animal species. Species with no formal special-status designation but thought by experts to be rare or in serious decline may also be considered special-status animal species in some cases, depending on project-specific analysis and relevant, localized conservation needs or precedence.

Sensitive Habitats

Sensitive habitats include riparian corridors, wetlands, habitats for legally protected species, areas of high biological diversity, areas supporting rare or special-status wildlife habitat, and unusual or regionally restricted habitat types. Vegetation types considered sensitive include those identified as sensitive on the CDFW's *California Natural Communities List* (i.e., those habitats that are rare or endangered within the borders of California) (CDFW, 2023a) and those that are occupied by species listed under ESA or are critical habitat in accordance with ESA, and those that are defined as ESHA under the CCA. Specific habitats may also be identified as sensitive in city or county general plans or ordinances. Sensitive habitats are regulated under federal regulations (such as the Clean Water Act [CWA] and Executive Order 11990 – Protection of Wetlands), state regulations (such as CEQA and the CDFW Streambed Alteration Program), or local ordinances or policies (such as city or county tree ordinances and general plan policies).

Regulatory Setting

The following regulatory discussion describes the laws that may be applicable to the project.

Federal Regulations

Federal Endangered Species Act

Provisions of the ESA of 1973 (16 USC 1532 et seq., as amended) protect federally Listed Threatened or Endangered species and their habitats from unlawful take. Listed species include those for which proposed and final rules have been published in the Federal Register. The ESA is administered by the USFWS or

[2] CNPS initially created five CRPR to categorize degrees of concern; however, to better define and categorize rarity in California's flora, the CNPS Rare Plant Program and Rare Plant Program Committee have developed the new CRPR 2A and CRPR 2B.

[3] Species on CRPR 3 (Plants about which we need more information - a review list) and CRPR 4 (Plants of limited distribution - a watch list) may, but generally do not, meet the definitions of Sections 2062 and 2067 of CESA, and are not typically considered in environmental documents relating to CEQA.

National Marine Fisheries Service (NMFS). In general, NMFS is responsible for the protection of ESA-Listed marine species and anadromous fish, whereas other listed species are under USFWS jurisdiction.

Section 9 of ESA prohibits the take of any fish or wildlife species listed under ESA as endangered or threatened. Take, as defined by ESA, is "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." Harm is defined as "any act that kills or injures the fish or wildlife…including significant habitat modification or degradation that significantly impairs essential behavioral patterns of fish or wildlife." In addition, Section 9 prohibits removing, digging up, and maliciously damaging or destroying federally listed plants on sites under federal jurisdiction. Section 9 does not prohibit take of federally listed plants on sites not under federal jurisdiction. If there is the potential for incidental take of a federally listed fish or wildlife species, take of listed species can be authorized through either the Section 7 consultation process for federal actions or a Section 10 incidental take permit process for non-federal actions. Federal agency actions include activities that are on federal land, conducted by a federal agency, funded by a federal agency, or authorized by a federal agency (including issuance of federal permits).

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) of 1918 prohibits killing, possessing, or trading migratory birds except in accordance with regulation prescribed by the Secretary of the Interior. Most actions that result in taking or in permanent or temporary possession of a protected species constitute violations of the MBTA. The Service is responsible for overseeing compliance with the MBTA and implements Conventions (treaties) between the United States and four countries for the protection of migratory birds – Canada, Mexico, Japan, and Russia. The Service maintains a list of migratory bird species that are protected under the MBTA, which was updated in 2023 (Service, 2023c).

State Regulations

California Endangered Species Act

CESA was enacted in 1984. The California Code of Regulations (Title 14, §670.5) lists animal species considered Endangered or Threatened by the State. Section 2090 of CESA requires State agencies to comply with endangered species protection and recovery and to promote conservation of these species. Section 2080 of the Fish and Game Code prohibits "take" of any species that the commission determines to be an Endangered species or a Threatened species. "Take" is defined in Section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." A Section 2081 Incidental Take Permit from the CDFW may be obtained to authorize "take" of any State Listed species.

California Native Plant Protection Act

The CNPPA of 1977 directed the CDFW to carry out the legislature's intent to "preserve, protect and enhance rare and Endangered plants in the State." The CNPPA prohibits importing rare and Endangered plants into California, taking rare and Endangered plants, and selling rare and Endangered plants. The CESA and CNPPA authorized the Fish and Game Commission to designate endangered, threatened, and rare species and to regulate the taking of these species (§2050-2098, Fish and Game Code). Plants listed as rare under the CNPPA are not protected under CESA; however, these plants may not be taken or possessed

at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research.

California Fish and Game Code

Birds: Section 3503 of the Fish and Game Code states that it is "unlawful to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Section 3503.5 prohibits the killing, possession, or destruction of any birds in the orders Falconiformes or Strigiformes (birds-of-prey). Section 3511 prohibits take or possession of fully protected birds. Section 3513 prohibits the take or possession of any migratory nongame birds designated under the federal MBTA. Section 3800 prohibits take of nongame birds.

Species of Special Concern: As noted above, the CDFW also maintains a list of wildlife "species of special concern." Although these species have no legal status, the CDFW recommends considering these species during analysis of project impacts to protect declining populations and avoid the need to list them as Endangered in the future.

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RESULTS

Vegetation Types

The survey results include mapping and quantification of the acreage of vegetation types within the project site (**Figure 3**). A description of vegetation types can be found below along with the identification of the presence or potential presence of special-status species within each type.

Ruderal/Disturbed

- *A Manual of California Vegetation* classification(s): None
- *California Natural Communities List*: Not listed

Ruderal areas are those areas which have been subject to historic and ongoing disturbance by human activities and are devoid of vegetation or dominated by non-native and/or invasive weed species. The entirety of the project site is comprised of ruderal vegetation, consisting of the school grounds which are actively managed on a regular basis (**Figure 3**). During the survey, the school custodian indicated that a majority of the project site is regularly mowed approximately once a month. The entirety of the project site was highly disturbed, with compacted soils containing imported gravel in some areas. The project site was dominated by non-native plant species including foxtail barley (*Hordeum murinum*), foxtail chess (*Bromus madritensis*), and common stork's bill (*Erodium cicutarium*); however, few native species were observed including coastal tidy tips (*Layia platyglossa*) and purple owl's clover (*Castilleja exserta*).

Ruderal areas typically provide only low-quality habitat for plants and wildlife. Common wildlife species which do well in disturbed areas include American crow (*Corvus brachyrhynchos*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), scrub jay (*Aphelocoma californica*), European starling (*Sturnus vulgaris*), western fence lizard (*Sceloporus occidentalis***)**, and rock dove (*Columba livia*). However, ruderal areas within the project site may also provide burrowing habitat for Nelson's antelope squirrel and giant kangaroo rat, dispersal habitat for San Joaquin kit fox, and upland or dispersal habitat for western spadefoot.

Sensitive Habitats

No sensitive habitats were identified within the project site.

Special-Status Species

Published occurrence data within the project site and surrounding USGS quadrangles were evaluated to compile a table of special-status species known to occur in the vicinity of the project site (**Appendix A**). Each of these species was evaluated for their likelihood to occur within and immediately adjacent to the project site. The special-status species that are known to or have been determined to have a moderate to high potential to occur within or immediately adjacent to the project site are discussed below. All other species within the table are assumed "unlikely to occur" or determined to have a low potential to occur for the species-specific reason presented in **Appendix A**.

Vegetation Types

Denise Duffy & Associates, Inc.
Planning and Environmental Consulting

Date
4/17/2024

Scale
1:1,900

Figure
3

Path: C:\GIS\2023-82 Carissa Plains Elementary\2023-82 Carissa Plains Elementary.aprx

Special-Status Wildlife Species

Nelson's Antelope Squirrel

The Nelson's antelope squirrel (*Ammospermophilus nelsoni*) is a state Threatened species. This species is a permanent resident of the western San Joaquin Valley from approximately 60-360 meters in elevation (200-1200 feet) on dry, sparsely vegetated, loam soils. This species is found from southern Merced County south to Kern, Kings, and Tulare Counties, and also occurs in portions of eastern San Luis Obispo and Santa Barbara Counties (Zeiner, 1988). Threats to the species include habitat loss due to cultivation and agriculture, overgrazing, and effects of rodenticides. Nelson's antelope squirrel feeds primarily on insects, green vegetation, seeds, and occasionally small vertebrates depending on seasonal availability of food sources. This species digs burrows, utilizes kangaroo rat burrows, or uses cover provided by rocks and other topographic features. Frequently found in areas with sandy loam soils and widely spaced alkali scrub vegetation or dry washes. Habitats include generally flat areas with widely scattered shrubs, annual forbs and grasses, and broken terrain with small gullies and washes.

The CNDDB reports 19 occurrences of this species within the quadrangles reviewed, the nearest located approximately two miles from the project site. Poor quality habitat is present within the project site; however, higher quality habitat is present directly adjacent to the project site within the NCER. Over one dozen small mammal burrows were observed within the project site and could provide suitable habitat for this species. Therefore, Nelson's antelope squirrel has a moderate potential to occur within the project site.

