WELL NO. 9

DRAFT INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

DECEMBER 2023

PREPARED FOR:

City of Fowler
128 S. 5th Street
Fowler, CA 93625

PREPARED BY:

Provost & Pritchard Consulting Group

TABLE OF CONTENTS

Chapter 1 Introduction 1-1
1.1 Regulatory Information 1-1
1.2 Document Format 1-1
Chapter 2 Project Description 2-1
2.1 Project Background 2-1
2.1.1 Project Title 2-1
2.1.2 Lead Agency Name and Address 2-1
2.1.3 Contact Person and Phone Number 2-1
2.1.4 Project Location 2-1
2.1.5 General Plan Designation and Zoning 2-1
2.1.6 Description of Project 2-1
2.1.7 Site and Surrounding Land Uses and Setting 2-3
2.1.8 Other Public Agencies Whose Approval May Be Required 2-3
2.1.9 Consultation with California Native American Tribes 2-3
Chapter 3 Determination 3-1
3.1 Potential Environmental Impacts 3-1
3.2 Determination 3-2
Chapter 4 Environmental Impact Analysis 4-1
4.1 Aesthetics 4-1
4.1.1 Baseline Conditions 4-1
4.1.2 Impact Analysis 4-2
4.2 Agriculture and Forestry Resources 4-4
4.2.1 Baseline Conditions 4-4
4.2.2 Impact Analysis 4-4
4.3 Air Quality 4-7
4.3.1 Baseline Conditions 4-7
4.3.2 Applicable Regulations 4-7
4.3.3 Thresholds 4-8
4.3.4 Impact Analysis 4-10
4.4 Biological Resources 4-11
4.4.1 Baseline Conditions 4-11
4.4.2 Applicable Regulations 4-17

4.4.3 Impact Analysis 4-20
4.4.4 Mitigation 4-22
4.5 Cultural Resources 4-23
4.5.1 Baseline Conditions 4-23
4.5.2 Impact Analysis 4-24
4.5.3 Mitigation 4-24
4.6 Energy 4-25
4.6.1 Baseline Conditions 4-25
4.6.2 Impact Analysis 4-25
4.7 Geology and Soils 4-26
4.7.1 Baseline Conditions 4-26
4.7.2 Impact Analysis 4-28
4.7.3 Mitigation 4-29
4.8 Greenhouse Gas Emissions 4-30
4.8.1 Baseline Conditions 4-30
4.8.2 Thresholds 4-31
4.8.3 Impact Analysis 4-31
4.9 Hazards and Hazardous Materials 4-33
4.9.1 Baseline Conditions 4-33
4.9.2 Impact Analysis 4-34
4.10 Hydrology and Water Quality 4-36
4.10.1 Baseline Conditions 4-36
4.10.2 Applicable Regulations 4-37
4.10.3 Impact Analysis 4-40
4.11 Land Use and Planning 4-43
4.11.1 Baseline Conditions 4-43
4.11.2 Impact Analysis 4-43
4.12 Mineral Resources 4-44
4.12.1 Baseline Conditions 4-44
4.12.2 Impact Analysis 4-44
4.13 Noise 4-46
4.13.1 Baseline Conditions 4-46
4.13.2 Applicable Regulations 4-46
4.13.3 Impact Analysis 4-47
4.14 Population and Housing 4-50

4.14.1 Baseline Conditions 4-50
4.14.2 Impact Analysis 4-50
4.15 Public Services 4-51
4.15.1 Baseline Conditions 4-51
4.15.2 Impact Analysis 4-52
4.16 Recreation 4-53
4.16.1 Baseline Conditions 4-53
4.16.2 Impact Analysis 4-53
4.17 Transportation 4-54
4.17.1 Baseline Conditions 4-54
4.17.2 Impact Analysis 4-54
4.18 Tribal Cultural Resources 4-56
4.18.1 Baseline Conditions 4-56
4.18.2 Applicable Regulations 4-57
4.18.3 Impact Assessment 4-58
4.18.4 Mitigation 4-58
4.19 Utilities and Service Systems 4-59
4.19.1 Baseline Conditions 4-59
4.19.2 Impact Analysis 4-60
4.20 Wildfire 4-61
4.20.1 Baseline Conditions 4-61
4.20.2 Impact Analysis 4-61
4.21 CEQA Mandatory Findings of Significance 4-63
4.21.1 Statement of Findings 4-63
Chapter 5 Mitigation, Monitoring, and Reporting Program 5-1
Chapter 6 References 6-1

LIST OF APPENDICES

Appendix A: CalEEMod Output Files A-1
Appendix B: Biological Evaluation B-1
Appendix C: Phase I Survey C-1

LIST OF FIGURES

Figure 2-1: Regional Location 2-4
Figure 2-2: Aerial of Project Site 2-5
Figure 2-3: Site Plan 2-6
Figure 2-4: Topo Quad 2-7
Figure 2-5: General Plan Land Use Designation Map 2-8
Figure 2-6: Zone District Map 2-9
Figure 4-1: Farmland Designation 4-6
Figure 4-2: FEMA 4-42

LIST OF TABLES

Table 2-1: Existing Uses, General Plan Designation, & Zone Districts of Surrounding Properties 2-3
Table 4-1: Aesthetics Impacts 4-1
Table 4-2: Agriculture and Forest Impacts 4-4
Table 4-3: Air Quality Impacts 4-7
Table 4-4: Summary of Ambient Air Quality Standards and Attainment Designation 4-9
Table 4-5: Biological Resources Impacts 4-11
Table 4-6. List of Special Status Animals with Potential to Occur Onsite and/or in the Vicinity 4-13
Table 4-7. List of Special Status Plants with Potential to Occur Onsite and/or in the Vicinity 4-15
Table 4-8: Cultural Resources Impacts 4-23
Table 4-9: Energy Impacts 4-25
Table 4-10: Geology and Soils Impacts 4-26
Table 4-11: Greenhouse Gas Emissions Impacts 4-30
Table 4-12: Hazards and Hazardous Materials Impacts 4-33
Table 4-13: Hydrology and Water Quality Impacts 4-36
Table 4-14: Land Use and Planning Impacts 4-43
Table 4-15: Mineral Resources Impacts 4-44
Table 4-16: Noise Impacts 4-46
Table 4-17: Noise Level Standards 4-47
Table 4-18: Typical Construction Noise Levels 4-48
Table 4-19: Population and Housing Impacts 4-50
Table 4-20: Public Services 4-51
Table 4-21: Recreation Impacts 4-53
Table 4-22: Transportation Impacts 4-54
Table 4-23: Tribal Cultural Resources Impacts 4-56
Table 4-24: Utilities and Service Systems Impacts 4-59
Table 4-25: Wildfire Impacts 4-61
Table 4-26: CEQA Mandatory Findings of Significance 4-63
Table 5-1: Mitigation, Monitoring, and Reporting Program 5-2

ACRONYMS AND ABBREVIATIONS

AB ..... Assembly Bill
AF ..... Acre Feet
APE ..... Area of PotentiaEffect
ASM ..... ASM Affiliates
BMP ..... Best Management Practices
BO ..... Biological Opinion
CalEEMod ..... California Emissions Estimator Model (software)
CalGEM ..... California Geologic Energy Management Division
CARB ..... California Air Resources Board
CCAA ..... California Clean Air Act
CDFW ..... California Department of Fish and Wildlife
CEQA ..... California Environmental Quality Act
CESA ..... California Endangered Species Act
CFR ..... Code of Federal Regulations
CGS ..... California Geological Survey
CH_4 ..... Methane
CHRIS ..... California Historical Resources Information System
CID ..... Consolidated Irrigation District
City ..... City of Fowler
CNDDB ..... California Natural Diversity Database
CNPS ..... California Native Plant Society
CO ..... Carbone Monoxide
CO_2 ..... Carbon Dioxide
County ..... County of Fresno
CVFPP ..... Central Valley Flood Protection Plan
dBA ..... A-weighted Decibels
DDW ..... (SWRCB) Division of Drinking Water
DTSC ..... Department of Toxic Substances Control
DWR ..... Department of Water Resources
ECOS ..... (USFWS) Environmental Conservation Online System
EIR ..... Environmental Impact Report

EPA ..... Environmental Protection Agency
ESA ..... Endangered Species Act
FEMA ..... Federal Emergency Management Agency
FMMP ..... Farmland Mapping and Monitoring Program
FTA ..... Federal Transit Administration
GAMAQI ..... Guide for Assessing and Mitigating Air Quality Impacts
GHG ..... Greenhouse Gas
GIS ..... Geographic Information System
gpm ..... Gallons Per Minute
GSA ..... Groundwater Sustainability Agency
GSP ..... Groundwater Sustainability Plan
IS ..... Initial Study
IS/MND ..... Initial Study/Mitigated Negative Declaration
MBTA ..... Migratory Bird Treaty Act
mgd ..... Million Gallons per Day
MMRP ..... Mitigation Monitoring and Reporting Program
MND ..... Mitigated Negative Declaration
MRZ ..... Mineral Resource Zone
NAAQS ..... National Ambient Air Quality Standards
NAHC ..... Native American Heritage Commission
ND ..... Negative Declaration
NEPA ..... National Environmental Policy Act
NMFS ..... National Marine Fisheries Service
NO_2 ..... Nitrogen Dioxide
NO_X ..... Nitrogen Oxides
NPDES ..... National Pollutant Discharge Elimination System
NPPA ..... Native Plant Protection Act
NRCS ..... Natural Resources Conservation Service
O_3 ..... Ozone
Pb ..... Lead
PG&E ..... Pacific Gas and Electric
PM_{10} ..... Particulate Matter 10 Microns in Size
$PM_{2.5}$ ..... Particulate Matter 2.5 Microns in Size
ppb ..... Parts per Million

ppm ..... Parts per Million
Project ..... City of Fowler Well No.9
ROG ..... Reactive Organic Gases
RWQCB ..... Regional Water Quality Control Board
SB ..... Senate Bill
SFHA ..... Special Flood Hazard Area
SGMA ..... Sustainable Groundwater Management Act
SJVAB ..... San Joaquin Valley Air Basin
SJVAPCD ..... San Joaquin Valley Air Pollution Control District
SKGSA ..... South Kings Groundwater Sustainability Agency
SO_2 ..... Sulfur Dioxide
SSJVIC ..... Southern San Joaquin Valley Information Center
SR ..... State Route
SWPPP ..... Storm Water Pollution Prevention Plan
SWRCB ..... State Water Resources Control Board
TAC ..... Toxic Air Contaminants
TCP 1,2,3-trichloropropane
TPY ..... Tons per Year
USC ..... United States Code
USDA ..... United States Department of Agriculture
USFWS ..... United States Fish and Wildlife Service
UST ..... Underground Storage Tank
$\mu g/m^3$ ..... Micrograms per Cubic Meter

CHAPTER 1 INTRODUCTION

Provost & Pritchard Consulting Group (Provost & Pritchard) has prepared this Initial Study/Mitigated Negative Declaration (IS/MND) on behalf of the City of Fowler (City) to address the environmental effects of the Well No. 9 Project (Project). This document has been prepared in accordance with the California Environmental Quality Act (CEQA), Public Resources Code Section 21000, et seq. The City is the CEQA lead agency for this Project.

The site and the Project are described in detail in Chapter 2 Project Description.

1.1 REGULATORY INFORMATION

An Initial Study (IS) is a document prepared by a lead agency to determine whether a project may have a significant effect on the environment. In accordance with California Code of Regulations Title 14 (Chapter 3, Section 15000, *et seq.*)-- also known as the CEQA Guidelines--Section 15064 (a)(1) states that an environmental impact report (EIR) must be prepared if there is substantial evidence in light of the whole record that the Project under review may have a significant effect on the environment and should be further analyzed to determine mitigation measures or project alternatives that might avoid or reduce project impacts to less than significant levels. A negative declaration (ND) may be prepared instead if the lead agency finds that there is no substantial evidence in light of the whole record that the project may have a significant effect on the environment. An ND is a written statement describing the reasons why a proposed Project, not otherwise exempt from CEQA, would not have a significant effect on the environment and, therefore, why it would not require the preparation of an EIR (CEQA Guidelines Section 15371). According to CEQA Guidelines Section 15070, a ND or *mitigated* ND shall be prepared for a project subject to CEQA when either:

a. The IS shows there is no substantial evidence, in light of the whole record before the agency, that the proposed Project may have a significant effect on the environment, or
b. The IS identified potentially significant effects, but:
    1. Revisions in the Project plans or proposals made by or agreed to by the applicant before the proposed MND and IS is released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur is prepared, and
    2. There is no substantial evidence, in light of the whole record before the agency, that the proposed Project as *revised* may have a significant effect on the environment.

1.2 DOCUMENT FORMAT

This IS/MND contains six chapters. Chapter 1 Introduction, provides an overview of the Project and the CEQA process. Chapter 2 Project Description, provides a detailed description of proposed Project components and objectives. Chapter 3 Determination, contains the Lead Agency's determination based upon this initial evaluation. Chapter 4 Environmental Impact Analysis presents the CEQA checklist and environmental analysis for all impact areas, mandatory findings of significance, and feasible mitigation measures. If the Project does not have the potential to significantly impact a given issue area, the relevant section provides a brief discussion of the reasons why no impacts are expected. If the Project could have a potentially significant impact on a resource, the issue area discussion provides a description of potential impacts, and appropriate mitigation measures and/or permit requirements that would reduce those impacts to a less than significant level. Chapter 5 Mitigation, Monitoring, and Reporting Program (MMRP),

provides the proposed mitigation measures, implementation timelines, and the entity/agency responsible for ensuring implementation. ReferencesChapter 6 References details the documents and reports this document relies upon to provide its analysis.

The CalEEMod Output Files, Biological Evaluation, and Phase I Survey, are provided as technical Appendix A, Appendix B, and Appendix C, respectively, at the end of this document.

CHAPTER 2 PROJECT DESCRIPTION

2.1 PROJECT BACKGROUND

2.1.1 Project Title

City of Fowler Well No. 9

2.1.2 Lead Agency Name and Address

City of Fowler
128 S. 5th Street
Fowler, CA 93625

2.1.3 Contact Person and Phone Number

Lead Agency Contact

Dawn E. Marple, City Planner
559-834-3113, ext. 122
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CEQA Consultant

Provost & Pritchard Consulting Group
Amy Wilson, Senior Planner
(559) 636-1166

2.1.4 Project Location

The Project is located in the City of Fowler in central Fresno County, approximately 170 miles south of Sacramento and 150 miles north of Bakersfield (see Figure 2-1). It is on the northeast corner of E. South Avenue & Stanford Avenue (Assessor's Parcel Numbers 343-280-60 & 343-280-61), approximately 0.45 miles west of State Route 99 (SR 99).