Giant Kangaroo Rat

The giant kangaroo rat (*Dipodomys ingens*) is a federal and state Endangered species. This species is a small, burrowing mammal found only in the central valley of California. Giant kangaroo rats occur in the San Joaquin Valley, the Carrizo and Elkhorn Plains, and the Cuyama Valley in gentle sloping hills, grasslands, and scrub habitats (USFWS, 2020a). This species is highly adapted to the dry environment in which it lives and is rarely found in areas with summer precipitation. Optimal habitat for giant kangaroo rat includes annual grassland with low vegetative growth and few or no shrubs on gentle slopes not prone to flooding during winter months. Although giant kangaroo rats typically have strong habitat preferences, they are more generalized during dispersal events. Food sources for this species primarily consist of seeds, but other food sources include invertebrates and green plant material. Kangaroo rats are fossorial and crepuscular, spending a majority of their lives underground in burrows and actively foraging above ground during sunrise and sunset. Burrows typically contain two to four openings and consist of a shallow underground system of complex tunnels. Burrow openings are approximately five centimeters in diameter. This species requires friable soils deep enough to support burrow construction. This species is solitary and typically does not share burrows or food resources, and many show aggression and territorial behavior toward members of the same species.

The maximum dispersal distance documented for giant kangaroo rat has been estimated as 2.25 kilometers (1.4 miles); however, long-distance dispersal is uncommon, and it is estimated that most individuals are more likely to disperse within only 700 meters (0.4 mile) from its natal den (USFWS, 2020a).

The CNDDB reports eight occurrences of this species within the quadrangles reviewed; however, only one occurrence (#200) is reported in the last 20 years. No CNDDB occurrences are located within 2.25 km of the project site; however, CDFW has documented that this species is present within the NCER surrounding

the project site (CDFW, 2017). Soils within the project site are relatively compacted and the vegetation is actively managed, as described above. These factors result in poor quality habitat for giant kangaroo rat within the project site; however, high quality habitat is present within the NCER directly adjacent to the project site. Additionally, over one dozen small mammal burrows were observed within the project site which may provide suitable habitat for this species. Therefore, this species has a moderate potential to occur within the project site.

San Joaquin Kit Fox

The San Joaquin kit fox (*Vulpes macrotis mutica*) is a federal Endangered and state Threatened species. Its present range extends from the southern end of the San Joaquin Valley, north to Stanislaus County along the east, and along the interior Coast Range valleys and foothills to central Contra Costa County. The kit fox typically inhabits valley alkaline scrub, valley and foothill grasslands, and open oak woodlands of low to moderate relief. Kit foxes are known to occupy human-altered habitats, such as vineyards, orchards, and petroleum fields, where denning opportunities and suitable prey are available. Man-made features, such as culverts in roadbeds and pipes, are frequently used in developed landscapes in the southern range of the kit fox. Kit foxes are thought to be weak excavators and largely dependent on rodent burrows, which they enlarge as den sites. Studies of kit fox in the northern part of their range support this presumption, as kit foxes are largely dependent on California ground squirrel (*Spermophilus beecheyi*) burrows for the creation of den sites. In the course of a year, up to 70 different dens may be used by a single individual. Mating occurs from December to February with pups born between February and late March. Pups emerge above ground, and are fed primarily by the male adult, at approximately one month old. Pups are fed 4 to 5 months, after which, the pups begin to forage independently. Juveniles disperse as far as 19 kilometers away from natal dens. Home ranges vary in size, depending on prey availability. Average home range is approximately 500 hectares.

SJKF is one of two subspecies of kit fox, *Vulpes macrotis*, which is the smallest canid species in North America. SJKF are primarily nocturnal and exhibit obligate use of subterranean dens. Dens are used for temperature regulation, reproduction, and escape from predators. The subspecies is endemic to the San Joaquin Valley and some of the adjacent valleys of central California (USFWS 2020b; Cypher et al 2013). Extensive land conversions of native habitat in the Central Valley, beginning as early as the mid-1800s, has resulted in almost 95 percent of the former range being converted to irrigated agriculture, industrial, or urban land uses (Constable et. al 2009).

Presently, the range of SJKF is restricted to the San Joaquin Valley in south-central California, as well as the Carrizo Plain, Panoche Valley, and adjacent smaller valleys in the Coast Range (USFWS 2020b). The largest extant populations of kit foxes are in western Kern County on and around the Elk Hills, Buena Vista Valley, and in the Carrizo Plain Natural Area [now the Carrizo Plain National Monument] of San Luis Obispo County (USFWS 1998). The USFWS *Recovery Plan for Upland Species of the San Joaquin Valley* (1998) defines three distinct core populations of SJKF: Western Kern County, Carrizo Plain, and Ciervo-Panoche. Thirteen satellite populations are also described in the remaining fragmented landscapes of the species range (USFWS 2020b; USFWS 2010b). Movement of foxes between these populations is important for maintaining gene flow and avoiding inbreeding effects (Cypher et al 2005).

Vegetation communities inhabited by SJFK include valley sink scrub, valley saltbush scrub, upper Sonoran

subshrub scrub, annual grassland, and other grassland communities (USFWS 2020b). Within these communities, optimal habitat for the subspecies is sparsely vegetated communities on gentle slopes (McGrew 1979; Cypher et al. 2013). SJKF can also be found in human altered habitats such as grazed grasslands, petroleum fields, solar farms, and urban areas. Tall or dense vegetation generally is less optimal for foxes as such conditions make it difficult for foxes to detect approaching predators or capture prey. Kit foxes also tend to avoid rugged steep terrain; predation risk is higher for foxes under such topographic conditions (Warrick and Cypher 1998). In general, kit fox dens are found in flat or gently rolling terrain with slopes of less than 10 degrees, with a large majority of dens occurring on slopes of less than 30 percent (Archon 1992 as cited in USFWS 1998). Suitable habitat must also include friable soils to allow for excavation of dens. Kit fox dens are primarily found in loose textured soils (Morrell 1972) but will also occupy areas where soils have a high clay content where they modify burrows dug by other animals (Orloff et al. 1986). Kit foxes are also known to den in human-made structures, or "atypical dens," such as culverts, pipes, and other artificially created dens.

The preferred prey of SJKF is kangaroo rats, but their diet varies geographically, seasonally, and annually based on temporal and spatial variation in abundance of potential prey. They are also known to feed on rabbits and hares, ground squirrels, pocket mice, deer mice, and insects. In developed areas, such as Bakersfield, kit fox also feed on house mice and anthropogenic food resources (Newsome et al 2010). A study of kit foxes in western Merced County (Constable et al 2009) indicated that prey availability, particularly the presence and abundance of kangaroo rats, appeared to be a potential factor in the patterns of kit fox distribution and abundance.

Estimates of kit fox density vary greatly throughout its range and have been reported as low as 0.03 kit fox per square mile and as high as 2 to 3 per square mile (USFWS 1998). Home range size varies widely but generally an individual or pair will need 1 to 2 square miles in optimal habitat and considerably more when incorporating lower-quality habitat (Morrell 1972; Knapp 1979, cited in USFWS 1998; Cypher et al. 2013). Adult pairs remain together all year, sharing the home range but not necessarily the same den (USFWS 2020b). During September and October, adult females begin to clean and enlarge natal or pupping dens which often have multiple openings (Morrell 1972). Mating and conception take place between late December and March (Morrell 1972, p. 19; Spencer et al. 1992). The median gestation period is estimated to range from 48 to 52 days. Litters of two to six pups are born sometime between February and late March (Morrell 1972; Spencer et al. 1992). The female is rarely seen hunting during the time she is lactating. During this period, the male provides most of the food for her and the pups. The pups emerge above ground at slightly more than 1 month of age. After 4 to 5 months, usually in August or September, the family bonds begin to dissolve, and the young begin dispersing. Occasionally, juveniles will remain with the family group beyond the first summer.

The CNDDB reports 50 occurrences of this species within the quadrangles reviewed, including one occurrence (#973) that encompasses the entire project site and multiple others within close proximity to the project site. Additionally, CDFW tracking collar data indicates the presence of SJKF in the general vicinity of the project site throughout the NCER (CDFW, 2017). The project site provides suitable dispersal habitat for this species; however, the entirety of the project site is surrounded by chain link fencing, which may serve as a barrier for SJKF and other larger mammals from entering the project site. Further, the highly compacted and disturbed soils likely provide only low-quality denning habitat for this species and would limit the presence of its prey (kangaroo rats and other small mammals). High quality habitat for SJKF is

present surrounding the project site throughout the NCER; therefore, there is low potential for SJKF to utilize the site as dispersal habitat, but unlikely for this species to utilize the project site as foraging or denning habitat[4].

Western Spadefoot

The western spadefoot toad (*Spea hammondii*) was proposed for listing as threatened under the ESA on December 5, 2023 (88 FR 84252) and is a CDFW species of special concern. Western spadefoot toads are distributed throughout the Central Valley and adjacent foothills and are typically quite common where they occur. In the Coast Ranges, this species is found from Point Conception in Santa Barbara County, south to the Mexican border. Elevations of occurrence extend from near sea-level to 1,360 meters. Rarely found on the surface, spadefoot toads spend most of the year in underground burrows, which they may construct themselves or may improve (from small mammals). Breeding and egg laying occur almost exclusively in shallow, temporary pools formed by heavy winter rains. Egg masses are attached to plant material or the upper surfaces of submerged rocks. Tadpoles consume planktonic organisms and algae but are also carnivorous and may consume dead aquatic larvae of amphibians (including cannibalism). Recently metamorphosed juveniles seek refuge in the immediate vicinities of breeding ponds. The maximum dispersal distance that has been recorded for western spadefoot is 605 m (1985 ft); however, dispersal distances for this species are highly dependent on rainfall (USFWS, 2023).

The CNDDB reports 46 occurrences of this species within the quadrangles reviewed, none of which are located within the dispersal distance (605 m) of the project site. Poor quality upland habitat is present within the project site; however, no suitable breeding habitat is present. High quality habitat is present adjacent to the project site within the NCER, where the species is known to occur (CDFW, 2017). Therefore, this species has moderate potential to disperse within the project site; however, there is only low potential the species would utilize the project site as upland habitat.

Raptors and Other Protected Avian Species

Raptors and their nests are protected under California Fish and Game Code. While the life histories of these species vary, overlapping nesting and foraging similarities (approximately February through August) allow for their concurrent discussion. Most raptors are breeding residents throughout most of the wooded portions of the state. Stands of live oak, riparian deciduous, or other forest vegetation types, as well as open grasslands, are used most frequently for nesting. Breeding occurs February through August, with peak activity May through July. Prey for these species includes small birds, small mammals, and some reptiles and amphibians. Many raptor species hunt in open woodland and habitat edges. Various common raptor species (such as red-tailed hawk [*Buteo jamaicensis*], red-shouldered hawk, great horned owl [*Bubo virginianus*], and turkey vulture [*Cathartes aura*]) have a potential to nest within any of the trees present within and adjacent to the project site.

[4] SJKF was determined to have a low potential to occur within the project site; however, it is included in this analysis due to the known presence of this species within the vicinity of the project site and its listing status.

Special-Status Plant Species

A botanical survey was conducted within the project site during the appropriate blooming period to identify special-status plant species or habitat for these species within the project site in April 2024. No special-status plant species were observed during the spring survey and no late-blooming species were determined to have potential to occur within the project site for the species-specific reasons presented in **Appendix A**.

IMPACTS AND MITIGATION

Construction activities associated with the proposed project could result in impacts to special-status wildlife species. Mitigation measures have been provided below to reduce these potential impacts to a less-than-significant level in accordance with CEQA.

Special-Status Wildlife Species

Potential Impact 1: Raptors and other protected avian species have the potential to occur within the survey area. Construction activities, including vegetation removal and excavation, during the breeding and nesting seasons could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment within the survey area. This would be a potentially significant impact that can be reduced to a less-than-significant level with implementation of Mitigation Measures 3a and 3b.

Mitigation Measure 1a: Prior to construction activities, the project proponent shall retain a qualified biologist to conduct an Employee Education Program for the construction crew. The biologist shall meet with the construction crew at the project site at the onset of construction to educate the construction crew on the following: a) a review of the project boundaries; b) all special-status species that may be present, their habitat, and proper identification; c) the specific mitigation measures that will be incorporated into the construction effort; d) the general provisions and protections afforded by the regulatory agencies; and e) the proper procedures if a special-status animal is encountered within the project site.

Mitigation Measure 1b: Construction activities that may directly (e.g., vegetation removal) or indirectly affect (e.g., noise/ground disturbance) nesting raptors and other protected avian species shall be timed to avoid the breeding and nesting seasons (February 1 through September 15).

If construction activities must occur during the breeding and nesting season (February 1 through September 15), a qualified biologist shall conduct pre-construction surveys for nesting raptors and other protected avian species within 300 feet of the proposed construction activities. Pre-construction surveys should be conducted no more than 7 days prior to the start of the construction activities during the early part of the breeding season (February through April) and no more than 14 days prior to the initiation of these activities during the late part of the breeding season (May through August).

If raptors or other protected avian nests are identified during the pre-construction surveys, the qualified biologist would notify the project proponent and an appropriate no-disturbance buffer would be imposed within which no construction activities or disturbance would take place (generally 300 feet in all directions for raptors; other avian species may have species-specific

requirements) until the young of the year have fledged and are no longer reliant upon the nest or parental care for survival, as determined by a qualified biologist.

Potential Impact 2: SJKF has the potential to occur within the project site. Construction activities, including vegetation removal and excavation, could result in impacts such as crushing animals in occupied dens, injury or mortality to animals sheltering under equipment or material stockpiles, or entrapment in trenches or deep excavations. Foxes within occupied dens, if present, could be disturbed by noise and ground vibrations, which may in turn negatively affect breeding behavior, distress young pups, cause den abandonment, or cause kit foxes to avoid the area. This would be a potentially significant impact that can be reduced to a less-than-significant level with implementation of Mitigation Measures 1a, 2a, and 2b.

Mitigation Measure 2a: San Joaquin kit fox pre-construction surveys shall be conducted not more than 14 days prior to the beginning of ground disturbance and/or construction associated with the project to determine if potential or occupied dens are present on-site or within 250 feet of the project site. If an occupied den is located on-site, an avoidance buffer shall be established as follows:

- Potential den: 50 feet – demarcated with flagged stakes,
- Atypical den: 50 feet – demarcated with flagged stakes,
- Known den: 100 feet – demarcated with orange construction fencing that fully encircles the den, but allows for passage of kit foxes should they be present,
- Natal/pupping den: at least 500 feet – USFWS must be contacted.

Essential vehicles may operate on existing roads and necessary foot traffic will be permitted. All other construction, vehicle operation, material storage, or any other type of surface-disturbing activity shall be prohibited within avoidance buffer(s). A qualified biologist will monitor the den site to determine when the den site has been vacated. Once it has been confirmed that SJKF are no longer present, the avoidance buffer may be removed, and construction may proceed.

Mitigation Measure 2b: The following avoidance and minimization measures shall be implemented during implementation of the project. These measures are adapted from the USFWS Standard Recommendations for Protection of the San Joaquin Kit Fox Prior to or During Ground Disturbance (USFWS, 1999):

- Kit foxes are attracted to den-like structures such as pipes and may enter stored pipes and become trapped or injured. All construction pipes, culverts, or similar structures with a diameter of 4-inches or greater that are stored at a construction site for one or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the USFWS has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped.

- Kit foxes are attracted to den-like structures such as pipes and may enter stored pipes and become trapped or injured. All construction pipes, culverts, or similar structures with a diameter of 4-inches or greater that are stored at a construction site for one or more overnight

periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the USFWS has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped.

- All food-related trash items such as wrappers, cans, bottles, and food scraps should be disposed of in securely closed containers and removed at least once a week from a construction or Project site.

- No pets, such as dogs or cats, should be permitted on the Project site to prevent harassment, mortality of kit foxes, or destruction of dens.

- Use of rodenticides and herbicides in the project site should be restricted. This is necessary to prevent primary or secondary poisoning of kit foxes and the depletion of prey populations on which they depend. All uses of such compounds should observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and Federal legislation, as well as additional Project- related restrictions deemed necessary by the USFWS. If rodent control must be conducted, zinc phosphide should be used because of a proven lower risk to kit fox.

- In the case of trapped animals, escape ramps or structures should be installed immediately to allow the animal(s) to escape, or the USFWS should be contacted for guidance.

- Any contractor, employee, or military or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox should immediately report the incident to their representative. This representative should contact CDFW immediately in the case of a dead, injured or entrapped kit fox. The CDFW contact for immediate assistance is State Dispatch at (916) 445-0045. They will contact the local warden or the wildlife biologist at (530) 934- 9309. The USFWS should be contacted at Endangered Species Division, 2800 Cottage Way, Suite W2605, Sacramento, CA 95825, (916) 414-6620 or (916) 414-6600.

- The Sacramento Fish and Wildlife Office and CDFW should be notified in writing within three working days of the accidental death or injury to a San Joaquin kit fox during Project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information.

- New sightings of kit fox should be reported to the CNDDB. A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the USFWS at the address listed above.

- Fencing of the project site, if proposed, shall incorporate wildlife-friendly fencing design. Fencing plans may use one of several potential designs that would allow SJKF to pass through the fence while still providing for Project security and exclusion of other unwanted species (i.e. domestic dogs and coyotes). Raised fences or fences with entry/exit points of at least 6 inches

in diameter spaced along the bottom of the fence to allow species such as San Joaquin kit fox access into and through the Project site would be appropriate designs.

- All project lighting shall be directed downward and towards the interior of the Project site, thus avoiding light pollution into adjacent open areas. Use of lighting shall be the minimum necessary to achieve safety and security on the site.

Potential Impact 3: Western spadefoot has the potential to occur within the project site. Construction activities, including vegetation removal and excavation, could result in impacts such as crushing animals in occupied burrows, injury or mortality to animals sheltering under equipment or material stockpiles, or entrapment in trenches or deep excavations. Individuals within occupied burrows, if present, could be disturbed by noise and ground vibrations, which may in turn negatively affect breeding behavior, or cause animals to avoid the area. This would be a potentially significant impact that can be reduced to a less-than-significant level with implementation of Mitigation Measures 3a through 3c.

Mitigation Measure 3a: A USFWS approved biologist shall survey the work sites where suitable habitat has been identified no more than 30 days before the onset of construction. Adult individuals detected during the surveys shall be relocated out of the area of disturbance by a USFWS approved biologist.

Mitigation Measure 3b: Areas beneath construction equipment and vehicles shall be inspected daily, prior to operation, for presence of western spadefoot under tracks/tires and within machinery by a USFWS approved biologist until the biologists determines a designated contractor is sufficiently trained to monitor. A USFWS approved biologist will ensure that this individual receives training consistent with USFWS requirements. A USFWS approved biologist will be on-call to come to the site if western spadefoot are found.

Mitigation Measure 3c: Exclusion fencing shall be installed between construction areas and suitable habitat to prevent animals from entering the project site.

Potential Impact 4: Nelson's antelope squirrel and giant kangaroo rat have the potential to occur within the project site. Construction activities, including vegetation removal and excavation, could result in impacts such as crushing animals in occupied burrows, injury or mortality to animals sheltering under equipment or material stockpiles, or entrapment in trenches or deep excavations. Individuals within occupied burrows, if present, could be disturbed by noise and ground vibrations, which may in turn negatively affect breeding behavior, or cause animals to avoid the area. This would be a potentially significant impact that can be reduced to a less-than-significant level with implementation of Mitigation Measures 1a and 4.