2.1.5 General Plan Designation and Zoning

Project Area	General Plan Designation	Zoning District
ONSITE	Low Density Residential	R-1-10
ADJACENT LANDS	Low Density Residential	R-1-10, AE-20

2.1.6 Description of Project

Project Background and Purpose

The City has been awarded a Small Community Drought Relief Program Grant from the Department of Water Resources (DWR) and proposes to build a new municipal groundwater well with funding from the grant on the west side of the City. As of 2022 the City serves residential, commercial and industrial users

through 2,160 service connections. The water system is currently supplied by six existing groundwater wells, each with a pumping capacity of between 310 and 1,700 gallons per minute (gpm). The synthetic organic contaminant 1,2,3-trichloropropane (TCP) has been detected in five of the six water supply wells. Wells 4, 5A, 6, and 8A have experienced individual TCP detections at, or greater than the maximum contaminant level (MCL) value but have not yet violated the standard, which is based on a running annual average of measurements. Well 7 has TCP levels greater than the allowable standard and the City is in the process of designing a water treatment facility to remove TCP from Well 7. With the exception of the presence of TCP at Well 7, the water produced by the City's supply wells currently meets all drinking water standards. Well No. 9 will provide a second water supply to the west side of the City which improves water resiliency for the community as a whole and redundancy for this area, specifically, in the event the existing well is out of for any number for reasons including declining water levels due to drought. This project does not include water treatment equipment; however, there is space reserved on site to accommodate for future treatment equipment, if required.

Project Description

The Project would allow for the construction of a new groundwater well for the City of Fowler. The groundwater well is intended to supplement the City's water supply system and provide additional drought resiliency for the City. The Project, which would be designed to produce a minimum desired 1,200 gpm that is consistent with the existing City production well yields in the area, would increase the City's potable water supply. Upon completion of well drilling and necessary zone testing it is expected that the well would be constructed at a depth of approximately 720 feet. The well will be drilled and constructed to comply with the requirements of the State Water Resources Control Board- Division of Drinking Water (DDW).

The new groundwater well will be constructed on an approximately 0.5-acre site owned by the City in southwest Fowler. The Project site is currently two parcels that will be merged into one lot prior to Project construction. The site was previously utilized as a stormwater retention pond, the pond will be backfilled and graded prior to well construction activities.

For purposes of biological and cultural surveys, the Area of Potential Effect (APE) includes the approximately 0.5-acre property and an additional 50-foot buffer to include the large trees adjacent to the property. The total area of the APE is approximately 1.4 acres and can be seen in Appendix B, Figure 3.

Construction Schedule

Construction duration of the Project is anticipated to be 17 months, occurring approximately from January 2024 to May 2025. The Project will begin with the clearing, grubbing, and backfilling of the existing, unused stormwater retention pond, lasting approximately one month. The test hole mobilization, drilling, and lab testing will follow, lasting approximately two months. Next will be the production well construction lasting approximately 2 months. After the drilling and production well construction phases are complete, the site improvements and equipment will be constructed and installed. All phases include inspections and site cleanup. Construction equipment will likely include a drilling rig, excavators, backhoes, graders, skid steers, loaders, and hauling trucks. During construction, measures to minimize noise impacts will include installing temporary sound barriers and providing advance communication to residents that may be affected by construction activities.

Generally, construction will occur between the hours of 7am and 5pm, Monday through Friday, excluding holidays. It is anticipated that well drilling and well construction will take between 12 to 16 weeks and during drilling activity 24/7 operation will be required at various points. A special permit, pursuant to Chapter 21, Article 6, Section 5-21.601 of the Fowler Noise Ordinance, would be obtained by the City to

allow for the continuous drilling. Construction will require temporary staging and storage of materials and equipment. Staging areas will be located onsite.

Operation and Maintenance

Operation and maintenance of the new groundwater well will be performed by the City of Fowler's existing Public Works staff.

2.1.7 Site and Surrounding Land Uses and Setting

Table 2-1: Existing Uses, General Plan Designation, & Zone Districts of Surrounding Properties

Direction from Project Site	Existing Use	General Plan Designation	Zone District
NORTH	Residential	Low Density Residential	R-1-10
EAST	Residential	Low Density Residential	R-1-10
SOUTH	Residential	Low Density Residential	AE-20 (Fresno County)
WEST	Residential	Low Density Residential	R-1-10

2.1.8 Other Public Agencies Whose Approval May Be Required

- State Water Resources Control Board – Division of Drinking Water
- San Joaquin Valley Air Pollution Control District

2.1.9 Consultation with California Native American Tribes

Public Resources Code Section 21080.3.1, *et seq. (codification of AB 52, 2013-14)*) requires that a lead agency, within 14 days of determining that it will undertake a project, must notify in writing any California Native American Tribe traditionally and culturally affiliated with the geographic area of the project if that Tribe has previously requested notification about projects in that geographic area. The notice must briefly describe the project and inquire whether the Tribe wishes to initiate request formal consultation. Tribes have 30 days from receipt of notification to request formal consultation. The lead agency then has 30 days to initiate the consultation, which then continues until the parties come to an agreement regarding necessary mitigation or agree that no mitigation is needed, or one or both parties determine that negotiation occurred in good faith, but no agreement will be made.

The City of Fowler has received written correspondence from the Santa Rosa Rancheria Tachi Yokut Tribe pursuant to Public Resources Code Section 21080.3.1 requesting notification of proposed project.