Mitigation Measure 4: Pre-activity surveys shall be conducted by a CDFW-approved biologist to identify occupied or potentially occupied active burrows. All occupied or potentially occupied burrows identified by the biologist shall be avoided to the greatest extent feasible. If occupied or potentially occupied burrows cannot be avoided, a CDFW-approved biologist shall delineate a work exclusion zone of at least 30 feet and remain on site as a biological monitor during implementation of construction. If the biologist cannot stay onsite during implementation of

construction, then the biologist shall delineate a work exclusion zone of 50 feet around the burrow(s).

If work must proceed inside a work-exclusion zone (i.e., within occupied or potentially occupied burrows), the project proponent will consult with CDFW to determine if an Incidental Take Permit (Section 2081) under CESA, is required.

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APPENDIX A

CALIFORNIA NATURAL DIVERSITY DATABASE REPORT

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (La Panza (3512032) OR La Panza NE (3512041) OR La Panza Ranch (3512042) OR Las Yeguas Ranch (3511948) OR California Valley (3512031) OR Simmler (3511938) OR Los Machos Hills (3512022) OR Branch Mtn. (3512021) OR Chimineas Ranch (3511928))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Agelaius tricolor tricolored blackbird	ABPBXB0020	None	Threatened	G1G2	S2	SSC
Ammospermophilus nelsoni Nelson's (=San Joaquin) antelope squirrel	AMAFB04040	None	Threatened	G2G3	S3	
Anniella grinnelli Bakersfield legless lizard	ARACC01050	None	None	G2G3	S2S3	SSC
Anniella pulchra Northern California legless lizard	ARACC01020	None	None	G3	S2S3	SSC
Antirrhinum ovatum oval-leaved snapdragon	PDSCR2K010	None	None	G3	S3	4.2
Antrozous pallidus pallid bat	AMACC10010	None	None	G4	S3	SSC
Arctostaphylos pilosula Santa Margarita manzanita	PDERI042Z0	None	None	G2?	S2?	1B.2
Aristocapsa insignis Indian Valley spineflower	PDPGN0U010	None	None	G1	S1	1B.2
Arizona elegans occidentalis California glossy snake	ARADB01017	None	None	G5T2	S2	SSC
Asio otus long-eared owl	ABNSB13010	None	None	G5	S3?	SSC
Athene cunicularia burrowing owl	ABNSB10010	None	None	G4	S2	SSC
Atriplex flavida Carrizo Plain crownscale	PDCHE04360	None	None	G3	S3	1B.3
Bombus crotchii Crotch's bumble bee	IIHYM24480	None	Candidate Endangered	G2	S2	
Branchinecta longiantenna longhorn fairy shrimp	ICBRA03020	Endangered	None	G2	S2	
Branchinecta lynchi vernal pool fairy shrimp	ICBRA03030	Threatened	None	G3	S3	
Calochortus palmeri var. palmeri Palmer's mariposa-lily	PMLIL0D122	None	None	G3T2	S2	1B.2
Calochortus simulans La Panza mariposa-lily	PMLIL0D170	None	None	G2	S2	1B.3
Calycadenia villosa dwarf calycadenia	PDAST1P0B0	None	None	G3	S3	1B.1

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Caulanthus californicus California jewelflower	PDBRA31010	Endangered	Endangered	G1	S1	1B.1
Caulanthus lemmonii Lemmon's jewelflower	PDBRA0M0E0	None	None	G3	S3	1B.2
Chorizanthe rectispina straight-awned spineflower	PDPGN040N0	None	None	G2	S2	1B.2
Corynorhinus townsendii Townsend's big-eared bat	AMACC08010	None	None	G4	S2	SSC
Delphinium parryi ssp. eastwoodiae Eastwood's larkspur	PDRAN0B1B2	None	None	G4T2	S2	1B.2
Delphinium recurvatum recurved larkspur	PDRAN0B1J0	None	None	G2?	S2?	1B.2
Delphinium umbraculorum umbrella larkspur	PDRAN0B1W0	None	None	G3	S3	1B.3
Dipodomys ingens giant kangaroo rat	AMAFD03080	Endangered	Endangered	G1G2	S2	
Dipodomys nitratoides nitratoides Tipton kangaroo rat	AMAFD03152	Endangered	Endangered	G3T1T2	S2	
Emys marmorata western pond turtle	ARAAD02030	Proposed Threatened	None	G3G4	S3	SSC
Eremalche parryi ssp. kernensis Kern mallow	PDMAL0C031	Endangered	None	G3G4T3	S3	1B.2
Eremophila alpestris actia California horned lark	ABPAT02011	None	None	G5T4Q	S4	WL
Eriastrum hooveri Hoover's eriastrum	PDPLM03070	Delisted	None	G3	S3	4.2
Eryngium spinosepalum spiny-sepaled button-celery	PDAPI0Z0Y0	None	None	G2	S2	1B.2
Eschscholzia rhombipetala diamond-petaled California poppy	PDPAP0A0D0	None	None	G1	S1	1B.1
Falco columbarius merlin	ABNKD06030	None	None	G5	S3S4	WL
Falco mexicanus prairie falcon	ABNKD06090	None	None	G5	S4	WL
Gambelia sila blunt-nosed leopard lizard	ARACF07010	Endangered	Endangered	G1	S2	FP
Gymnogyps californianus California condor	ABNKA03010	Endangered	Endangered	G1	S2	FP
Lanius ludovicianus loggerhead shrike	ABPBR01030	None	None	G4	S4	SSC
Lasthenia glabrata ssp. coulteri Coulter's goldfields	PDAST5L0A1	None	None	G4T2	S2	1B.1

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Layia heterotricha pale-yellow layia	PDAST5N070	None	None	G2	S2	1B.1
Layia munzii Munz's tidy-tips	PDAST5N0B0	None	None	G2	S2	1B.2
Lepidium jaredii ssp. jaredii Jared's pepper-grass	PDBRA1M0G1	None	None	G2G3T1T2	S1S2	1B.2
Madia radiata showy golden madia	PDAST650E0	None	None	G3	S3	1B.1
Malacothamnus gracilis slender bush-mallow	PDMAL0Q0J0	None	None	G1Q	S1	1B.1
Masticophis flagellum ruddocki San Joaquin coachwhip	ARADB21021	None	None	G5T2T3	S3	SSC
Monolopia congdonii San Joaquin woollythreads	PDASTA8010	Endangered	None	G2	S2	1B.2
Navarretia nigelliformis ssp. radians shining navarretia	PDPLM0C0J2	None	None	G4T2	S2	1B.2
Northern Claypan Vernal Pool Northern Claypan Vernal Pool	CTT44120CA	None	None	G1	S1.1	
Onychomys torridus tularensis Tulare grasshopper mouse	AMAFF06021	None	None	G5T1T2	S1S2	SSC
Perognathus inornatus San Joaquin pocket mouse	AMAFD01060	None	None	G2G3	S2S3	
Phrynosoma blainvillii coast horned lizard	ARACF12100	None	None	G4	S4	SSC
Rana draytonii California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
Sidalcea hickmanii ssp. parishii Parish's checkerbloom	PDMAL110A3	None	Rare	G2T1	S1	1B.2
Spea hammondii western spadefoot	AAABF02020	Proposed Threatened	None	G2G3	S3S4	SSC
Taxidea taxus American badger	AMAJF04010	None	None	G5	S3	SSC
Thamnophis hammondii two-striped gartersnake	ARADB36160	None	None	G4	S3S4	SSC
Valley Sink Scrub Valley Sink Scrub	CTT36210CA	None	None	G1	S1.1	
Vulpes macrotis mutica San Joaquin kit fox	AMAJA03041	Endangered	Threatened	G4T2	S3	

Record Count: 58

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APPENDIX B

INFORMATION FOR PLANNING AND CONSULTING (IPaC) RESOURCE LIST

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IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

San Luis Obispo County, California

Local office

Sacramento Fish And Wildlife Office

(916) 414-6600
(916) 414-6713

Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Giant Kangaroo Rat Dipodomys ingens Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6051	Endangered

San Joaquin Kit Fox Vulpes macrotis mutica — Endangered

Wherever found

No critical habitat has been designated for this species.

https://ecos.fws.gov/ecp/species/2873

Birds

NAME	STATUS

California Condor Gymnogyps californianus — Endangered

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

https://ecos.fws.gov/ecp/species/8193

Reptiles

NAME	STATUS

Blunt-nosed Leopard Lizard Gambelia silus — Endangered

Wherever found

No critical habitat has been designated for this species.

https://ecos.fws.gov/ecp/species/625

Green Sea Turtle Chelonia mydas — Threatened

No critical habitat has been designated for this species.

https://ecos.fws.gov/ecp/species/6199

Southwestern Pond Turtle Actinemys pallida — Proposed Threatened

Wherever found

No critical habitat has been designated for this species.

https://ecos.fws.gov/ecp/species/4768

Amphibians

NAME	STATUS

California Red-legged Frog Rana draytonii — Threatened

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

https://ecos.fws.gov/ecp/species/2891

Western Spadefoot Spea hammondii — Proposed Threatened

Wherever found

No critical habitat has been designated for this species.

https://ecos.fws.gov/ecp/species/5425

Insects

NAME	STATUS

NAME	STATUS
Monarch Butterfly Danaus plexippus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743	Candidate

Crustaceans

NAME	STATUS
Vernal Pool Fairy Shrimp Branchinecta lynchi Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/498	Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

Bald & Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act[1] and the Migratory Bird Treaty Act[2].

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats[3], should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

There are likely bald eagles present in your project area. For additional information on bald eagles, refer to Bald Eagle Nesting and Sensitivity to Human Activity

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
Golden Eagle *Aquila chrysaetos* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

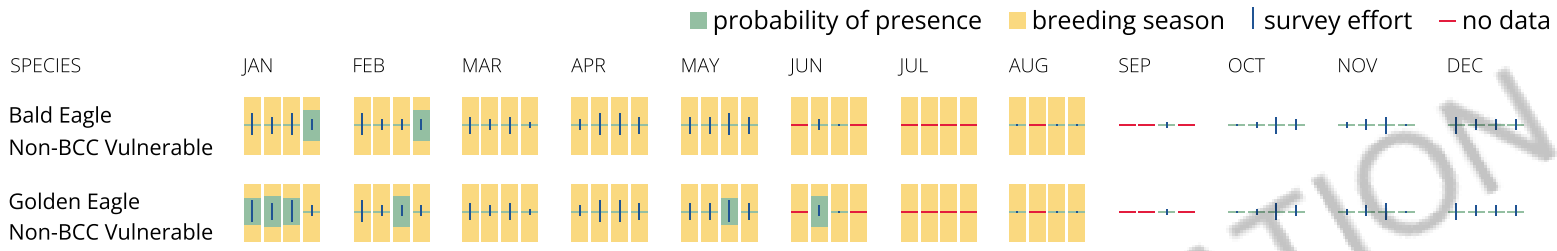
Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply). To see a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats[3] should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory

Birds and Eagles".

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/ documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
Belding's Savannah Sparrow *Passerculus sandwichensis beldingi* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8	Breeds Apr 1 to Aug 15
Bullock's Oriole *Icterus bullockii* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Mar 21 to Jul 25
California Thrasher *Toxostoma redivivum* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jan 1 to Jul 31

Common Yellowthroat Geothlypis trichas sinuosa — Breeds May 20 to Jul 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/2084

Golden Eagle Aquila chrysaetos — Breeds Jan 1 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1680

Long-eared Owl asio otus — Breeds Mar 1 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3631

Mountain Plover Charadrius montanus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3638

Northern Harrier Circus hudsonius — Breeds Apr 1 to Sep 15
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/8350

Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Tricolored Blackbird Agelaius tricolor — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3910

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

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To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
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Survey Timeframe
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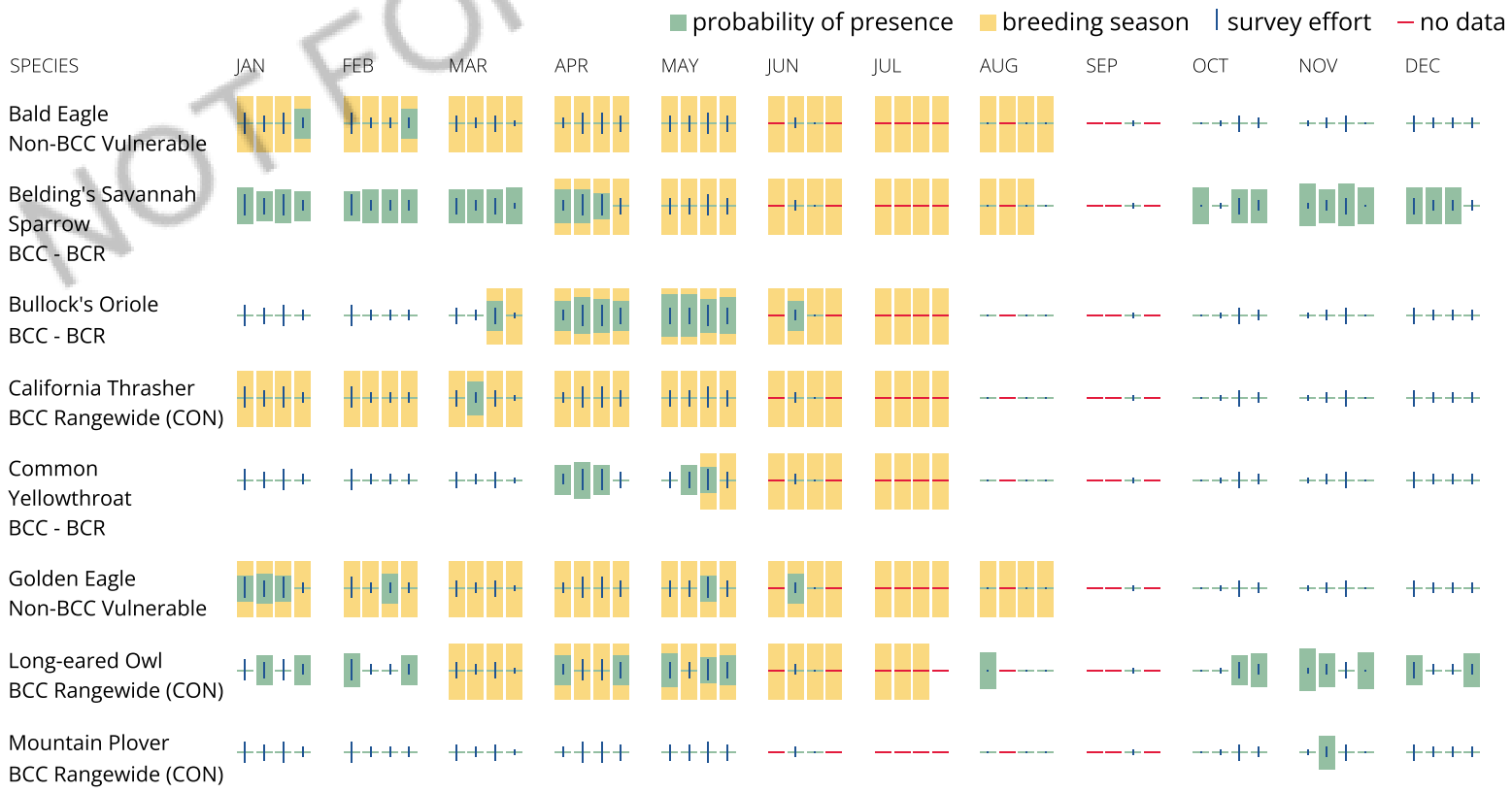

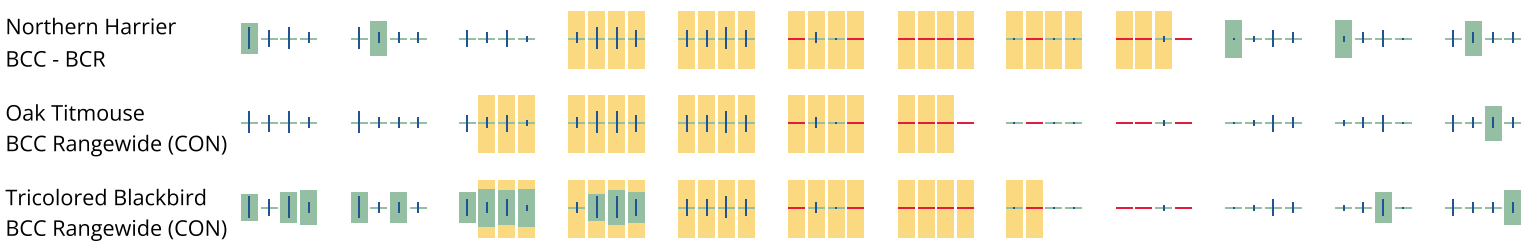

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

This location did not intersect any wetlands mapped by NWI.

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

APPENDIX C

SPECIAL-STATUS SPECIES TABLE

Special-Status Species Table

California Valley, Simmler, La Panza Ranch, La Panza NE, Las Yeguas Ranch, La Panza, Los Machos Hills, Branch Mountain, and Chimineas Ranch Quadrangles

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence within Project Site
MAMMALS			
Ammospermophilus nelsoni **Nelson's antelope squirrel**	--/ST/--	Western San Joaquin valley from 200-1200 feet in elevation on dry, sparsely vegetated loam soils. Arid annual grassland and shrubland communities. Digs burrows or uses kangaroo rat burrows. Need widely scattered shrubs, forbs and grasses in broken terrain with gullies and washes.	**Moderate** Poor quality habitat is present within the project site; however, suitable habitat is present adjacent to the project site. The CNDDB reports 19 occurrences of this species within the quadrangles reviewed, the nearest located approximately two miles from the project site.
Antrozous pallidus Pallid bat	-- / CSC / --	Occurs in a wide variety of habitats including grasslands, shrublands, arid desert areas, oak savanna, coastal forested areas, and coniferous forests of the mountain regions of California. Most common in open, dry habitats with rocky areas for roosting. Day roosts include caves, crevices, mines, and occasionally hollow trees and buildings. Seems to prefer rocky outcrops, cliffs, and crevices with access to open habitats for foraging. Similar structures are used for night roosting and will also use more open sites such as eaves, awnings, and open areas under bridges for feeding roosts.	**Unlikely** No roosting habitat is present within or adjacent to the project site.
Corynorhinus townsendii Townsend's big-eared bat	-- / CSC / --	Found primarily in rural settings from inland deserts to coastal redwoods, oak woodland of the inner Coast Ranges and Sierra foothills, and low to mid-elevation mixed coniferous-deciduous forests. Typically roost during the day in limestone caves, lava tubes, and mines, but can roost in buildings that offer suitable conditions. Night roosts are in more open settings and include bridges, rock crevices, and trees.	**Unlikely** No roosting habitat is present within or adjacent to the project site.
Dipodomys ingens **Giant kangaroo rat**	FE / SE / --	Appears to require fairly large areas of homogenous terrain, with only scattered shrubs, but with an open, herbaceous cover of annual forbs and grasses. Found on fine sandy loam soils supporting sparse annual grass/forb vegetation, and marginally found in low-alkali desert scrub.	**Moderate** Poor quality habitat is present within the project site; however, suitable habitat is present adjacent to the project site. The CNDDB reports 8 occurrences of this species within the quadrangles reviewed; however, only one occurrence (#200) is reported in the last 20 years. CDFW considers this species to be present throughout the NCER surrounding the project site (CDFW, 2017).
Dipodomys nitratoides nitratoides Tipton kangaroo rat	FE / SE / --	Saltbrush scrub and sink scrub communities in the Tulare Lake basin of the southern San Joaquin Valley. Needs soft friable soils which escape seasonal flooding. Digs burrows in elevated soil mounds at bases of shrubs, fence posts, or berms.	**Unlikely** No suitable habitat is present within the project site. Additionally, the CNDDB reports only one historical occurrence (#100) of this species in the quadrangles reviewed from 1950.