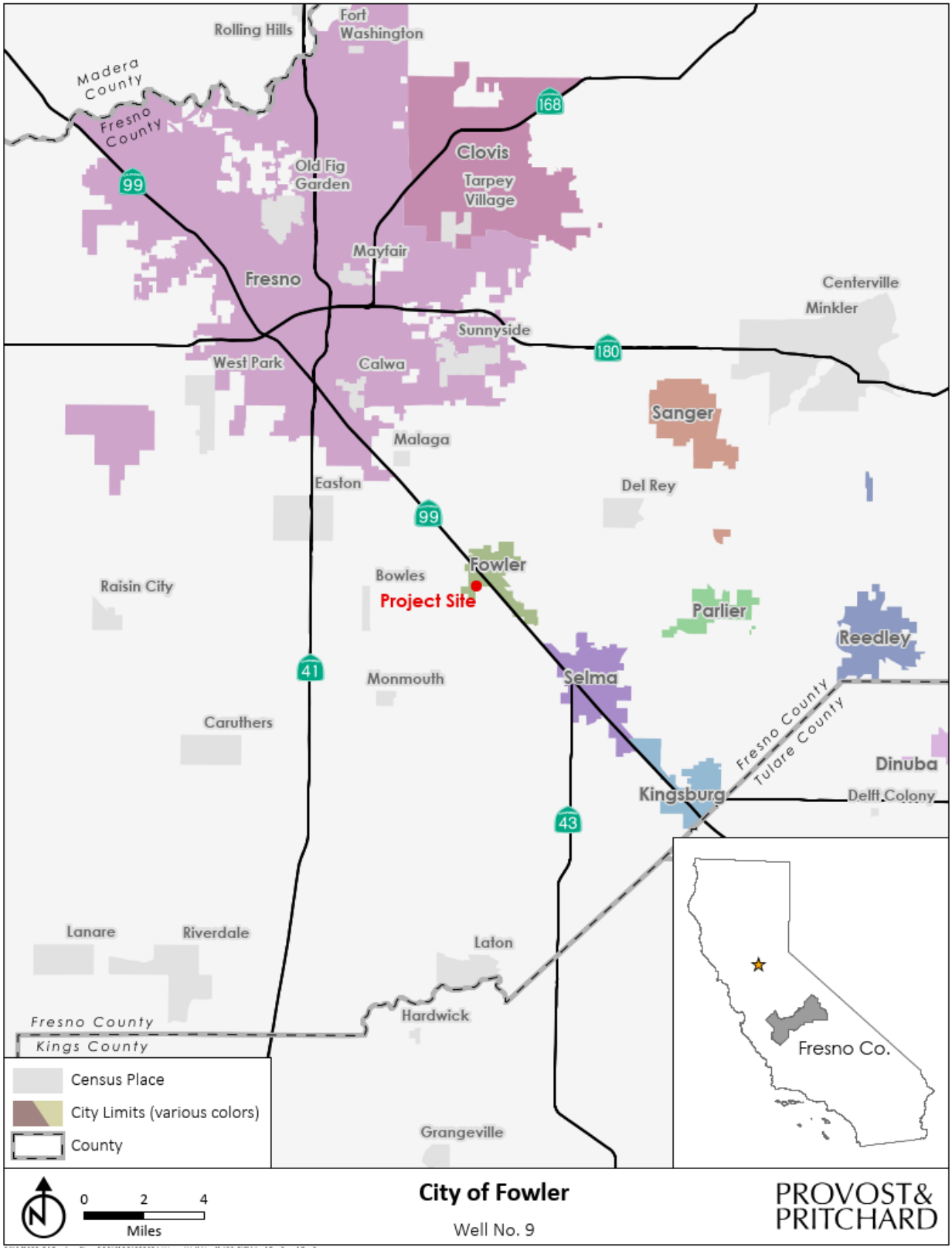

Figure 2-1: Regional Location

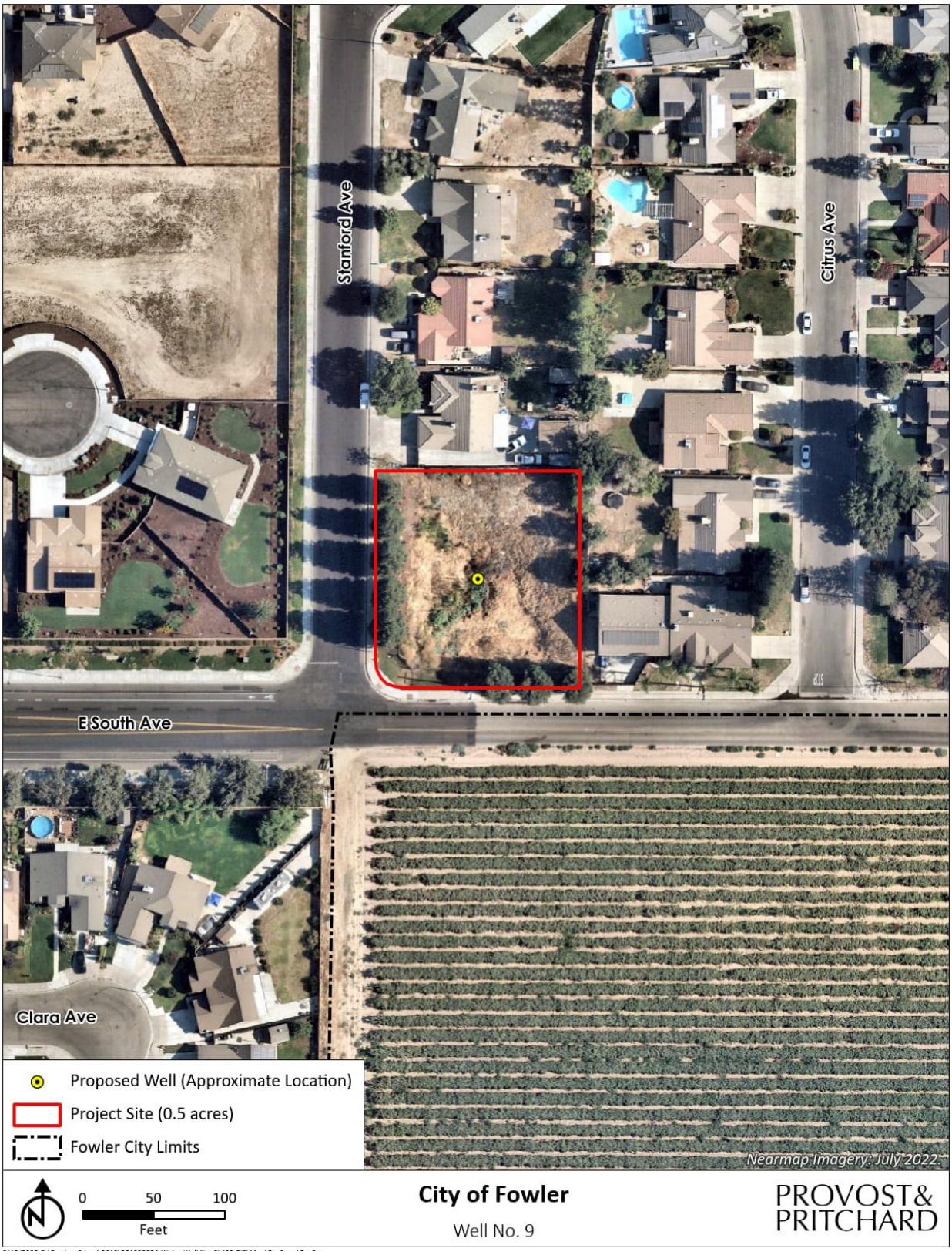

Figure 2-2: Aerial of Project Site

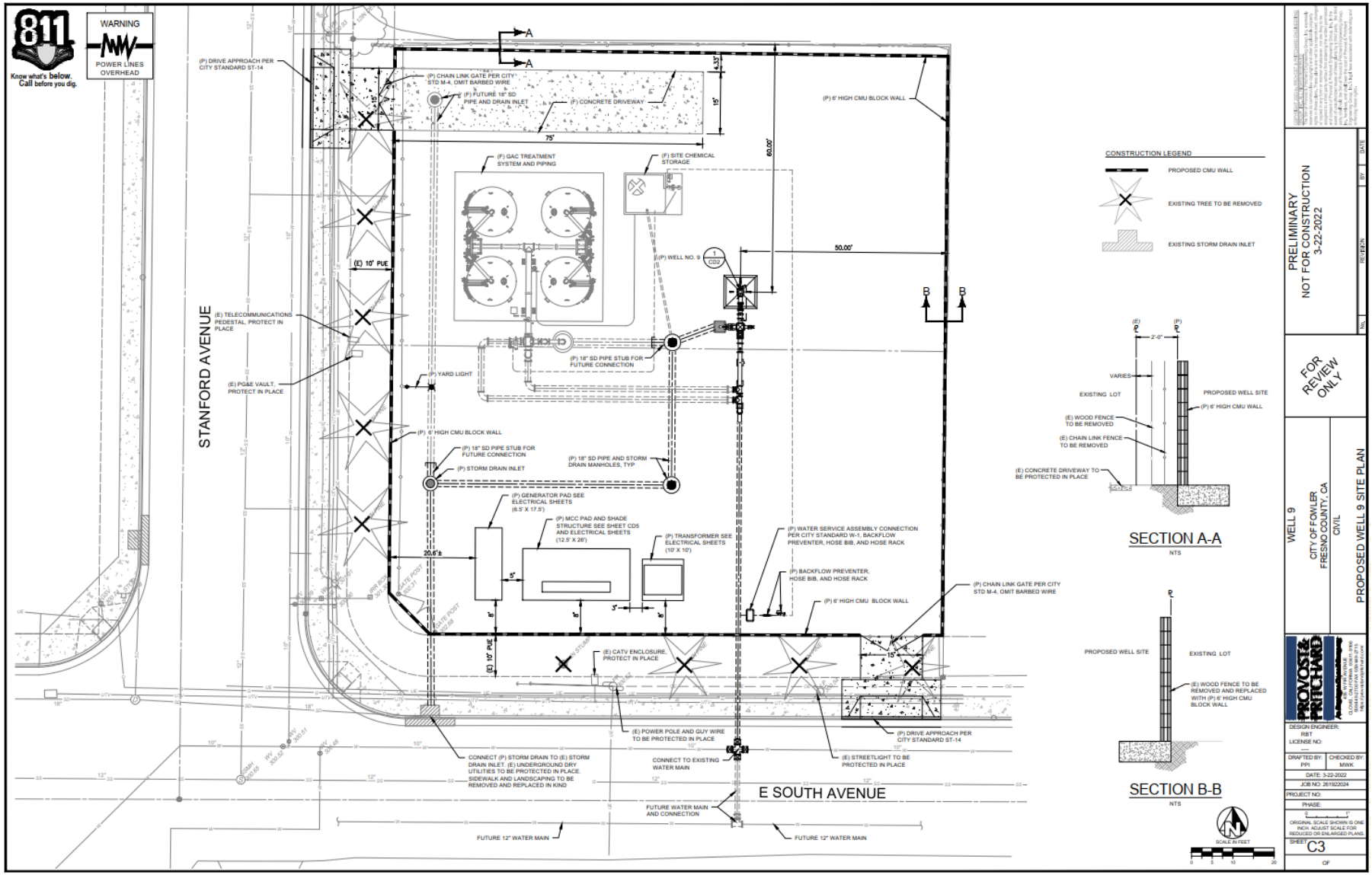

Figure 2-3: Site Plan

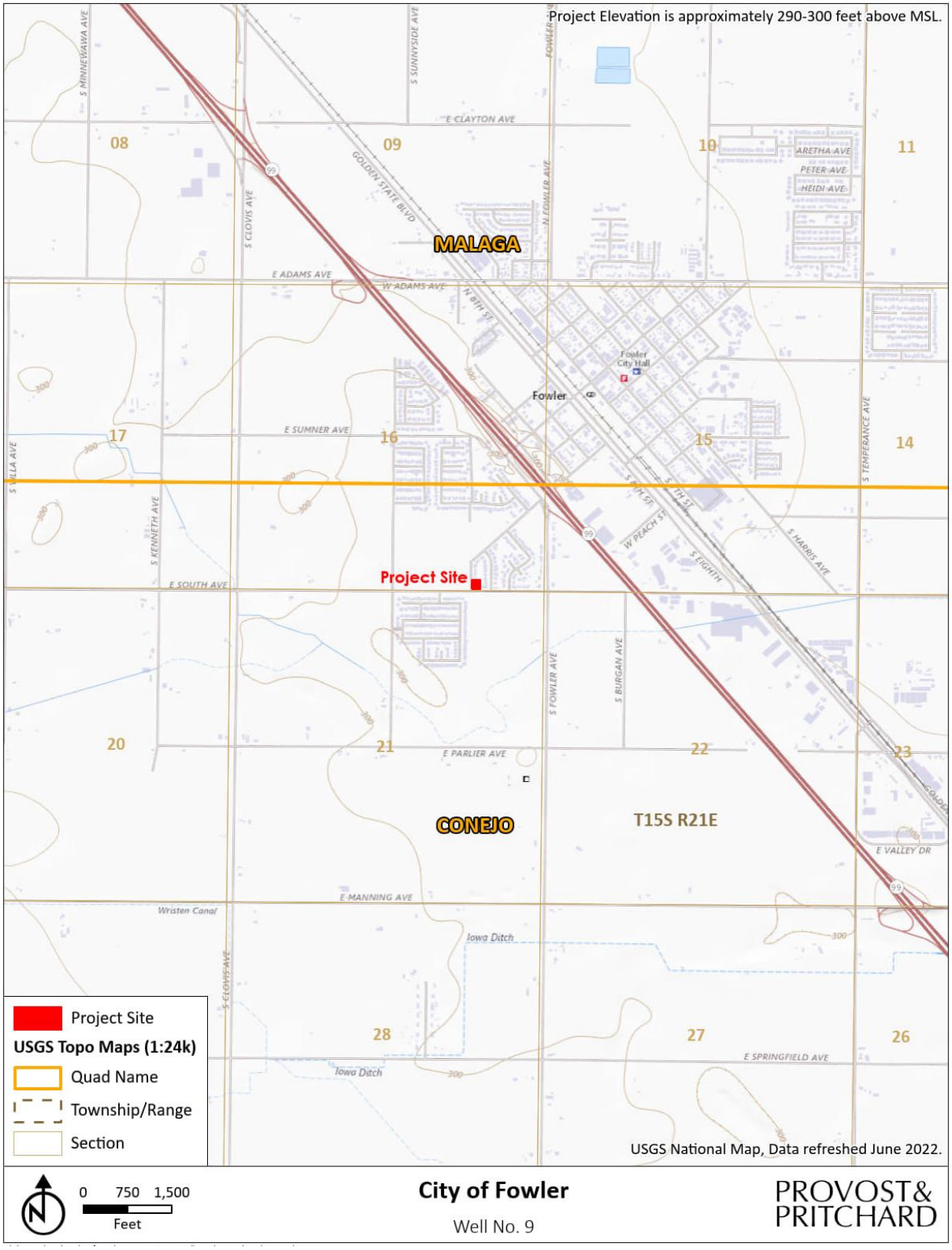

Figure 2-4: Topo Quad

Figure 2-5: General Plan Land Use Designation Map

Figure 2-6: Zone District Map

CHAPTER 3 DETERMINATION

3.1 POTENTIAL ENVIRONMENTAL IMPACTS

As indicated by the discussions of existing and baseline conditions, and impact analyses that follow in this Chapter, environmental factors not checked below would have no impacts or less than significant impacts resulting from the Project. Environmental factors that are checked below would have potentially significant impacts resulting from the Project. Mitigation measures are recommended for each of the potentially significant impacts that would reduce the impact to less than significant.

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

The analyses of environmental impacts in Chapter 4 Impact Analysis result in an impact statement, which shall have the following meanings.

Potentially Significant Impact. This category is applicable if there is substantial evidence that an effect may be significant, and no feasible mitigation measures can be identified to reduce impacts to a less than significant level. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

Less than Significant with Mitigation Incorporated. This category applies where the incorporation of mitigation measures would reduce an effect from a "Potentially Significant Impact" to a "Less than Significant Impact." The lead agency must describe the mitigation measure(s), and briefly explain how they would reduce the effect to a less than significant level (mitigation measures from earlier analyses may be cross-referenced).

Less than Significant Impact. This category is identified when the proposed Project would result in impacts below the threshold of significance, and no mitigation measures are required.

No Impact. This category applies when a project would not create an impact in the specific environmental issue area. "No Impact" answers do not require a detailed explanation if they are adequately supported by the information sources cited by the lead agency, which show that the impact does not apply to the specific project (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 a project-specific screening analysis).

3.2 DETERMINATION

On the basis of this initial evaluation (to be completed by the Lead Agency):

☐ 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

December 12, 2023
Date

Dawn Marple, City Planner
Printed Name/Position

CHAPTER 4 ENVIRONMENTAL IMPACT ANALYSIS

4.1 AESTHETICS

Table 4-1: Aesthetics Impacts

Except as provided in Public Resources Code Section 21099, would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Have substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c) In non-urbanized areas, substantially degrade the existing visual character or quality 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?	☐	☐	☒	☐

4.1.1 Baseline Conditions

The Project site is located on the floor of the San Joaquin Valley in the southwest portion of the City of Fowler. The predominant landscape feature of the San Joaquin Valley is a wide variety of agricultural land. Regional views from the valley floor are generally limited due to the flatness of the region; however, on clear days the Sierra Nevada Mountains are visible to the east. The City is characterized as a freestanding city with a small-town atmosphere surrounded by agricultural land. As one of the cities along the Fresno County Blossom Trail, Fowler offers scenic views of blossoming orchards from February to March.

The site would be visible from the nearby residences to the north, east and west. The Project lies within an area designated as low density residential. The surrounding area is considered low density, with agricultural land containing one single-family residence to the south of the Project site. There are no scenic vistas on the Project site or in the vicinity. There are no designated State scenic highways within the City or surrounding area. In Fresno County, a portion of State Route 180 (SR 180) has been officially identified by Caltrans as a "designated State Scenic Highway"; however, that segment is approximately 15 miles northeast of the Project site.

4.1.2 Impact Analysis

a) Have substantial adverse effect on a scenic vista?

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

a-b) Less than Significant Impact. The City of Fowler does not identify any scenic vistas within the Project site. The Project is expected to adhere to local design guidelines and standards which will minimize any visual impact. In addition, most of the water well features are underground.

The Project site is within an area comprised of agricultural uses to the south and residential uses to the north, west, and east. There are no other scenic vistas or other protected scenic resources on or near the site. The visual character of the site is addressed further in Response C below.

There are no State designated scenic highways within proximity to the Project site. Caltrans' Scenic Highway Mapping System identifies a segment of SR 180 from near Minkler to near the General Grant section of Kings Canyon National Park as an Officially Designated State Scenic Highway.[1] This is the nearest scenic highway and is located approximately 15 miles northeast of the Project site. Additionally, the Project would not damage any trees, rock outcroppings or historic buildings within a State scenic highway corridor.

Construction activities associated with the Project will be visible from adjacent roadsides; however, the construction would be temporary in nature and will not affect a scenic vista. Therefore, the Project will have a less than significant impact on scenic vistas or designated scenic resources or highways.

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

Less than Significant Impact. The Project would result in minor alteration of the existing visual character of public views of the site with the addition of minimal structures; however, most of the Project components are located underground. Above-ground structures will consist of the wellhead, pump, and related appurtenances. The Project will not be inconsistent with the existing visual setting of the area.

The improvements proposed by the Project are typical of City public facility areas and are generally expected from residents of the City. The Project itself is not visually imposing against the scale of the existing surrounding area and would comply with zoning and regulations for groundwater-well-related construction. Furthermore, the well site will be screened in the same manner as other well sites located in residential neighborhoods in the City. The screening involves a six-foot minimum CMU block wall and landscaping which will obscure the view to wellsite equipment.

Therefore, the Project would have a less than significant impact on the visual character of the area.

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

Less than Significant Impact. Current sources of light near the Project site include streetlights, vehicles traveling along surrounding roadways and residential lighting in the area. The Project lighting will follow Title 24 and City standards and will implement a full cutoff design that will be conducive for surrounding

[1] (California Department of Transportation 2023)

properties. Design will take into consideration the surrounding properties and minimize light onto said properties. Accordingly, potential impacts would be considered less than significant.

4.2 AGRICULTURE AND FORESTRY RESOURCES

Table 4-2: Agriculture and Forest Impacts

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 use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

4.2.1 Baseline Conditions

The Project is located in California's central San Joaquin Valley in Fresno County and more specifically within the City of Fowler. Fresno County is located within California's agricultural heartland. In 2019, Fresno County ranked as the top agricultural county in the State in the annual market value of farm products.[2]

The Farmland Mapping and Monitoring Program (FMMP) for Fresno County designates the Project site as Urban and Built-up Land.[3] The Project site is not considered farmland and is not farmed.

4.2.2 Impact Analysis

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?

[2] (California Department of Food and Agriculture, 2020)
[3] (Calfornia Department of Conservation 2022)

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

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

d) Result in the loss of forest land or conversion of forest land to non-forest use?

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

a-e) No Impact. There are no agricultural resources or forest lands present on the Project site. The site is currently vacant but was previously utilized by the City as a stormwater retention pond. The Project consists of constructing a groundwater well and associated infrastructure. The Project would not conflict with the City of Fowler's land use designations upon approval. The site location is considered Urban and Built-up Land by the FMMP. Accordingly, the Project would not convert prime farmland, conflict with an existing agricultural use, or result in the conversion of existing farmland. Additionally, no Williamson Act contracted lands would be impacted due to the Project, and the Project site is not subject to a Williamson Act contract. Therefore, the Project would have no impact on agricultural and forest resources.

Figure 4-1: Farmland Designation

4.3 AIR QUALITY

Table 4-3: Air Quality Impacts

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?	☐	☐	☒	☐

4.3.1 Baseline Conditions

The Project site is a vacant site surrounded by single-family residential and agricultural land uses.

4.3.2 Applicable Regulations

Under the California Clean Air Act (CCAA), the California Air Resources Board (CARB) is required to designate areas of the State as attainment, nonattainment, or unclassified with respect to applicable standards. An "attainment" designation for an area signifies that pollutant concentrations did not violate the applicable standard in that area. A "nonattainment" designation indicates that a pollutant concentration violated the applicable standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria. Depending on the frequency and severity of pollutants exceeding applicable standards, the nonattainment designation can be further classified as serious nonattainment, severe nonattainment, or extreme nonattainment, with extreme nonattainment being the most severe of the classifications. An "unclassified" designation signifies that the data does not support either an attainment or nonattainment designation. The CCAA divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

The United States Environmental Protection Agency (EPA) designates areas for ozone (O_3), carbon monoxide (CO), and nitrogen dioxide (NO_2) as "does not meet the primary standards," "cannot be classified," or "better than national standards." For sulfur dioxide (SO_2), areas are designated as "does not meet the primary standards," "does not meet the secondary standards," "cannot be classified," or "better than national standards." However, the CARB terminology of attainment, nonattainment, and unclassified is more frequently used. The EPA uses the same sub-categories for nonattainment status: serious, severe, and extreme. In 1991, the EPA assigned new nonattainment designations to areas that had previously been classified as Group I, II, or III for particulate matter less than 10 microns in diameter (PM_{10}) based on the likelihood that they would violate national PM_{10} standards. All other areas are designated "unclassified."