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence within Project Site
Onychomys torridus tularensis Tulare grasshopper mouse	-- / CSC / --	Frequents desert areas, especially scrub habitats with friable soils for digging. Alkali desert scrub, shrub, wash, riparian, mixed chaparral, sagebrush, low sage, and bitterbrush.	**Unlikely** No suitable habitat is present within the project site. The CNDDB reports five occurrences within the quadrangles reviewed; however, only one occurrence (#100) is reported within the last 50 years.
Taxidea taxus American badger	-- / CSC / --	Dry, open grasslands, fields, pastures savannas, and mountain meadows near timberline are preferred. The principal requirements seem to be sufficient food, friable soils, and relatively open, uncultivated grounds.	**Unlikely** Very poor habitat is present within the project site, the compacted and disturbed soils are likely incompatible for this species.
Vulpes macrotis mutica **San Joaquin kit fox**	FE / ST / --	Open, level areas with loose-textured soils supporting scattered, shrubby vegetation with little human disturbance. Live in annual grasslands or grassy open stages dominated by scattered brush, shrubs, and scrub.	**Low** Suitable dispersal habitat is present within the project site; however, no suitable foraging or denning habitat is present. The CNDDB reports 50 occurrences of this species within the quadrangles reviewed, including one occurrence (#973) that encompasses the full project site and multiple others within close proximity to the project site. CDFW tracking collar data indicates the presence of SJKF in the general vicinity of the project site (CDFW, 2017).
BIRDS			
Agelaius tricolor Tricolored blackbird (nesting colony)	-- / ST / --	Nest in colonies in dense riparian vegetation, along rivers, lagoons, lakes, and ponds. Forages over grassland or aquatic habitats.	**Unlikely** No suitable habitat is present within the project site.
Asio otus Long-eared owl (nesting)	-- / CSC / --	Frequents dense, riparian and live oak thickets near meadow edges, and nearby woodland and forest habitats. Also found in dense conifer stands at higher elevations.	**Unlikely** No suitable habitat is present within the project site.
Athene cunicularia Western burrowing owl (burrow sites & some wintering sites)	-- / CSC / --	Year-round resident of open, dry grassland and desert habitats, and in grass, forb and open shrub stages of pinyon-juniper and ponderosa pine habitats. Frequent open grasslands and shrublands with perches and burrows. Use rodent burrows (often California ground squirrel) for roosting and nesting cover. Pipes, culverts, and nest boxes may be substituted for burrows in areas where burrows are not available.	**Unlikely** Poor quality habitat is present within the project site; however, suitable habitat is present adjacent to the project site. The CNDDB reports 10 occurrences within the reviewed quadrangles, with the nearest located 1.8 miles from the project site in 2016.
Gymnogyps californianus California condor	FE / SE&CFP /--	Roosting sites in isolated rocky cliffs, rugged chaparral, and pine covered mountains 2000-6000 feet above sea level. Foraging area removed from nesting/roosting site (includes rangeland and coastal area - up to 19-mile commute one way). Nest sites in cliffs, crevices, potholes.	**Unlikely** No suitable nesting habitat is present within or adjacent to the project site.
Lanius ludovicianus Loggerhead shrike (nesting)	-- / CSC / --	Resident in dry open grasslands and agricultural areas. Scattered shrubs or trees, particularly thick or thorny species, serve as nesting substrates and hunting perches. Fences, utility wires, grasses, and forbs also may be used as perches.	**Low** Poor quality habitat is present within the project site; however, suitable habitat is present adjacent to the project site.

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence within Project Site
REPTILES AND AMPHIBIANS			
Anniella grinnelli Bakersfield legless lizard	-- / CSC /--	Southern San Joaquin valley in two disjunct areas: the east side of the Carrizo Plain and portions of the city limits of Bakersfield. General habitat is sandy with herbaceous cover and scattered shrubs. Often found underneath leaf litter, rocks, and logs.	**Unlikely** No suitable habitat is present within the project site.
Anniella pulchra Northern California legless lizard	-- / CSC / --	Requires moist, warm habitats with loose soil for burrowing and prostrate plant cover, often forages in leaf litter at plant bases; may be found on beaches, sandy washes, and in woodland, chaparral, and riparian areas.	**Unlikely** No suitable habitat is present within the project site.
Arizona elegans occidentalis California glossy snake	-- / CSC / --	Inhabits arid scrub, rocky washes, grasslands, chaparral. Appears to prefer microhabitats of open areas and areas with soil loose enough for easy burrowing.	**Unlikely** Poor quality habitat is present within the project site; however, suitable soil conditions do not occur. Additionally, the CNDDB reports only two historical occurrences from 1982 within the quadrangles reviewed.
Chelonia mydas Green sea turtle	FT / -- / --	This species is found worldwide primarily in subtropical and temperate regions of the Atlantic, Pacific, and Indian Oceans, and in the Mediterranean Sea, including the coast of California.	**Not Present** No suitable habitat is present within the project site.
Emys marmorata Western pond turtle	-- / CSC / --	Associated with permanent or nearly permanent water in a wide variety of habitats including streams, lakes, ponds, irrigation ditches, etc. Require basking sites such as partially submerged logs, rocks, mats of vegetation, or open banks.	**Unlikely** No suitable habitat is present within the project site.
Gambelia sila Blunt-nosed leopard lizard	FE / SE&CFP / --	Suitable habitat for this species includes sparsely vegetated scrub and grassland habitats in areas of low topographic relief. In areas of high relief, distribution, distribution is usually confined to broad sandy washes. Found on alkali flats, large washes, arroyos, canyons, and low foothills from 100-3000ft.	**Low** Poor quality habitat is present within the project site. The CNDDB reports three occurrences of this species within the quadrangles reviewed, the nearest of which is located approximately 8.5 miles from the project site.
Masticophis flagellum ruddocki San Joaquin coachwhip	-- / CSC / --	Variety of habitats-deserts, scrub land, juniper-grassland, woodland, thorn forest, and farmland. Generally avoid dense vegetation. Ranges from Arbuckle in the Sacramento southward to the Grapevine in the Kern County portion of the San Joaquin Valley and westward into the inner South Coast Ranges. An isolated population also occurs in the Sutter Buttes.	**Low** No suitable habitat is present within the project site.
Phrynosoma blainvillii Coast horned lizard	-- / CSC / --	Associated with open patches of sandy soils in washes, chaparral, scrub, and grasslands.	**Unlikley** No suitable habitat is present within the project site.
Rana draytonii California red-legged frog	FT / CSC / --	Lowlands and foothills in or near permanent or late-season sources of deep water with dense, shrubby, or emergent riparian vegetation. During late summer or fall adults are known to utilize a variety of upland habitats with leaf litter or mammal burrows.	**Unlikely** No suitable upland or breeding habitat is present within the project site. No CNDDB occurrences occur within one mile of the project site, the known dispersal distance for this species.

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence within Project Site
Spea hammondii **Western spadefoot**	PT / CSC / --	Grasslands with shallow temporary pools are optimal habitats for the western spadefoot. Occur primarily in grassland habitats but can be found in valley and foothill woodlands. Vernal pools are essential for breeding and egg laying.	**Moderate** Suitable dispersal habitat is present within the project site; however, only poor quality upland habitat and no suitable breeding habitat is present. High quality habitat is present adjacent to the project site within the NCER, where the species is known to occur (CDFW, 2017).
Thamnophis hammondii Two-striped gartersnake	-- / CSC / --	Associated with permanent or semi-permanent bodies of water bordered by dense vegetation in a variety of habitats from sea level to 2400m elevation.	**Not Present** No suitable habitat is present within the project site.
INVERTEBRATES			
Bombus crotchii Crotch bumble bee	-- / SC / --	Occurs in open grassland and scrub at relatively warm and dry sites. Requires plants that bloom and provide adequate nectar and pollen throughout the colony's life cycle, which is from early February to late October. Generally, nests underground, often in abandoned mammal burrows. Within California this species is known to occur in the Mediterranean, Pacific Coast, Western Desert, as well as Great Valley and adjacent foothill regions.	**Unlikely** No suitable habitat is present within the project site. The project site is within the historic range of this species. The CNDDB reports only one occurrence (#238) of this species within the quadrangles reviewed, located approximately 12 miles from the project site.
Branchinecta lynchi Vernal pool fairy shrimp	FT / -- / --	Require ephemeral pools with no flow. Associated with vernal pool/grasslands from near Red Bluff (Shasta County), through the central valley, and into the South Coast Mountains Region. Require ephemeral pools with no flow.	**Unlikely** No suitable habitat is present within the project site.
Branchinecta longiantenna Longhorn fairy shrimp	FE / -- / --	Endemic to the eastern margin of the central coast mountains in seasonally astatic grassland vernal pools. Inhabit small, clear-water depressions in sandstone and clear-to-turbid clay/grass-bottomed pools in shallow swales.	**Unlikely** No suitable habitat is present within the project site.
PLANTS			
Arctostaphylos pilosula Santa Margarita manzanita	-- / -- / 1B	Closed-cone coniferous forest, chaparral, and cismontane woodland at elevations if 170-1100 meters. Evergreen shrub in the Ericaceae family; blooms December-March.	**Not Present** This perennial species was not observed during the April 2024 botanical survey. Additionally, no suitable habitat is present within the project site.
Arenaria paludicola Marsh sandwort	FE / SE / 1B	Known from only two natural occurrences in Black Lake Canyon and at Oso Flaco Lake. Sandy openings of freshwater of brackish marshes and swamps at elevations of 3-170 meters. Stoloniferous perennial herb in the Caryophyllaceae family; blooms May-August.	**Unlikely** No suitable habitat is present within the project site. The project site is outside the known distribution range of this species.
Aristocapsa insignis Indian Valley spineflower	-- / -- / 1B	Cismontane woodland on sandy soils at elevations of 300-600 meters. Annual herb in the Polygonaceae family; blooms May-September.	**Unlikely** No suitable habitat is present within the project site.