The State and national attainment status designations pertaining to the San Joaquin Valley Air Basin (SJVAB) are summarized in Table 1. The SJVAB is currently designated as a nonattainment area with respect to the

State PM_{10} standard, ozone, and fine particulate matter 2.5 microns in size ($PM_{2.5}$) standards. The SJVAB is designated nonattainment for the National Ambient Air Quality Standards (NAAQS) 8-hour ozone and $PM_{2.5}$ standards. On September 25, 2008, the EPA re-designated the San Joaquin Valley to attainment status for the PM_{10} NAAQS and approved the PM_{10} Maintenance Plan.

4.3.3 Thresholds

To assist local jurisdictions in the evaluation of air quality impacts, the San Joaquin Valley Air Pollution Control District (SJVAPCD) has published the Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI). This guidance document includes recommended thresholds of significance to be used for the evaluation of short-term construction, long-term operational, odor, toxic air contaminant, and cumulative air quality impacts. Accordingly, the SJVAPCD-recommended thresholds of significance are used to determine whether implementation of the proposed Project would result in a significant air quality impact. Projects that exceed these recommended thresholds would be considered to have a potentially significant impact on human health and welfare. The thresholds of significance are summarized, as follows:

Short-Term Emissions of Particulate Matter (PM_{10}): Construction impacts associated with the proposed Project would be considered significant if the feasible control measures for construction in compliance with Regulation VIII as listed in the SJVAPCD guidelines are not incorporated or implemented, or if project-generated emissions would exceed 15 tons per year (TPY).

Short-Term Emissions of Ozone Precursors (ROG and NO_X): Construction impacts associated with the proposed Project would be considered significant if the project generates emissions of Reactive Organic Gases (ROG) or nitrogen oxides (NO_X) that exceeds 10 TPY.

Long-Term Emissions of Particulate Matter (PM_{10}): Operational impacts associated with the proposed Project would be considered significant if the project generates emissions of PM_{10} that exceed 15 TPY.

Long-Term Emissions of Ozone Precursors (ROG and NO_X): Operational impacts associated with the proposed Project would be considered significant if the project generates emissions of ROG or NO_X that exceeds 10 TPY.

Conflict with or Obstruct Implementation of Applicable Air Quality Plan: Due to the region's nonattainment status for O_3, $PM_{2.5}$, and PM_{10}, if the project-generated emissions of either of the ozone precursor pollutants (i.e., ROG and NO_X) or PM_{10} would exceed the SJVAPCD's significance thresholds, then the project would be considered to conflict with the attainment plans. In addition, if the project would result in a change in land use and corresponding increases in vehicle miles traveled, the project may result in an increase in vehicle miles traveled that is unaccounted for in regional emissions inventories contained in regional air quality control plans.

Local Mobile-Source CO Concentrations: Local mobile source impacts associated with the proposed Project would be considered significant if the project contributes to CO concentrations at receptor locations in excess of the California Ambient Air Quality Standards (i.e., 9.0 ppm for 8 hours or 20 ppm for 1 hour).

Toxic Air Contaminants (TACs): Exposure to toxic air contaminants would be considered significant if the probability of contracting cancer for the Maximally Exposed Individual (i.e., maximum individual risk) would exceed 20 in 1 million or would result in a Hazard Index greater than 1.

Odors: Odor impacts associated with the proposed Project would be considered significant if the project has the potential to frequently expose members of the public to objectionable odors.

Table 4-4: Summary of Ambient Air Quality Standards and Attainment Designation

Pollutant	Averaging Time	California Standards*		National Standards*	
		Concentration*	Attainment Status	Primary	Attainment Status
Ozone (O_3)	1-hour	0.09 ppm	Nonattainment/ Severe	–	No Federal Standard
	8-hour	0.070 ppm	Nonattainment	0.075 ppm	Nonattainment (Extreme)**
Particulate Matter (PM_{10})	AAM	20 µg/m^3	Nonattainment	–	Attainment
	24-hour	50 µg/m^3		150 µg/m^3	
Fine Particulate Matter ($PM_{2.5}$)	AAM	12 µg/m^3	Nonattainment	12 µg/m^3	Nonattainment
	24-hour	No Standard		35 µg/m^3	
Carbon Monoxide (CO)	1-hour	20 ppm	Attainment/ Unclassified	35 ppm	Attainment/ Unclassified
	8-hour	9 ppm		9 ppm	
	8-hour (Lake Tahoe)	6 ppm		–	
Nitrogen Dioxide (NO_2)	AAM	0.030 ppm	Attainment	53 ppb	Attainment/ Unclassified
	1-hour	0.18 ppm		100 ppb	
Sulfur Dioxide (SO_2)	AAM	–	Attainment	--	Attainment/ Unclassified
	24-hour	0.04 ppm		--	
	3-hour	–		0.5 ppm	
	1-hour	0.25 ppm		75 ppb	
Lead (Pb)	30-day Average	1.5 µg/m^3	Attainment	–	No Designation/ Classification
	Calendar Quarter	–		--	
	Rolling 3-Month Average	–		0.15 µg/m^3	
Sulfates (SO_4)	24-hour	25 µg/m^3	Attainment	No Federal Standards	
Hydrogen Sulfide (H_2S)	1-hour	0.03 ppm (42 µg/m^3)	Unclassified		
Vinyl Chloride (C_2H_3Cl)	24-hour	0.01 ppm (26 µg/m^3)	Attainment		
Visibility-Reducing Particle Matter	8-hour	Extinction coefficient: 0.23/km-visibility of 10 miles or more due to particles when the relative humidity is less than 70%.	Unclassified		

** For more information on standards visit: https://ww3.arb.ca.gov/research/aaqs/aaqs2.pdf*
*** No Federal 1-hour standard. Reclassified extreme nonattainment for the Federal 8-hour standard.*
****Secondary Standard*
Source: http://www.valleyair.org/aginfo/attainment.htm.

4.3.4 Impact Analysis

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

Less than Significant Impact. CEQA requires that certain projects be analyzed for consistency with the applicable air quality plan. For a project to be consistent with SJVAPCD air quality plans, the pollutants emitted from a project should not exceed the SJVAPCD emission thresholds or cause a significant impact on air quality. In addition, emission reductions achieved through implementation of offset requirements are a major component of the SJVAPCD air quality plans. As discussed below, construction of the Project would not result in the generation of criteria air pollutants that would exceed SJVAPCD thresholds of significance. Implementation of SJVAPCD Regulation VIII would further reduce construction dust impacts. Operational emissions associated with the project would not exceed SJVAPCD established significance thresholds for ROG, NO_X, CO, SO_X, PM_{10}, or $PM_{2.5}$ emissions. Therefore, the Project would not conflict with or obstruct implementation of SJVAPCD air quality plans. The impact would be 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?

Less than Significant Impact. The Project would not exceed thresholds of significance established by the SJVAPCD, as shown in Appendix A. Therefore, impacts would be less than significant.

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

Less than Significant Impact. The Project would require the use of diesel-powered off-road construction equipment and an on-site emergency generator should grid-supplied electricity go offline. For purposes of this review, it is assumed that the generator would operate a maximum of 100 hours per year for testing and maintenance purposes. A health risk assessment was prepared based on the on-site exhaust emissions found in Appendix A. The Project would result in a health risk of 10.22 in a million for construction emissions. Operational emissions were modeled to have a health risk of 0.14 in a million, both less than the 20 per 1 million threshold. Chronic and acute hazard indexes would be *de minimis*. Therefore, the impact would be less than significant.

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

Less than Significant Impact. Heavy-duty equipment in the project area during construction could emit odors, primarily from the equipment exhaust. However, the construction activity would cease when construction is completed. The emergency generator could generate diesel exhaust emissions during operations, but these would be temporary and short in duration.

The SJVAPCD addresses odor criteria within the GAMAQI. The District has not established a rule or standard regarding odor emissions, rather, the District has a nuisance rule, which states, “Any project with the potential to frequently expose members of the public to object able odors to be deemed to have a significant impact.” The proposed uses are not anticipated to emit any long-term objectionable odors. Therefore, objectionable odors affecting a substantial number of people would not occur as a result of the project. There would be a less than significant impact.

4.4 BIOLOGICAL RESOURCES

Table 4-5: Biological Resources Impacts

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

4.4.1 Baseline Conditions

The Project site is located in the agricultural community of Fowler, which lies within the lower San Joaquin Valley, part of the Great Valley of California. The Valley is bordered by the Sierra Nevada Mountain Ranges to the east, the Coast Ranges to the west, the Klamath Mountains and Cascade Range to the north, and the Transverse Ranges and Mojave Desert to the south.

The approximately 0.5-acre Project site which was previously used as a stormwater retention pond will require import of soil to fill the site and bring the site up to match the surrounding grade. The only soil identified within the Project APE was Hesperia fine sandy loam, very deep. This soil is well drained, has negligible runoff, and has moderately rapid permeability. Typical vegetation for this soil type within the San Joaquin Valley consists of sparse annual grasses. This soil is considered prime farmland if irrigated.

Adjacent land uses consist of residential homes and farmland. The City of Fowler is located within the Kennedy Pond watershed; Hydrologic Unit Code: 180300090206.[4] The San Joaquin River and the Kings River are the two principal river systems within this watershed and the San Joaquin Valley, and the City of Fowler is located approximately 18 miles south of the San Joaquin River and 9 miles west of the Kings River. There are no tributaries or distributaries located within the site boundaries or adjacent to the site.

A search of the CNDDB for published accounts of special status plant and animal species was conducted for the *Conejo* 7.5-minute quadrangle that contains the APE in its entirety, and for the 8 surrounding quadrangles: Caruthers, Fresno South, Malaga, Sanger, Selma, Burris Park, Laton, and Riverdale. These species, and their potential to occur within the Project area are listed in the tables on the following pages. Raw data obtained from CNDDB is available in Appendix B at the end of this document. Other sources of information utilized in the preparation of this analysis included the California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Vascular Plants of California, CalFlora's online database of California native plants, the Jepson Herbarium online database (Jepson eFlora), United States Fish and Wildlife Service (USFWS) Environmental Conservation Online System (ECOS), the NatureServe Explorer online database, the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Plants Database, CDFW California Wildlife Habitat Relationships database, ebird.org, the California Herps online database, and various manuals, reports, and references related to plants and animals of the San Joaquin Valley region.

Wildlife

The Project area consists of a vacant lot, previously utilized as a stormwater retention pond. The lot is currently enclosed by a chain-linked fence. Drainage into the pond ceased in approximately 2020, as part of construction activities for the subdivision of single-family residences to the north and east of the APE. Since then, stormwater has not been directed into the retention pond. The APE now consists of primarily herbaceous vegetation, such as common chickweed (*Stellaria media*), curly dock (*Rumex crispus*), various grasses, hairy bittercress (*Cardamine hirsuta*), horseweed (*Conyza canadensis*), rough cocklebur (*Xanthium strumarium*), telegraph weed (*Heterotheca grandiflora*), and turkey mullein (*Croton setigerus*). There are several coast redwoods (*Sequoia sempervirens*) on the south and west sides of the APE.

The soil in the bed of the pond was especially sandy and was dominated by common tule (*Schoenoplectus acutus*). The common tule appeared to be under severe water stress due to lack of water in the basin. White-crowned Sparrows (*Zonotrichia leucophrys*) were observed foraging within the thicket of tule.

Bird species adapted to surviving in urban environments such as American Crow (*Corvus brachyrhynchos*), House Finch (*Carpodacus mexicanus*), and Northern Mockingbird (*Mimus polyglottos*) were seen in the surrounding areas.

There were no active mammal burrows or signs of mammals (i.e., tracks, scat, fur, burrows) within the APE.

Evaluation of Special-Status Species Identified in the Literature Search

There are no special-status species previously documented within the Study Area, but several special-status species are known to occur within an approximate five-mile radius of the Project (see Attachment A in Appendix B). Special-status species that came up on the CNPS, CNDDB, and USFWS database queries were evaluated for their potential to occur onsite. Based upon the vegetation community and habitats present onsite, there are no potentially occurring special-status plants, invertebrates, fish, amphibians, reptiles, and

[4] (United States Environmental Protection Agency 2023)

mammals for the Project site, but does support potential nesting habitat for a few special-status birds and birds protected under the MBTA.

Table 4-6. List of Special Status Animals with Potential to Occur Onsite and/or in the Vicinity

Species	Status	Habitat	Occurrence within Project Site
Blunt-nosed leopard lizard *(Gambelia sila)*	FE, CE, CFP	Inhabits semi-arid grasslands, alkali flats, low foothills, canyon floors, large washes, and arroyos, usually on sandy, gravelly, or loamy substrate, sometimes on hardpan. Often found where there are abundant rodent burrows in dense vegetation or tall grass. Cannot survive on lands under cultivation. Known to bask on kangaroo rat mounds and often seeks shelter at the base of shrubs, in small mammal burrows, or in rock piles. Adults may excavate shallow burrows but rely on deeper pre-existing rodent burrows for hibernation and reproduction.	**Absent.** Suitable habitat for this species is absent from the APE. There is not enough undeveloped land present to support this species and there are no mammal burrows within the APE to support this species. There are no recorded observations of this species within the nine-quad search.
Burrowing owl (*Athene cunicularia*)	CSC	Resides in open, dry annual or perennial grasslands, deserts, and scrublands with low growing vegetation. Nests underground in existing burrows created by mammals, most often ground squirrels.	**Absent.** Suitable habitat for this species is absent from the APE. There are no burrows within the APE to support this species and there are high levels of disturbance in the area. The nearest recorded observation of this species occurred in non-native grassland approximately 13.5 miles south of the APE in 2017.
California glossy snake (Arizona elegans occidentalis)	CSC	Inhabits arid scrub, rocky washes, grasslands, and chaparral. Prefers open areas with loose soil for easy burrowing.	**Absent.** Suitable habitat and soil for this species is absent from the APE. The APE is outside of the current known range of this species. The nearest recorded observation of this species is from a historical collection dated more than 80 years ago approximately seven miles southwest of the APE.
California tiger salamander (*Ambystoma californiense)*	FT, CT, CWL	Requires vernal pools or seasonal ponds for breeding and small mammal burrows for aestivation. Generally found in grassland and oak savannah plant communities in central California from sea level to 1500 feet in elevation.	**Absent.** Suitable habitat for this species is absent from the APE. There are no vernal pools for breeding or burrows for aestivation present. The nearest recorded extant observation of this species occurred approximately 19.5 miles south of the APE in 1999.
Coast horned lizard (*Phrynosoma blainvillii*)	CSC	Found in grasslands, coniferous forests, woodlands, and chaparral, primarily in open areas with patches of loose, sandy soil and low-lying vegetation in valleys, foothills, and semi-arid mountains. Frequently found near ant hills and along dirt roads in lowlands along sandy washes with scattered shrubs.	**Absent.** Suitable habitat and soil for this species is absent from the APE. The only recorded observation of this species in the nine-quad search is from a historical collection from 130 years ago and occurred somewhere in the vicinity of Fresno.
Crotch's bumble bee (*Bombus crotchii*)	CCE	Occurs throughout coastal California, as well as east to the Sierra-Cascade crest, and south into Mexico. Food plant genera include *Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia*, and *Eriogonum*.	**Unlikely.** The APE does not offer high quality foraging or overwintering habitat for this species. The nearest recorded observation of this species is from a historical collection dated more than 110 years ago and occurred

Species	Status	Habitat	Occurrence within Project Site
			approximately four miles southeast of the APE.
Fresno kangaroo rat (*Dipodomys nitratoides exilis*)	FE, CE	An inhabitant of alkali sinks open grassland environments in western Fresno County. Prefers bare, alkaline, clay-based soils subject to seasonal inundation with more friable soil mounds around shrubs and grasses.	**Absent.** Suitable habitat for this species is absent from the APE and surrounding area. There are no burrows within the APE to support this species. There are no recorded observations of this species within the nine-quad search.
Monarch butterfly (*Danaus plexippus*)	FC	Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby. Larval host plants consist of milkweeds (*Asclepias* sp.). Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico.	**Unlikely.** Suitable habitat for foraging, roosting, or depositing eggs is absent from the APE. This species is frequently seen in the region, but only as part of its migration route. There are no recorded observations of this species within the nine-quad search.
Northern California legless lizard (*Anniella pulchra*)	CSC	Found primarily underground, burrowing in loose, sandy soil. Forages in loose soil and leaf litter during the day. Occasionally observed on the surface at dusk and night.	**Absent.** Suitable habitat for this species is absent from the APE. The nearest recorded observation of this species is a historical collection dated more than 130 years ago and occurred somewhere in the vicinity of Fresno.
Pallid bat (*Antrozous pallidus*)	CSC	Found in grasslands, chaparral, and woodlands, where it feeds on ground- and vegetation-dwelling arthropods, and occasionally takes insects in flight. Prefers to roost in rock crevices, but may also use tree cavities, caves, bridges, and other man-made structures.	**Unlikely.** Suitable roosting habitat for this species is absent from the APE. Project activities would deter this species from foraging near the APE. The nearest recorded observation of this species occurred approximately nine miles north of the APE in 1909.
San Joaquin kit fox (*Vulpes macrotis mutica*)	FE, CT	Underground dens with multiple entrances in alkali sink, valley grassland, and woodland in valleys and adjacent foothills.	**Absent.** Suitable habitat for this species is absent from the APE. The APE is outside of the current known range of this species (United States Fish & Wildlife Service 2020). The nearest recorded observation of this species occurred approximately eight miles northeast of the APE on an unknown date in the 1880's.
Swainson's hawk (*Buteo swainsoni*)	CT	Nests in large trees in open areas adjacent to grasslands, grain or alfalfa fields, or livestock pastures suitable for supporting rodent populations.	**Possible.** This species could potentially nest within the large coast redwoods in the APE. The nearest recorded observation of this species occurred approximately four miles west of the APE in 2016.
Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*)	FT	Lives in mature elderberry shrubs of the Central Valley and foothills. Adults are active from March to June.	**Absent.** There are no elderberry shrubs within the APE or surrounding area. The nearest recorded observation of this species occurred approximately nine miles northeast of the APE in 1998.
Vernal pool fairy shrimp (*Branchinecta lynchi*)	FT	Occupies vernal pools, clear to tea-colored water, in grass or mud-bottomed swales, and basalt depression pools.	**Absent.** Suitable habitat for this species is absent from the APE. Vernal pools are not present. The only recorded observation of this species in the nine-quad search occurred in vernal pools within non-native grassland approximately 19 miles southeast of the APE in 2017.

Species	Status	Habitat	Occurrence within Project Site
Vernal pool tadpole shrimp (*Lepidurus packardi*)	FE	Occurs in vernal pools, clear to tea-colored water, in grass or mud-bottomed swales, and basalt depression pools.	**Absent.** Suitable habitat for this species is absent from the APE. Vernal pools are not present. The nearest recorded observation of this species occurred approximately 19 miles southeast of the APE in 2017.
Western mastiff bat (*Eumops perotis californicus*)	CSC	Found in open, arid to semi-arid habitats, including dry desert washes, flood plains, chaparral, oak woodland, open ponderosa pine forest, grassland, and agricultural areas, where it feeds on insects in flight. Roosts most commonly in crevices in cliff faces but may also use high buildings and tunnels.	**Unlikely.** Suitable roosting habitat for this species is absent from the APE. Project activities would deter this species from foraging near the APE. The nearest recorded observation of this species occurred approximately 5.5 miles west of the APE in 1958.
Western spadefoot (*Spea hammondii*)	CSC	Prefers open areas with sandy or gravelly soils, in a variety of habitats including mixed woodlands, grasslands, coastal sage scrub, chaparral, sandy washes, lowlands, river floodplains, alluvial fans, playas, alkali flats, foothills, and mountains. Vernal pools or temporary wetlands, lasting a minimum of three weeks, which do not contain bullfrogs, fish, or crayfish are necessary for breeding.	**Unlikely.** Aquatic habitats required by this species are absent from the APE and surrounding area. The nearest recorded observation of this species occurred approximately 19 miles southeast of the APE in 2017 in vernal pool habitat adjacent to Cross Creek.
Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*)	FT, CE	Suitable nesting habitats in California includes dense riparian willow-cottonwood and mesquite habitats along a perennial river. Once a common breeding species in riparian habitats of lowland California, this species currently breeds consistently in only two locations in the State: along the Sacramento and South Fork Kern Rivers.	**Absent.** Suitable nesting habitat for this species is absent from the APE. This species has not been observed in the region in over a century. The nearest recorded observation of this species occurred approximately 4.5 miles southeast of the APE in 1898.

Table 4-7. List of Special Status Plants with Potential to Occur Onsite and/or in the Vicinity

Species	Status	Habitat	Occurrence within Project Site
Alkali-sink goldfields (*Lasthenia chrysantha*)	CNPS 1B	Found in vernal pool and wet saline flat habitats. Occurrences documented in the San Joaquin and Sacramento Valleys at elevations below 656 feet. Blooms February - April.	**Absent.** Suitable habitat for this species is absent from the APE. There are no vernal pools or saline soils present. The nearest recorded observation of this species occurred approximately eight miles south of the APE in 1934 and is listed as possibly extirpated.
Bristly sedge (*Carex comosa*)	CNPS 2B	Found on lake margins and wet places in marshes, swamps, coastal prairie, valley grassland, and foothill grassland at elevations between -15 and 3,300 feet. Blooms May - September.	**Unlikely.** Suitable habitat for this species is absent from the APE as the presence of water is inconsistent. The only recorded observation of this species in the nine-quad search occurred in a drainage canal approximately nine miles east of the APE in 1989.

Species	Status	Habitat	Occurrence within Project Site
Brittlescale (*Atriplex depressa*)	CNPS 1B	Found in the San Joaquin Valley and Sacramento Valley in alkaline or clay soils, typically in meadows or annual grassland in at elevations below 1050 feet. Sometimes associated with vernal pools. Blooms June–October.	**Absent.** Suitable habitat for this species is absent from the APE. There is no alkaline or clay soil within the APE. The only recorded observation of this species in the nine-quad search occurred approximately 12 miles south of the APE on an unknown date.
California alkali grass (*Puccinellia simplex*)	CNPS 1B	Found in the San Joaquin Valley and other parts of California in saline flats and mineral springs within valley grassland and wetland-riparian communities at elevations below 3000 feet. Blooms March–May.	**Absent.** Suitable habitat for this species is absent from the APE. The only recorded observation of this species in the nine-quad search occurred approximately 13.5 miles south of the APE in 1935 and is listed as possibly extirpated.
California jewelflower (*Caulanthus californicus*)	FE, CE, CNPS 1B	Found in the San Joaquin Valley and Western Transverse Ranges in sandy soils. Occurs on flats and slopes, generally in non-alkaline grassland at elevations between 230 feet and 6100 feet. Blooms February–April.	**Absent.** This species has not been seen in the region in over a century. The APE is not suitable for this species. The only recorded observation of this species in the nine-quad search occurred somewhere in the vicinity of Fresno on an unknown date and is listed as extirpated.
California satintail (*Imperata brevifolia*)	CNPS 2B	Although this facultative species is equally likely to occur in wetlands and non-wetlands, it is often found in wet springs, meadows, streambanks, and floodplains at elevations below 1600 feet. Blooms September – May.	**Unlikely.** This species has not been observed in the region in over a century. The only recorded observation of this species in the nine-quad search occurred somewhere in the vicinity of Fresno in 1893.
Greene's tuctoria (*Tuctoria greenei*)	FE, CR, CNPS 1B	Found in the San Joaquin Valley and other parts of California in vernal pools within valley grassland, wetland, and riparian communities at elevations below 3500 feet. Blooms May – September.	**Absent.** Suitable habitat for this species is absent from the APE. There are no vernal pools present within the APE. The only recorded observation of this species in the nine-quad search occurred approximately 11.5 miles northeast of the in 1954 and is listed as extirpated.
Lesser saltscale (*Atriplex minuscula*)	CNPS 1B	Found in the San Joaquin Valley in sandy, alkaline soils in alkali scrub, valley and foothill grassland, and alkali sink communities at elevations below 750 feet. Blooms April–October.	**Absent.** Suitable habitat and soil for this species is absent from the APE. The only recorded observation of this species within the nine-quad search occurred approximately 19 miles southeast of the APE in 2016.
Madera leptosiphon (*Leptosiphon serrulatus*)	CNPS 1B	Found in openings in foothill woodland, often yellow-pine forest, and chaparral at elevations between 1000 feet and 4300 feet. Blooms April – May.	**Absent.** The APE is outside of the lower elevational range of this species. The only recorded observation of this species in the nine-quad search occurred somewhere in the vicinity of Fresno in 1922.
Panoche pepper-grass (*Lepidium jaredii* ssp. *album*)	CNPS 1B	Found on steep slopes, washes, alluvial-fans, and clay, sometimes alkaline, within Valley and Foothill Grassland communities in western Fresno County at elevations between 600–2400 feet. Blooms February–June.	**Absent.** This species has not been observed in the region in over a century and the APE is outside of the lower elevational range of this species. The only recorded observation of this species in the nine-quad search occurred approximately 15.5 miles southwest of the APE in 1893.

EXPLANATION OF OCCURRENCE DESIGNATIONS AND STATUS CODES

Present:	Species observed on the site at time of field surveys or during recent past.
Likely:	Species not observed on the site, but it may reasonably be expected to occur there on a regular basis.
Possible:	Species not observed on the site, but it could occur there from time to time.
Unlikely:	Species not observed on the site, and would not be expected to occur there except, perhaps, as a transient.
Absent:	Species not observed on the site and precluded from occurring there due to absence of suitable habitat.

STATUS CODES

FE	Federally Endangered	CE	California Endangered
FT	Federally Threatened	CT	California Threatened
FC	Federal Candidate	CFP	California Fully Protected
		CSC	California Species of Concern
		CWL	California Watch List
		CCE	California Endangered (Candidate)
		CR	California Rare

CNPS LISTING

1B	Plants Rare, Threatened, or Endangered in California and elsewhere.	2B	Plants Rare, Threatened, or Endangered in California, but more common elsewhere.

4.4.2 Applicable Regulations

Federal

Endangered Species Act

The Endangered Species Act (ESA) protects plants and animals that are listed as endangered or threatened by USFWS and the National Marine Fisheries Service (NMFS). Section 9 of the ESA prohibits, without authorization, the taking of listed wildlife, where take is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct" (50 Code of Federal Regulations [CFR] 17.3). For plants, this statute governs removing, possessing, maliciously damaging, or destroying any listed plant under federal jurisdiction and removing, cutting, digging up, damaging, or destroying any listed plant in any other area in knowing violation of state law (16 United States Code [USC] 1538).

Under Section 7 of the ESA, federal agencies are required to consult with USFWS and/or NMFS if their actions, including permit approvals and funding, could adversely affect a listed (or proposed) species (including plants) or its critical habitat. Through consultation and the issuance of a biological opinion (BO), USFWS and NMFS may issue an incidental take statement allowing take of the species that is incidental to an otherwise authorized activity provided the activity will not jeopardize the continued existence of the species. Section 10 of ESA provides for the issuance of incidental take permits where no other federal actions are necessary provided a habitat conservation plan is developed.

Section 7 Consultation

Section 7 of the ESA mandates that all federal agencies consult with USFWS and/or NMFS to ensure that federal agencies' actions do not jeopardize the continued existence of a listed species or adversely modify critical habitat for listed species. If direct and/or indirect effects will occur to critical habitat that appreciably diminish the value of critical habitat for both the survival and recovery of a species, the adverse modifications will require formal consultation with USFWS or NMFS. If adverse effects are likely, the federal lead agency must prepare a biological assessment (BA) for the purpose of analyzing the potential effects of the proposed Project on listed species and critical habitat to establish and justify an "effect determination." Often a third-party, non-federal applicant drafts the BA for the lead federal agencies. The USFWS/NMFS reviews the BA; if it concludes that the Project may adversely affect a listed species or its habitat, it prepares a BO. The BO may recommend "reasonable and prudent alternatives" to the Project to avoid jeopardizing or adversely modifying habitat.