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence within Project Site
Atriplex flavida Carrizo Plain crownscale	-- / -- / 1B	Chenopod scrub, valley and foothill grassland, vernal pools, and alkaline soils at elevations of 585-605 m. Annual herb in the Chenopodiaceae family; blooms March-July.	**Not Present** This species was not observed during the April 2024 botanical survey. Additionally, suitable soil conditions do not occur within the project site. within the project site.
Calochortus palmeri var. palmeri Palmer's mariposa-lily	-- / -- / 1B	Meadows and seeps, chaparral, lower montane coniferous forest. Vernally moist places in yellow-pine forest, chaparral, and meadows at elevations of 195-2530 m. Perennial bulb herb in the Liliaceae family; blooms April-July.	**Not Present** This species was not observed during the April 2024 botanical survey. Additionally, no suitable habitat is present within the project site.
Calochortus simulans La Panza mariposa-lily	-- / -- / 1B	Valley and foothill grassland, cismontane woodland, chaparral, lower montane coniferous forest. Found in decomposed granite, or sometimes on serpentine soils at elevations of 150-1160 m. Perennial bulb herb in the Liliaceae family; blooms April-June	**Not Present** This species was not observed during the April 2024 botanical survey. Additionally, suitable soil conditions do not occur within the project site.
Calycadenia villosa Dwarf calycadenia	-- / CSC / 1B	Chaparral, cismontane woodland, meadows, seeps, and valley and foothill grasslands on rocky, fine soils at elevations of 240-1350 meters. Annual herb in the Asteraceae family; blooms May-October.	**Unlikely** No suitable habitat is present within the project site.
Caulanthus californicus California jewelflower	FE / SE / S1	Shadscale scrub, valley grassland, pinyon-juniper woodland communities at elevations of 65-1860 m. Annual herb in the Brassicaceae family; blooms February-May.	**Not Present** This species was not observed during the April 2024 botanical survey.
Caulanthus lemmonii Lemmon's jewelflower	-- / CSC / 1B	Open, grassy areas on hillside slopes and in fields, canyons, and arroyos. Soils include alkaline soils, shaley clay, sandstone talus, and decomposed serpentine. Predominantly found within valley and foothill grassland and occasionally in pinyon and juniper woodland at elevations of 80 – 12,200 meters. Annual herb in the Brassicaceae family; blooms March-May.	**Not Present** This species was not observed during the April 2024 botanical survey. Additionally, suitable soil conditions do not occur within the project site.
Chorizanthe rectispina Straight-awned spineflower	-- / -- / 1B	Chaparral, cismontane woodland, and coastal scrub at elevations of 85-1305 meters. Annual herb in the Polygonaceae family; blooms April-July.	**Not Present** This species was not observed during the April 2024 botanical survey. Additionally, no suitable habitat is present within the project site and the only occurrence reported within the quadrangles reviewed (#17) is reported as possibly extirpated.
Delphinium parryi ssp. *eastwoodiae* Eastwood's larkspur	-- / -- / 1B	Openings within chaparral and valley and foothill grasslands on serpentine soils at elevations of 75-500 meters. Perennial herb in the Ranunculaceae family; blooms February-April.	**Not Present** This species was not observed during the April 2024 botanical survey. Additionally, suitable soil conditions do not occur within the project site.
Delphinium recurvatum Recurved larkspur	-- / -- / 1B	Chenopod scrub, cismontane woodlands, and valley and foothill grasslands on alkaline soils at elevations of 3-750 meters. Perennial herb in the Ranunculaceae family; blooms March-June.	**Not Present** This species was not observed during the April 2024 botanical survey. Additionally, suitable soil conditions do not occur within the project site.
Delphinium umbraculorum Umbrella larkspur	-- / -- / 1B	Cismontane woodland at elevations of 400-1600 meters. Perennial herb in the Ranunculaceae family; blooms April-June.	**Not Present** This species was not observed during the April 2024 botanical survey. Additionally, no suitable habitat is present within the project site.

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence within Project Site
Eremalche parryi ssp. Kernensis Kern mallow	FE / -- / S3	Chenopod scrub, valley and foothill grassland, pinyon and juniper woodlands. On dry, open, sandy to clay soils; usually within valley saltbush scrub; often at edge of balds at elevations of 60-1290 meters. Annual herb in the Malvaceae family; blooms January-May.	**Not Present** This species was not observed during the April 2024 botanical survey. Additionally, suitable soil conditions do not occur within the project site.
Eryngium spinosepalum Spiny-sepaled button-celery	-- / -- / 1B	Valley and foothill grassland and vernal pools at elevations of 80-975 meters. Annual/perennial herb in the Apiaceae family; blooms April-June.	**Not Present** This species was not observed during the April 2024 botanical survey. Additionally, no suitable habitat is present within the project site.
Eschscholzia rhombipetala Diamond-petaled California poppy	-- / -- / 1B	Valley and foothill grassland on alkaline and clay soils at elevations of 0-975 meters. Annual herb in the Papaveraceae family; blooms March-April.	**Not Present** This species was not observed during the April 2024 botanical survey. Additionally, suitable soil conditions do not occur within the project site.
Lagophylla diabolensis Diablo Range hare-leaf	-- / -- / 1B	Cismontane woodland and valley and foothill grassland on clay soils at elevations of 365-885 meters. Annual herb in the Asteraceae family; blooms April -September.	**Not Present** This species was not observed during the April 2024 botanical survey. Additionally, suitable soil conditions do not occur within the project site.
Lasthenia glabrata ssp. Coulteri Coulter's goldfields	-- / -- / 1B	Opening in closed-cone coniferous forest, coastal scrub, meadows, seeps, marshes, and swamps at elevations of 60-520 meters. Perennial herb in the Asteraceae family; blooms April-October.	**Not Present** This species was not observed during the April 2024 botanical survey. Additionally, no suitable habitat is present within the project site.
Layia heterotricha Pale-yellow layia	-- / CSC / 1B	Cismontane woodlands, coastal scrub, pinyon and juniper woodlands, and valley and foothill grasslands on alkaline or clay soils at elevations of 300-1705 meters. Annual herb in the Asteraceae family; blooms March-June.	**Not Present** This species was not observed during the April 2024 botanical survey. Additionally, suitable soil conditions do not occur within the project site.
Layia munzii Munz's tidy-tips	-- / -- / 1B	Chenopod scrub and valley and foothill grasslands on alkaline clay soils at elevations of 150-700 meters. Annual herb in the Asteraceae family; blooms March-April.	**Not Present** This species was not observed during the April 2024 botanical survey. Additionally, suitable soil conditions do not occur within the project site.
Lepidium jaredii ssp. Jaredii Jared's pepper grass	-- / -- / 1B	Valley and foothill grassland on alkaline and adobe soils at elevations of 335-1005 meters. Annual herb in the Brassicaceae family; blooms March-May.	**Not Present** This species was not observed during the April 2024 botanical survey. Additionally, suitable soil conditions do not occur within the project site.
Madia radiata Showy golden madia	-- / -- / 1B	Cismontane woodland and valley and foothill grassland at elevations of 25-1215 meters. Annual herb in the Asteraceae family; blooms March-May.	**Not Present** This species was not observed during the April 2024 botanical survey.
Malacothamnus gracilis Slender bush-mallow	-- / -- / 1B	Chaparral, usually on rocky soils, at elevations of 190-575 meters. Perennial deciduous shrub in the Malvaceae family; blooms May-October.	**Unlikely** No suitable habitat is present within the project site.
Monolopia congdonii San Joaquin woollythreads	FE / -- / 1B	Chenopod scrub, valley and foothill grassland on sandy soils at elevations of 60-800 meters. Annual herb in the Asteraceae family; blooms February-May.	**Not Present** This species was not observed during the April 2024 botanical survey. Additionally, suitable soil conditions do not occur within the project site.

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence within Project Site
Navarretia nigelliformis ssp. radians Shining navarretia	-- / -- / 1B	Cismontane woodland, valley and foothill grasslands, and vernal pools at elevations of 76-1000 meters. Annual herb in the Polemoniaceae family; blooms April-July.	**Not Present** This species was not observed during the April 2024 botanical survey.
Sidalcea hickmanii ssp. parishii Parish's checkerbloom	-- / SR / S1	Chaparral, cismontane woodland, lower montane coniferous forest at elevations of 1000-2499 meters. Disturbed burned or cleared areas on dry, rocky slopes, in fuel breaks and fire roads along the mountain summits. Perennail herb in the Malvaceae family; blooms May-August.	**Unlikely** No suitable habitat is present within the project site.