Critical Habitat

Critical Habitat is defined in Section 3 of the ESA as:

1. the specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the ESA, on which are found those physical or biological features essential to the conservation of the species and that may require special management considerations or protection; and
2. specific areas outside the geographical area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

For inclusion in a Critical Habitat designation, habitat within the geographical area occupied by the species at the time it was listed must first have features essential to the conservation of the species (16 USC 1533). Critical Habitat designations identify, to the extent known and using the best scientific data available, habitat areas that provide essential life cycle needs of the species (areas on which are found the primary constituent elements). Primary constituent elements are the physical and biological features that are essential to the conservation of the species and that may require special management considerations or protection. These include but are not limited to the following:

1. Space for individual and population growth and for normal behavior.
2. Food, water, air, light, minerals, or other nutritional or physiological requirements.
3. Cover or shelter.
4. Sites for breeding, reproduction, or rearing (or development) of offspring.
5. Habitats that are protected from disturbance or are representative of the historic, geographical, and ecological distributions of a species.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) implements international treaties between the U.S. and other nations devised to protect migratory birds, any of their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. As authorized under the MBTA, USFWS issues permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal. The regulations governing migratory bird permits can be found in 50 CFR part 13 General Permit Procedures and 50 CFR part 21 Migratory Bird Permits. The State of California has incorporated the protection of nongame birds, migratory birds, and birds of prey in Fish and Game Code Sections 3800, 3513, and 3503.5, respectively.

Clean Water Act

The purpose of the federal Clean Water Act (CWA) is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters." Section 404 of the CWA prohibits the discharge of dredged or fill material into "Waters of the United States" without a permit from the USACE. The definition of Waters of the U.S. includes rivers, streams, estuaries, the territorial seas, ponds, lakes, and wetlands. Wetlands are defined as those areas "that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3 7b). The USEPA also has authority over wetlands, including the authority to veto permits issued by USACE under CWA Section 404(c).

Projects involving activities that have no more than minimal individual and cumulative adverse environmental effects may meet the conditions of one of the Nationwide Permits already issued by USACE (Federal Register 82:1860, January 6, 2017). If impacts on wetlands could be substantial, an individual

permit is required. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions; this certification or waiver is issued by the Regional Water Quality Control Board (RWQCB).

State

California Endangered Species Act

The California Endangered Species Act (CESA) (Fish and Game Code Sections 2050-2116) protects species of fish, wildlife, and plants listed by the State as endangered or threatened. Species identified as candidates for listing may also receive protection. Section 2080 of the CESA prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit. Take is defined in Fish and Game Code Section 86 as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." The CESA allows for take incidental to otherwise lawful projects under permits issued by CDFW.

Fully Protected Species

The State of California first began to designate species as "fully protected" prior to the creation of the federal and the California ESAs. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction and included fish, amphibians and reptiles, birds, and mammals. Most fully protected species have since been listed as threatened or endangered under the federal and/or California ESAs. Fully protected species are identified in the California Fish and Game Code Section 4700 for mammals, Section 3511 for birds, Section 5050 for reptiles and amphibians, and Section 5515 for fish.

These sections of the California Fish and Game Code provide that fully protected species may not be taken or possessed at any time, including prohibition of CDFW from issuing incidental take permits for fully protected species under the CESA. CDFW will issue licenses or permits for take of these species for necessary scientific research or live capture and relocation pursuant to the permit and may allow incidental take for lawful activities carried out under an approved Natural Community Conservation Plan within which such species are covered.

Native Plant Protection Act

The Native Plant Protection Act (NPPA) of 1977 (Fish and Game Code Sections 1900-1913) was established with the intent to "preserve, protect and enhance rare and endangered plants in this state." The NPPA is administered by CDFW. The Fish and Game Commission has the authority to designate native plants as "endangered" or "rare." The NPPA prohibits the take of plants listed under the NPPA, but the NPPA contains a number of exemptions to this prohibition that have not been clarified by regulation or judicial rule. In 1984, the CESA brought under its protection all plants previously listed as endangered under NPPA. Plants listed as rare under NPPA are not protected under the CESA but are still protected under the provisions of NPPA. The Fish and Game Commission no longer lists plants under NPPA, referring all listings to the CESA.

California Fish and Game Code Special Protections for Birds

In addition to protections contained within the CESA and Fish and Game Code Section 3511 described above, the California Fish and Game Code includes a number of sections that specifically protect certain birds.

Section 3800 states that it is unlawful to take non-game birds, such as those occurring naturally in California that are not resident game birds, migratory game birds, or fully protected birds, except when in accordance with regulations of the California Fish and Game Commission or a mitigation plan approved by CDFW for mining operations.

Section 3503 prohibits the take, possession, or needless destruction of the nest or eggs of any bird.

Section 3503.5 protects birds of prey (which includes eagles, hawks, falcons, kites, ospreys, and owls) and prohibits the take, possession, or destruction of any birds and their nests.

Section 3505 makes it unlawful to take, sell, or purchase egrets, ospreys, and several exotic non-native species, or any part of these birds.

Section 3513 specifically prohibits the take or possession of any migratory non-game bird as designated in the MBTA.

Porter-Cologne Water Quality Act

The RWQCB implements water quality regulations under the federal CWA and the Porter-Cologne Water Quality Act. These regulations require compliance with the National Pollutant Discharge Elimination System (NPDES), including compliance with the California Storm Water NPDES General Construction Permit for discharges of stormwater runoff associated with construction activities. General Construction Permits for projects that disturb one or more acres of land require development and implementation of a Storm Water Pollution Prevention Plan. Under the Porter-Cologne Water Quality Act, the RWQCB regulates actions that would involve "discharging waste, or proposing to discharge waste, with any region that could affect the water of the state" [Water Code Section 13260(a)]. Waters of the State are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" [Water Code Section 13050 (e)]. The RWQCB regulates all such activities, as well as dredging, filling, or discharging materials into Waters of the State, which are not regulated by USACE due to a lack of connectivity with a navigable water body. The RWQCB may require issuance of a Waste Discharge Requirements for these activities.

Local

City of Fowler General Plan

The Project is located within the City of Fowler. The City of Fowler General Plan Policy Document contains the following goals and policies related to the Project:

Goal SAF-3: Local Watersheds, waterbodies, and groundwater resources are responsibly managed.

Policy SAF-14: Maintain the domestic water system in accordance with applicable water quality standards.

Policy PF-17: Design and construct water system infrastructure as needed to meet current and future water demands and system requirements.

4.4.3 Impact Analysis

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 Wildlife or U.S. Fish and Wildlife Service?

Less than Significant Impact with Mitigation Incorporated. The APE contains suitable nesting and/or foraging habitat for a variety of avian species. Swainson's hawk was identified as the only special status species likely to occur within the APE. Implementation of the following measures BIO-1 through BIO-4 would reduce potential impacts to nesting raptors, migratory birds, and special status birds to a less than significant level under CEQA and ensure compliance with State and federal laws protecting these avian species.

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, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

No Impact. The CDFW and USFWS often designates areas of "Critical Habitat" when it lists species as threatened or endangered. Critical Habitat is a specific geographic area that contains features essential for the conservation of a threatened or endangered species and would require special management or protection. There are no CNDDB-designated "natural communities of special concern" recorded within the Project site or surrounding lands. Therefore, there would be no impact.

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?

No Impact. The Project site was previously used as a stormwater retention pond and is not a natural wetland. The site has likely previously functioned as a wetland as evidenced by the presence of hydrophytic vegetation. However, the primary water source was blocked in 2020. NWI does not identify the pond as a wetland feature. The Project site does not meet the definition Water of the United States, and the State Water Resources Control Board exempts artificially constructed wetlands used for stormwater runoff from the definition of a Water of the State. Therefore, there would be no impact.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

No Impact. The Project site does not contain features that would be likely to function as wildlife movement corridors. Furthermore, the Project site is surrounded by chain-link fence and is located in a developed portion of the City of Fowler which would discourage dispersal and migration. There would be no impact.

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

No Impact. Several trees on the Project site could potentially be removed as part of the Project. Any trees removed would be within the property boundaries and as such would not conflict with the City's policy on tree removal which addresses trees on public parking strips or other public place in the City. The Project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy. There would be no impact.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. The Project is consistent with the goals and policies of the City of Fowler General Plan. There is no habitat conservation plan, natural community conservation plan, or other approved local, regional, or State habitat conservation plan is in effect for the Project site. There would be no impact.

4.4.4 Mitigation

BIO-1 Avoidance: The Project's construction activities would occur, if feasible, between September 16 and January 31 (outside of nesting bird season) in an effort to avoid impacts to nesting birds.

BIO-2 Pre-construction Surveys: If activities must occur within nesting bird season (February 1 to September 15), a qualified biologist would conduct pre-construction surveys for Swainson's hawk nests onsite and within a 0.5-mile radius. This survey would be conducted in accordance with the *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (Swainson's Hawk Technical Advisory Committee, 2000) or current guidance. The pre-construction survey would also provide a presence/absence survey for all other nesting birds within the APE and an additional 50 feet, no more than 7 days prior to the start of construction. All raptor nests would be considered "active" upon the nest-building stage.

BIO-3 Establish Buffers: On discovery of any active nests or breeding colonies near work areas, the biologist would determine appropriate construction setback distances based on applicable CDFW and/or USFWS guidelines and/or the biology of the species in question. Construction buffers would be identified with flagging, fencing, or other easily visible means, and would be maintained until the biologist has determined that the nestlings have fledged.

BIO-4 ITP: In the event an active Swainson's hawk nest or other nest is detected during surveys and cannot be avoided, consultation with CDFW would be warranted to discuss how to implement the Project and avoid take. If take cannot be avoided, take authorization through the acquisition of an ITP pursuant to Fish and Game Code Section 2081, subdivision (b) is necessary to comply with CESA.

4.5 CULTURAL RESOURCES

Table 4-8: Cultural Resources Impacts

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 in § 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?	☐	☒	☐	☐

4.5.1 Baseline Conditions

The San Joaquin Valley was dominated by agricultural pursuits until the oil boom of the early 1900s, which saw a shift in the region, as some reclaimed lands previously used for farming were leased to oil companies. Nonetheless, the shift of the San Joaquin Valley towards oil production did not halt the continued growth of agriculture. The Great Depression of the 1930s brought with it the arrival of a great number of migrants from the drought-affected Dust Bowl region, looking for agricultural labor. These migrants established temporary camps in the valley, staying on long past the end of the drought and the Great Depression, eventually settling in towns such as Bakersfield where their descendants live today.

Following the completion of the transcontinental railroad in 1869, the Central Pacific Railroad, predecessor to the Southern Pacific Railroad, began construction of a Central Valley route to connect southern California with the commerce center of the San Francisco Bay. The segment through Fowler was laid around 1872. Thomas Fowler, a State Senator from 1869–1872, owned the ranch where a railroad switch was built by the Central Pacific Railroad. The town developed around the railroad switch and became known as Fowler's Switch. The Valley branch of the historic Southern Pacific Railroad is presently owned and operated by the Union Pacific Railroad. A post office branch was established in Fowler in 1882, the name was eventually shortened, and the City of Fowler was incorporated in 1908. In May 1973, Fowler's Switch was registered as a California Point of Interest for its local significance to Fowler. The marker for the Fowler Switch is located at the intersection of East Merced Street and South 7th Street. (See Appendix C).

Records Search

A records search from the Southern San Joaquin Valley Information Center (SSJVIC) of the California Historical Resources Information System (CHRIS), located at California State University, Bakersfield was conducted in February 2023. The SSJVIC records search includes a review of all recorded archaeological and built-environment resources as well as a review of cultural resource reports on file. In addition, the California Points of Historical Interest, the California Historical Landmarks, the California Register of Historical Resources, the National Register of Historic Places, and the California State Built Environment Resources Directory listings were reviewed for the above referenced APE and an additional ¼-mile radius. Due to the sensitive nature of cultural resources, archaeological site locations are not released. (Appendix C).

Additional sources included the State Office of Historic Preservation Historic Properties Directory, Archaeological Determinations of Eligibility, and the California Inventory of Historic Resources.

4.5.2 Impact Analysis

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

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

a-b) Less than Significant Impact with Mitigation Incorporated. A CHRIS records search, from SSJVIC, was conducted in February 2023 and confirmed there have been no previous cultural resource studies conducted within the Project area. There have been three previous cultural resource studies within the one-half mile radius: FR-02416, FR-01837, and FR-02108 however these reports are greater than five years and should be considered out of date. The search also confirmed there are no recorded resources within the project area or within the one-half mile radius. It is unlikely that the Project has the potential to result in significant impacts or adverse effects to cultural or historical resources, such as archaeological remains, artifacts, or historic properties. However, in the unusual event that cultural resources are encountered during Project construction, implementation of mitigation measure CUL-1 outlined below, would reduce impacts to less than significant.

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

Less than Significant Impact with Mitigation Incorporated. There is no evidence that the Project site has the potential to be an unknown burial site, or the site of buried human remains. In the unlikely event of such a discovery, mitigation will be implemented. With incorporation of mitigation measure CUL-2 outlined below, impacts resulting from the discovery of remains interred in the Project site would be less than significant.

4.5.3 Mitigation

CUL-1 Should archeological remains or artifacts be unearthed during any stage of project activities, work in the area of the discovery shall cease until the area is evaluated by a qualified archaeologist. If mitigation is warranted, the project proponent shall abide by recommendations of the archaeologist.

CUL-2 In the event that human remains are discovered on the Project site, the Fresno County Coroner must be notified of that discovery (Health and Safety Code Section 7050.5) and all activities in the immediate area if the find or in any nearby area reasonably suspected of overlie adjacent human remains must cease until appropriate and lawful measures have been implemented. If the Coroner determines that the remains are not recent, but rather of Native American origin, the Coroner shall notify the NAHC in Sacramento within 24 hours to permit the NAHC to determine the most likely descendent of the deceased Native American.

4.6 ENERGY

Table 4-9: Energy Impacts

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?	☐	☐	☒	☐

4.6.1 Baseline Conditions

Pacific Gas and Electric (PG&E) supplies electricity and natural gas to the Project area. PG&E obtains its power through hydroelectric, thermal (natural gas), wind, and solar generation of purchases. PG&E continually produces new electric generation and natural gas sources and implements continuous improvements to gas lines throughout its service areas to ensure the provision of services to users.

4.6.2 Impact Analysis

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?

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

a-b) Less than Significant Impact. The Project would comply with Building Energy Efficiency Standards included in Titles 20 and 24 of the California Code of Regulations, which requires new development to incorporate energy efficiency standards, including include energy-efficient lighting and motor requirements, into Project designs. Current regulations for construction equipment, heavy-duty equipment, and earthmoving equipment used in construction contribute to reductions in energy as well as reduction in pollutant emissions. California implemented its In-Use Off-Road Diesel Fueled Fleets regulations (off-road regulation) which applies to all self-propelled off-road diesel vehicles 25 horsepower or greater and most two-engine vehicles. The Small Off-Road Engines program was implemented by California to apply to categories of outdoor powered equipment and specialty vehicles often used in construction. Through compliance with energy reduction standards and regulations aimed at reducing consumption of transportation related energy consumption, as well as the energy provider's energy reduction programs, the Project will have less than significant impacts related to energy usage during Project operations and construction and its impacts related to wasteful, inefficient, or unnecessary energy consumption overall, would be less than significant. The Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

4.7 GEOLOGY AND SOILS

Table 4-10: Geology and Soils Impacts

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? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii. Strong seismic ground shaking?	☐	☐	☒	☐
iii. Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv. Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994) creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	☐	☒	☐	☐

4.7.1 Baseline Conditions

Geology and Soils

The Project is located in the City of Fowler in central Fresno County, in the southern section of California's Great Valley Geomorphic Province, or Central Valley. The Sacramento Valley makes up the northern third and the San Joaquin Valley makes up the southern two-thirds of the geomorphic province. Both valleys are watered by large rivers flowing west from the Sierra Nevada Range, with smaller tributaries flowing east from the Coast Ranges. Most of the surface of the Great Valley is covered by Quaternary (present day to 1.6 million years ago) alluvium. The sedimentary formations are steeply upturned along the western margin

due to the uplifted Sierra Nevada Range.[5] From the time the Valley first began to form, sediments derived from erosion of igneous and metamorphic rocks and consolidated marine sediments in the surrounding mountains have been transported into the Valley by streams.

Faults and Seismicity

The Project is not located within an Alquist-Priolo Earthquake Fault Zone and there are no known active faults within the City. The nearest major fault is the San Andreas Fault, located approximately 70 miles southwest of the Project site. The San Andreas fault is the dominant active tectonic feature of the Coast Ranges and represents the boundary of the North American and Pacific plates. The Nunez Fault is approximately 51 miles southwest and the Poso Fault is approximately 60 miles south.[6]

Liquefaction

The potential for liquefaction, which is the loss of soil strength due to seismic forces, is dependent on soil types and density, the groundwater table, and the duration and intensity of ground shaking. Although no specific liquefaction hazard areas have been identified in Fresno County, this potential is recognized throughout the San Joaquin Valley where unconsolidated sediments and a high-water table coincide. Soil types along the Valley floor are not generally conducive to liquefaction because they are generally too coarse. Furthermore, the average depth to groundwater within the city is approximately 85 to 95 feet which also minimizes liquefaction potential.[7]

Using the USDA NRCS soil survey of Fresno County, an analysis of the soils onsite was performed. Soil in the area consist of Hesperia fine sandy loam.[8]

Soil Subsidence

Subsidence occurs when a large land area settles due to over-saturation or extensive withdrawal of groundwater, oil, or natural gas. These areas are typically composed of open-textured soils, high in silt or clay content, that become saturated. Although some areas in Fresno County have experienced subsidence due to groundwater overdraft, the City's elevation has remained relatively unchanged.

Soil of the Project site consist of Hesperia sandy loam, which is course-textured, low in clay content, and has a low shrink-swell potential. Therefore, soil onsite represents a low risk of subsidence.

Dam and Levee Failure

Hundreds of dams and reservoirs have been built in California for water supply, flood control, hydroelectric power, and recreational uses. The storage capacity of these dams varies across the State from large reservoirs with capacities exceeding millions of acre-feet (AF) to small reservoirs with capacities from hundreds to thousands of AF. Depending on the season, water from these reservoirs is released into the river system of the State and eventually reaches the Pacific Ocean. The Kings River, which flows approximately 12 miles east, is the primary river in the vicinity. The Kings River is impounded by Pine Flat Dam, which forms the Pine Flat reservoir, approximately 25 miles northeast of the Project site. If Pine Flat Dam were to fail, a large portion of Fresno County, including the City, would be inundated.

[5] (Harden, 1998)
[6] (California Department of Conservation 2023)
[7] (California Department of Water Resources 2022)
[8] (United States Department of Agriculture 2022)

4.7.2 Impact Analysis

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

i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

ii. Seismic-related ground failure, including liquefaction?

i-ii) Less than Significant Impact. The Project site is located in an area traditionally characterized by relatively low seismic activity. The site is not located in an Alquist-Priolo Earthquake Fault Zone as established by the Alquist-Priolo Fault Zoning Act (Section 2622 of Chapter 7.5, Division 2 of the California Public Resources Code). The nearest major fault is the San Andreas Fault, located approximately 70 miles southwest of the Project site. A smaller fault zone, The Nunez Fault is approximately 51 miles southwest of the site.

The Project involves construction of a groundwater well and associated infrastructure, which does not include development of habitable residential, agricultural, commercial, or industrial structures. Therefore, implementation of the Project would not result in an increase of people or habitable structures onsite. Any impact would be less than significant.

iii. Seismic-related ground failure, including liquefaction?

Less than Significant Impact. Liquefaction occurs when loose, water-saturated sediments lose strength and fail during strong ground shaking. Although no specific liquefaction hazard areas have been identified in Fresno County, this potential is recognized throughout the San Joaquin Valley where unconsolidated sediments and a high-water table coincide. Using the USDA NRCS soil survey of Fresno County, an analysis of the soils onsite was performed. Soils in the area consist of Hesperia fine sandy loam, which is well-drained and coarse-textured, representing a low risk for liquefaction or seismic-related ground failure. In addition, the average depth to groundwater within the City is approximately 85 to 95 feet which further reduces potential for liquefaction. Furthermore, as mentioned above in Impact Assessments VI-a-i and VI-a-ii, strong seismic ground shaking is unlikely to occur. Any impacts related to seismic-related ground failure, including liquefaction, would be less than significant.

iv. Landslides?

No Impact. Landslides usually occur in locations with steep slopes and unstable soils. The Project is located on the Valley floor where no major geologic landforms exist, and the topography is essentially flat and level. The nearest foothills are approximately 15 miles northeast. Therefore, the Project site has minimal-to-no landslide susceptibility, and there would be no impact.

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

Less than Significant Impact. Earthmoving activities associated with the Project would include import of soil to backfill the existing stormwater retention pond on site and for grading activities. These activities could expose soils to erosion processes and the extent of erosion would vary depending on slope steepness/stability, vegetation/cover, concentration of runoff, and weather conditions. Once earthmoving activities are completed the Project site will have a generally flat topography. Construction

activities could expose barren soils to sources of wind or water, resulting in the potential for erosion and sedimentation on and off the Project site. During construction, nuisance flow caused by minor rain could flow off-site. The City and/or contractor would be required to employ appropriate sediment and erosion control BMPs as part of construction activities. Once construction is complete, the Project would not result in soil erosion or loss of topsoil. Compliance with state regulations would ensure that impacts remain less than significant.

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?

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

c-d) Less than Significant Impact. Soils onsite consist of Hesperia fine sandy loam, which is well-drained, low in clay content, and coarse-textured. This soil has a low shrink-swell potential and a low plasticity index, and therefore, is not considered an expansive soil. Furthermore, the aforementioned physical properties of the soil make subsidence, liquefaction, lateral spreading, or other ground failure unlikely. Any 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?

No Impact. The Project does not include the construction, replacement, or disturbance of septic tanks or alternative wastewater disposal systems. Therefore, there would be no impact.

f) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geological feature?

Less than Significant Impact with Mitigation. No known paleontological resources have been identified at the Project site. However, if a paleontological resource is found incorporation of mitigation measure GEO-1 would reduce impacts to less than significant.

4.7.3 Mitigation

GEO-1 Should paleontological resources be encountered on the Project site, all ground disturbing activities in the area shall stop. A qualified paleontologist shall be contacted to assess the discovery. Mitigation may include monitoring, recording the fossil locality, data recovery and analysis, and a final report. Public educational outreach may also be appropriate. Upon completion of the assessment, a report documenting methods, findings, and recommendations shall be prepared and submitted to the City of Fowler for review, and (if paleontological materials are recovered) a paleontological repository, such as the University of California Museum of Paleontology.

4.8 GREENHOUSE GAS EMISSIONS

Table 4-11: Greenhouse Gas Emissions Impacts

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?	☐	☐	☒	☐

4.8.1 Baseline Conditions

Commonly identified GHG emissions and sources include the following:

Carbon dioxide (CO_2) is an odorless, colorless, natural greenhouse gas and is emitted from natural and anthropogenic sources. Natural sources include the following: decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic out gassing. Anthropogenic sources include the burning of coal, oil, natural gas, and wood.

Methane (CH_4) is a flammable greenhouse gas. A natural source of methane is the anaerobic decay of organic matter. Geological deposits, known as natural gas fields, also contain methane, which is extracted for fuel. Other sources are from landfills, fermentation of manure, and ruminants such as cattle.

Nitrous oxide (N_2O), also known as laughing gas, is a colorless greenhouse gas. Nitrous oxide is produced by microbial processes in soil and water, including those reactions that occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load.

Water vapor is the most abundant, and variable greenhouse gas. It is not considered a pollutant; in the atmosphere, it maintains a climate necessary for life.

Ozone (O_3) is known as a photochemical pollutant and is a greenhouse gas; however, unlike other greenhouse gases, ozone in the troposphere is relatively short-lived and, therefore, is not global in nature. Ozone is not emitted directly into the atmosphere but is formed by a complex series of chemical reactions between volatile organic compounds, nitrogen oxides, and sunlight.

Aerosols are suspensions of particulate matter in a gas emitted into the air through burning biomass (plant material) and fossil fuels. Aerosols can warm the atmosphere by absorbing and emitting heat and can cool the atmosphere by reflecting light.

Chlorofluorocarbons (CFCs) are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the earth's surface). CFCs were first synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. CFCs destroy stratospheric ozone; therefore, their production was stopped as required by the Montreal Protocol in 1987.

Hydrofluorocarbons (HFCs) are synthetic chemicals that are used as a substitute for CFCs. Of all the greenhouse gases, HFCs are one of three groups (the other two are perfluorocarbons and sulfur hexafluoride) with the highest global warming potential. HFCs are human-made for applications such as air conditioners and refrigerants.

Perfluorocarbons (PFCs) have stable molecular structures and do not break down through the chemical processes in the lower atmosphere; therefore, PFCs have long atmospheric lifetimes, between 10,000 and 50,000 years. The two main sources of PFCs are primary aluminum production and semiconductor manufacture.

Sulfur hexafluoride (SF_6) is an inorganic, odorless, colorless, nontoxic, nonflammable gas. It has the highest global warming potential of any gas evaluated. Sulfur hexafluoride is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.

Emissions of GHGs contributing to global climate change are largely attributable to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. About three-quarters of human emissions of CO_2 to the global atmosphere during the past 20 years are due to fossil fuel burning. Atmospheric concentrations of CO_2, CH_4, and N_2O have increased by at least 40 percent, 150 percent, and 20 percent respectively since the year 1750. GHG emissions are typically expressed in carbon dioxide-equivalents (CO_2e), based on the GHG's Global Warming Potential (GWP). The GWP is dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. For example, one ton of CH_4 has the same contribution to the greenhouse effect as approximately 25 tons of CO_2. Therefore, CH_4 is a much more potent GHG than CO_2.

4.8.2 Thresholds

The City of Fowler has not adopted a greenhouse gas emission threshold of significance or prepared a Greenhouse Gas Reduction Plan that can be used as a basis for determining project significance. In accordance with SJVAPCD's CEQA Greenhouse Gas Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects,[9] projects complying with Best Performance Standards (BPS) would be determined to have a less-than-significant impact. The SJVAPCD does not have an adopted threshold for GHGs; however, the South Coast Air Quality Management District (SCAQMD) has set a threshold of 10,000 $MTCO_2e$.[10] This threshold has been applied to this Project. Compliance with BPS and projects generating less than 10,000 $MTCO_2e$ per year would result in less than significant impacts. In addition, project-generated emissions complying with an approved plan or mitigation program would also be determined to have a less-than-significant impact.

4.8.3 Impact Analysis

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

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

[9] (San Joaquin Valley Air Pollution Control District, 2009)
[10] (South Coast Air Quality Management District, 2008)

a-b) Less than Significant Impact. As depicted in Appendix A, construction of the Project would emit approximately 75.62 $MTCO_2e$, and operation of the well would generate approximately 91.23 $MTCO_2e$. These emissions are well below the above threshold of significance and thus impacts would be less than significant.

4.9 HAZARDS AND HAZARDOUS MATERIALS

Table 4-12: Hazards and Hazardous Materials Impacts

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 within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan 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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

4.9.1 Baseline Conditions

Hazardous Materials

The Hazardous Waste and Substances Sites (Cortese) List is a planning document used by the State, local agencies, and developers to comply with CEQA requirements in providing information about the location of hazardous materials release sites. Government Code Section 65962.5 requires the California Environmental Protection Agency to develop at least annually an updated Cortese List. The Department of Toxic Substances Control (DTSC) is responsible for a portion of the information contained in the Cortese List. Other State and local government agencies are required to provide additional hazardous material release information for the Cortese List. DTSC's EnviroStor database provides DTSC's component of Cortese List data (DTSC, 2010). In addition to the EnviroStor database, the State Water Resources Control Board

(SWRCB) Geotracker database provides information on regulated hazardous waste facilities in California, including underground storage tank (UST) cases and non-UST cleanup programs, including Spills-Leaks-Investigations-Cleanups sites, Department of Defense sites, and Land Disposal program. A search of the DTSC EnviroStor database and the SWRCB Geotracker performed on February 28, 2023, determined that there are no known active hazardous waste generators or hazardous material spill sites within the Project site or immediate surrounding vicinity.

Airports

The Fresno Yosemite International Airport is located approximately ten miles north-northwest, and the Selma Municipal Airport is located approximately three miles south-southeast of the Project.

Emergency Response Plan

The Fresno County Office of Emergency Services coordinates the development and maintenance of the Fresno County Operational area Master Plan.

Sensitive Receptors

The Project site is located in an area of residential development.

4.9.2 Impact Analysis

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

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?

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

a-c) Less than Significant Impact. At its nearest point, the Project site is located approximately one mile southwest of Sutter Middle School. Construction of the Project would involve the use of hazardous materials associated with construction equipment, such as diesel fuel, lubricants, and solvents. BMPs to reduce the potential for exposure to waterways would be included as part of the Project during construction and would comply with all Cal/OSHA regulations regarding regular maintenance and inspection of equipment, spill prevention, and spill remediation in order to reduce the potential for incidental release of pollutants or hazardous substances onsite. Furthermore, any potential accidental hazardous materials spills during construction are the responsibility of the contractor to remediate in accordance with industry best management practices and State and county regulations. The operational phase of the Project would not involve the use or transport of hazardous materials. Impacts would be less than significant.