STATUS DEFINITIONS

Federal

FE = listed as Endangered under the federal Endangered Species Act
FT = listed as Threatened under the federal Endangered Species Act
FC = Candidate for listing under the federal Endangered Species Act
-- = no listing

State

SE = listed as Endangered under the California Endangered Species Act
ST = listed as Threatened under the California Endangered Species Act
SC = Candidate for listing under California Endangered Species Act
SR = listed as Rare under the California Native Plant Protection Act
CFP = California Fully Protected Species
CSC = CDFW Species of Special Concern
-- = no listing

California Native Plant Society

1B = California Rare Plant Rank 1B species; plants rare, threatened, or endangered in California and elsewhere
-- = no listing

POTENTIAL TO OCCUR

Present = known occurrence of species within the site; presence of suitable habitat conditions; or identified during field surveys
High = known occurrence of species in the vicinity from the CNDDB or other documentation; presence of suitable habitat conditions
Moderate = known occurrence of species in the vicinity from the CNDDB or other documentation; presence of marginal habitat conditions within the site
Low = species known to occur in the vicinity from the CNDDB or other documentation; lack of suitable habitat or poor quality
Unlikely = species not known to occur in the vicinity from the CNDDB or other documentation, no suitable habitat is present within the site
Not Present = species was not identified during surveys

Appendix D

Phase I Archaeological Report

This report may discuss locations of specific archaeological sites and is confidential. For this reason, it is not included in this Initial Study. Qualified personnel, however, may request a copy of the report from the Lead Agency.

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Appendix E

AB 52 Tribal Outreach Sample Letter

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Atascadero Unified School District

5601 WEST MALL • ATASCADERO, CALIFORNIA 93422
PHONE (805) 462-4200 • FAX (805) 462-4421

Thomas Butler, Superintendent

July 23, 2024

[redacted]

Subject: Notification of Proposed Project Under AB 52 Amendment to CEQA for the Carrisa Plains School Water System Improvements Project

Dear [redacted],

The Atascadero Unified School District ("District") is the lead agency for the Carrisa Plains Water System Improvements Project ("Proposed Project"). The proposed project consists of construction of a new water source well, 10,000 gallon storage reservoir, booster pump, connecting piping, electrical conduit, emergency back-up generator, and the demolition and removal of the existing well and well building. The new well would be located on the southeastern portion of the existing parcel and would be drilled to a depth of approximately 600 feet. New electrical conduits and water pipelines would connect to the School's existing water distribution system. The Proposed Project is intended to provide the School with a reliable source of water with nitrate concentrations below the State's Maximum Contaminant Level ("MCL") for nitrates.

The Area of Potential Effect ("APE") is the existing Carrisa Plains School, located in unincorporated San Luis Obispo County, California. The site is surrounded primarily by agricultural and low density residential uses, a solar farm, and an ecological preserve. A map showing the Proposed Project APE is attached. This well is anticipated to reach groundwater 600 feet below ground surface and would be located within a 15 by 15 foot fenced enclosure near the southeastern portion of the project site. Electrical equipment for the well would be located above ground within this area. A propane-powered backup generator will be installed on the northwestern portion of the site to operate the new well and pump in the event of a power outage. The new storage tank and construction staging area will also be located in this area.

A new dedicated 1,400 foot long water line of four-inch polyvinyl chloride ("PVC") will be laid to connect the new well to the existing water distribution system located at the existing well building. Electrical conduit would be laid in parallel to the water line to connect the new well to the School's electrical system. The electrical conduit and water pipeline would be laid at a depth of approximately four (4) feet.

The Native American Heritage Commission ("NAHC") has identified the [redacted] in a consultation list of tribes that are traditionally and culturally affiliated with the geographic area of the above listed Proposed Project. The result of the NAHC Sacred Lands File check was negative. Achasta Archaeological Services is currently preparing a Phase 1 Cultural Resources Assessment for the project site.

The District is interested in obtaining additional information regarding the presence of cultural resources within or adjacent to Proposed Project locations and in learning of any concerns you or other tribal members may have regarding the Proposed Project. Please provide your comments and if you feel that other groups or individuals should be contacted, please let me know at:

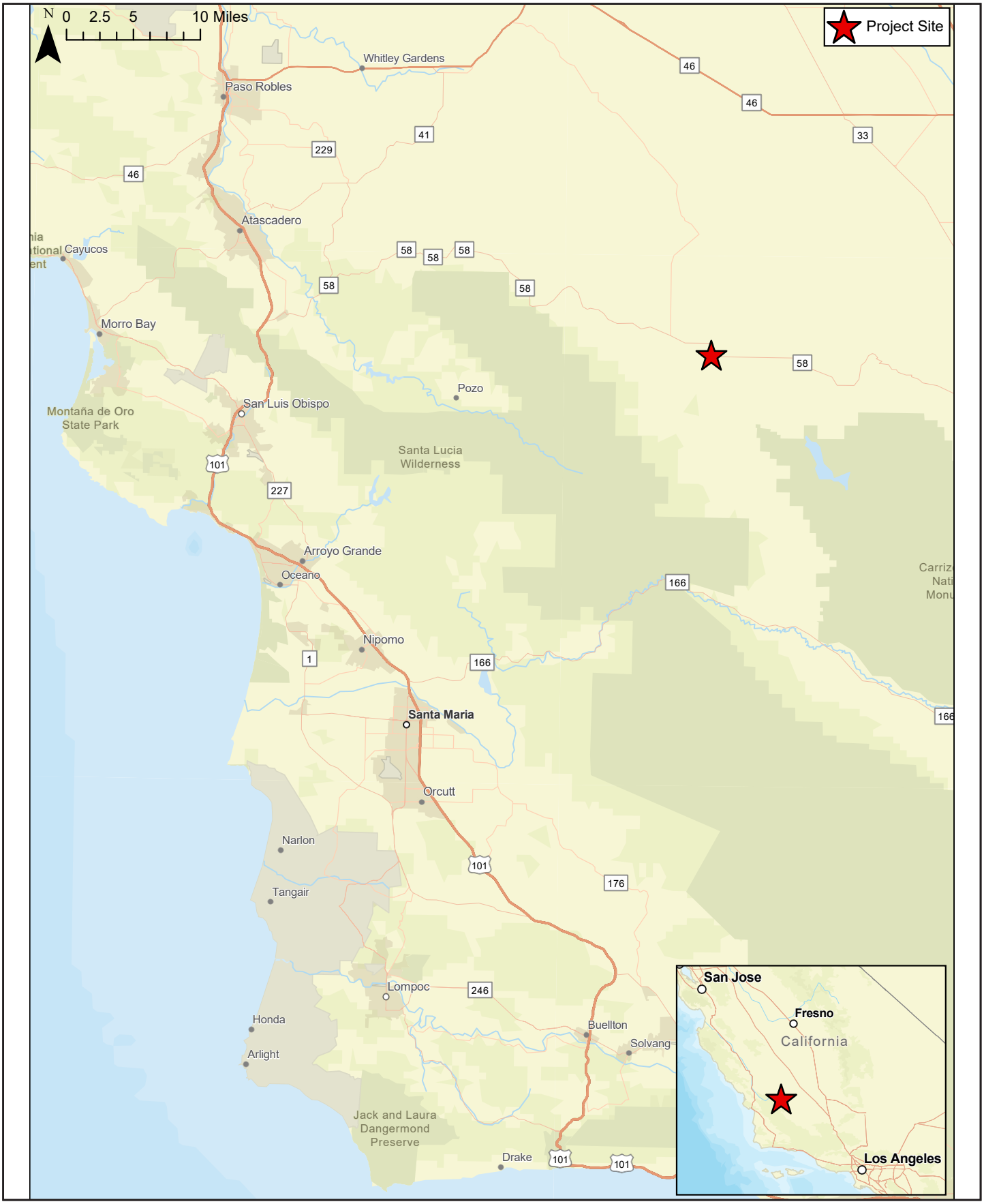
Atascadero Unified School District
Attention: Alice Colombo, Administrative Assistant of Facilities
5601 West Mall, Atascadero, CA 93422
(805) 462-4204
alicecolombo@atausd.org

Please consider this letter and preliminary project information as the notification of a proposed project as required under the California Environmental Quality Act, specifically Public Resources Code ("PRC") 21080.3.1 and Chapter 532 Statutes of 2014 (i.e., AB 52). Please respond within 30 days, pursuant to PRC 21080.3.1 (d) if you would like to consult on this Proposed Project. Additionally, with your response, please provide a designated contact person.

Very Respectfully,

Alice M. Colombo

Alice Colombo
Administrative Assistant of Facilities
Atascadero Unified School District



Title: # Regional Map

Date 3/28/2024
Scale N/A
Project 2023.82

Monterey | San Jose
Denise Duffy and Associates, Inc.
Environmental Consultants Resource Planners
947 Cass Street, Suite 5
Monterey, CA 93940
(831) 373-4341

Figure 1

Source: MNS Engineers, July 2024

Title: Site Plan - Overall	Date 7/23/2024 Scale N/A Project 2023.82		Monterey | San Jose **Denise Duffy and Associates, Inc.** Environmental Consultants Resource Planners 947 Cass Street, Suite 5 Monterey, CA 93940 (831) 373-4341	Figure 2