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?

No Impact. The Project does not involve land that is listed as a hazardous materials site pursuant to Government Code Section 65962.5 and is not included on a list compiled by the Department of Toxic

Substances Control. A search of the DTSC EnviroStor database and the SWRCB Geotracker determined that there are no known active hazardous waste generators or known hazardous material spill sites within the Project site. There would be no impact.

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

No Impact. The Project is not located within an airport land use plan or within two miles of an airport. The Fresno Yosemite International Airport is located approximately ten miles north-northwest, and the Selma Municipal Airport is located approximately three miles south-southeast of the Project. Construction and implementation of the Project would not be a safety hazard for people working in the area. There would be no impact.

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

Less than Significant Impact. The Project involves construction of a new municipal groundwater well and associated infrastructure. Construction activities will be temporary in nature and will not cause any road closures that could interfere with any adopted emergency response or evacuation plan. The construction contractor will be required to work with the City and County (public works, police/fire, etc.) if and when roadway diversions are required to ensure that adequate access is maintained for residents and emergency vehicles. Accordingly, any impacts would be less than significant.

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

No Impact. The nearest wildland area, which has a moderate fire risk, according to CAL FIRE[11] is located approximately 15 miles northeast of the Project site. Given the absence of wildlands in the vicinity, implementation of the Project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. There would be no impact.

[11] (CAL FIRE 2022)

4.10 HYDROLOGY AND WATER QUALITY

Table 4-13: Hydrology and Water Quality Impacts

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 ground water 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 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?	☐	☐	☒	☐
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?	☐	☐	☐	☒

4.10.1 **Baseline Conditions**

The San Joaquin River and the Kings River are the two principal drainages within the San Joaquin Valley, and Fowler is generally located approximately 18 miles south of the San Joaquin River and nine miles west of the Kings River.

Fowler lies entirely within the Kings Groundwater Subbasin of the San Joaquin Valley Groundwater Basin.[12] Due to groundwater overdraft and contamination from agricultural chemicals, provision of reliable sources of groundwater in both quantity and quality have been a challenge throughout most of the Central Valley.

Water supply is produced from six groundwater wells located throughout the City and distribution is provided by the Water Division of the City's Public Works Department through a system in which pumps deliver water from beneath the ground to a network of water mains, pipelines, and laterals, which distribute water to residents and businesses. Municipal water is tested monthly to ensure quality. According to the Annual Water Quality Report (2021), the average depth to groundwater is 85 to 95 feet.

Fowler is also a member city of South Kings Groundwater Sustainability Agency (SKGSA). SKGSA comprises five cities and two community services districts. These public entities formed a joint-powers authority agreement in May 2017 to take on the responsibility of sustainable groundwater management in the portion of the Kings Subbasin underlying the GSA's boundary. In 2019, Fowler along with the other members of the SKGSA adopted the SKGSA Groundwater Sustainability Plan (GSP).

The Project site is approximately 0.75 miles south from the nearest 100-year floodplain.

4.10.2 Applicable Regulations

Federal

Clean Water Act

The CWA was enacted in 1972 with the intent of restoring and maintaining the chemical, physical and biological integrity of the Waters of the United States. In 1987 the CWA was amended to establish the National Storm Water Program. The program was established in two phases, incorporating a prioritized approach to stormwater. Phase I of the program required discharges from Municipal Storm Sewer Systems (MS4s) serving populations over 100,000 to be covered under a NPDES permit. Phase II of the program reduced the population threshold to 10,000 and reduced the area of construction disturbance that requires permit coverage from five acres to one acre.

National Pollutant Discharge Elimination System Program

Section 402 of the CWA established the NPDES to control water pollution by regulating point sources that discharge pollutants into Waters of the United States. In California, the USEPA has authorized the SWRCB as the permitting authority to implement the NPDES program. The SWRCB issues two-baseline general permits; one for industrial operations, the other for construction activities (General Construction Permit). Additionally, the NPDES program includes the regulation of stormwater discharges from cities, counties, and other municipalities under Order No. R8-2009-0030 (waste discharge requirements for stormwater) and updated under Order No. 5-01-048 for the Central Valley Region.

Federal Emergency Management Agency

FEMA administers the NFIP, in which participating agencies must satisfy certain mandated floodplain management criteria. The National Flood Insurance Act of 1968 adopted a desired level of protection with an expectation that developments should be protected from floodwater damage of the Intermediate Regional Flood (IRF). The IRF is defined as a flood that has an average frequency of occurrence on the order of once every 100 years, although such a flood may occur in any given year. The 1968 Act made federally subsidized flood insurance available to property owners if their communities participate in the NFIP. A community establishes its eligibility to participate by:

[12] (California Department of Water Resources 2018)

- Adopting and enforcing floodplain management measures to regulate new construction; and
- Ensuring that substantial improvements within Special Flood Hazard Areas (SFHA) are designed to eliminate or minimize future flood damage.

An SFHA is an area within a floodplain having a 1-percent or greater chance of flood occurrence within any given year. SFHAs are delineated on flood hazard boundary maps issued by FEMA. The Flood Disaster Protection Act of 1973 and the National Flood Insurance Reform Act of 1994 make flood insurance mandatory for most properties in SFHAs. Executive Order 11988 (Floodplain Management) addresses floodplain issues related to public safety, conservation, and economics. It generally requires federal agencies constructing, permitting, or funding a project in a floodplain to do the following:

- Avoid incompatible floodplain development;
- Be consistent with the standards and criteria of the NFIP; and
- Restore and preserve natural and beneficial floodplain values.

The National Flood Insurance Program (NFIP) is a program administered by FEMA to provide subsidized flood insurance for property owners in communities. The NFIP established regulations that limit development in flood-prone areas. The boundaries of flood-prone areas are determined by FEMA's Flood Insurance Rates Maps, which provide flood information and identify the flood hazard in the community. In certain high-risk areas, federally regulated or insured lenders require property owners to have flood insurance before issuing a mortgage.

State

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act of 1969, which became Division 7 of the California Water Code (WC), authorized the SWRCB to provide comprehensive protection for California's waters through water allocation and water quality protection. The SWRCB implements the requirement of the CWA Section 303, which states that water quality standards must be established for certain waters through the adoption of water quality control plans under the Porter-Cologne Act. The Porter-Cologne Act established the responsibilities and authorities of the nine RWQCBs, which include preparing water quality plans within the regions, identifying water quality objectives, and instituting waste discharge requirements. Water quality objectives are defined as limits or levels of water quality constituents and characteristics established for reasonable protection of beneficial uses or prevention of nuisance. Beneficial uses consist of all the various ways that water can be used for the benefit of people and wildlife. The Porter-Cologne Act was later amended to provide the authority delegated from the USEPA to issue NPDES permits regulating discharges to Waters of the United States.

Sustainable Groundwater Management Act of 2014

On September 16, 2014, a three-bill legislative package was signed into law, composed of AB 1739, SB 1168, and SB 1319, collectively known as the Sustainable Groundwater Management Act (SGMA). The Governor's signing message states "a central feature of these bills is the recognition that groundwater management in California is best accomplished locally". SGMA provides a framework for sustainable management of groundwater supplies by local authorities, with the potential for state intervention, if necessary, to protect the resource. The Act requires the formation of local Groundwater Sustainability Agency (GSA) that must assess conditions in their local water basins and adopt locally based management plans. The groundwater basin that serves Fresno County has been designated by the Department of Water Resources as high- priority and subject to a condition of critical overdraft.

Local

Fowler Municipal Code

Title 8 – Chapter 8: Floodplain Management – This chapter aims to reduce the risk of public or private loss or damage due to flooding by regulating the activities within flood prone, mudslide, or flood related areas. Restrictions are placed on the alteration of floodplains or streams, diversion of water through the construction of flood barriers, and certain development involving filling or grading which could increase flood damage.

Title 8 – Chapter 14: Grading Permit and Site Improvement Requirements – This chapter establishes the requirement of a permit for any excavation, construction, or earthwork activity, and promotes erosion control procedures to safeguard and protect water resources and related habitats. The goal of this chapter is to reduce the discharge of sediment into drainage and provide sediment management practices by regulating grading, site improvements, and related activities on private and public property.

Central Valley Regional Water Quality Control Board – Tulare Lake Basin Plan

Water quality control plans, or basin plans, contain California's administrative policies and procedures for protecting state waters. Basin plans are required by the WC Section 13240.[13] In addition, CWA Section 303 requires states to adopt water quality standards that "consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses."

Basin plans are adopted and amended by regional water boards under a structured process involving full public participation and state environmental review. Basin plans and amendments do not become effective until approved by the SWRCB. Adoption or revision of surface water standards are subject to the approval of the USEPA before they become accepted standards for the federal program.

The first edition of this Water Quality Control Plan for the Tulare Lake Basin (Basin Plan) was adopted by the California RWQCB, Central Valley Region, on July 25, 1975, and became effective following approval by the SWRCB in August 1975 and the USEPA in June 1976. The most recent revision was adopted in May 2018.

Central Valley Flood Protection Plan

The Central Valley Flood Protection Plan (CVFPP), first adopted in 2012 and updated every five years, was developed to better manage flood risk in the Central Valley using the following strategies:

- Prioritize the state's investment in flood management over the next three decades,
- Promote multi-benefit projects, and
- Integrate and improve ecosystem functions associated with flood risk reduction projects.

Following adoption of the initial CVFPP in 2012, DWR funded development of six Regional Flood Management Plans (RFMP) to address regional flood management goals and challenges. The planning area is not included in an RFMP because the risk of flooding in the region is minimal. Fowler and the surrounding lands are not located within the 100-year, 200-year, or 500-year floodplains.[14]

[13] (California Regional Water Quality Control Board Central Valley Region 2018)
[14] (California Department of Water Resources 2022)

4.10.3 Impact Analysis

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

Less than Significant Impact Construction activities could temporarily increase runoff, erosion, and sedimentation. Construction activities also could result in soil compaction and wind erosion effects that could adversely affect soils and reduce the revegetation potential at construction sites and staging areas.

Three general sources of potential short-term construction-related stormwater pollution associated with the proposed Project are: 1) the handling, storage, and disposal of construction materials containing pollutants; 2) the maintenance and operation of construction equipment; and 3) earth moving activities which, when not controlled, may generate soil erosion and transportation, via storm runoff or mechanical equipment. Generally, routine safety precautions for handling and storing construction materials may effectively mitigate the potential pollution of stormwater by these materials. These same types of common sense, Best Management Practices (BPMs) procedures can be extended to non-hazardous stormwater pollutants such as sawdust and other solid wastes.

Poorly maintained vehicles and heavy equipment leaking fuel, oil, antifreeze, or other fluids on the construction site are also common sources of stormwater pollution and soil contamination. In addition, grading activities can greatly increase erosion processes. Two general strategies are recommended to prevent construction silt from entering local storm drains. First, erosion control procedures should be implemented for those areas that must be exposed. Secondly, the area should be secured to control offsite migration of pollutants. These BMPs are expected to reduce short term construction-related impacts to less than significant.

Once constructed, the Project will provide supplemental water to the City. The water extracted by the new groundwater well will be in compliance with the requirements of the Division of Drinking Waters. There are no water discharge activities associated with the well, once constructed. Therefore, any 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?

Less than Significant Impact. Groundwater is pumped from the Kings River Basin underground aquifer through six groundwater wells operated by the City. As per the Schematic Design Technical Memorandum prepared by Provost and Pritchard[15] for this Project, the six wells can produce an estimated maximum of 5,735 gpm with maximum production of all six existing wells at about 8.2 million gallons per day (mgd). As of the 2020 Census the City had 6,700 residents and pumped an average of 205 gallons per day/per person for all municipal uses, or about 1.4 mgd. That leaves 6.8 mgd remaining well capacity. As a result, adequate groundwater resources are available to meet the long-term water demand of the City; no surface water would need to be imported. The Project, which is expected to produce a minimum desired 1,200 gpm, is consistent with the existing City production well yields in the area. This would not substantially decrease groundwater supplies or interfere with groundwater recharge. Furthermore, the Project in and of itself would not promote or increase population growth in the area and current water demand would not be substantially increased. As a result, the Project would have a less than significant impact.

[15] (Provost and Pritchard 2023)

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?

Less than Significant Impact. The Project includes changes to the existing stormwater drainage pattern of the area through the backfilling of the site and installation of impermeable (concrete/asphalt) surfaces and/or structures associated with the new groundwater well. It is not expected that the increase in impermeable surface will substantially alter the drainage pattern of the area. Standard construction practices and compliance with State and federal regulations, City ordinances and regulations, the California Building Code, and adherence to professional engineering design approved by the City of Fowler will reduce or eliminate potential drainage impacts from the Project. Therefore, any impacts resulting from drainage patterns would be less than significant.

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

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

d-e) No Impact. The proposed Project site is not within any special flood hazard areas, or other areas of flood hazard (as identified by current FEMA Flood Insurance Rate Map). In addition, the Project does not include any housing or structures that would be subject to flooding either from a watercourse or from dam inundation. There are no bodies of water near the site that would create a potential risk of hazards from seiche, tsunami or mudflow. The Project would not conflict with any water quality control plans or sustainable groundwater management plan. There would be no impacts associated with Project implementation.

Figure 4-2: FEMA

4.11 LAND USE AND PLANNING

Table 4-14: Land Use and Planning Impacts

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

4.11.1 Baseline Conditions

The City of Fowler 2025 General Plan Land Use Diagram designates the Project site as Low Density Residential (0.0-3.6 du/ac). The Project is identified within the R-1-10 (One Family Residential, 10,000 square feet minimum parcel size) Zone District. Lands adjacent to the site are developed with single-family residences to the east, west, and north, and undeveloped agriculture land that is zoned as AE-20 (Exclusive Agriculture) by Fresno County to the south. General Plan land use designations and Zone Districts of the Project site and surrounding areas are illustrated in Figure 2-5 and Figure 2-6.

4.11.2 Impact Analysis

a) Would the project physically divide an established community?

No Impact. The physical division of an established community typically refers to the construction of a physical feature (such as a wall, interstate highway, or railroad tracks) or the removal of a means of access (such as a local road or bridge) that would impair mobility. The Project does not include any component that would divide an established community; the Project site is an existing vacant parcel that was previously utilized as a ponding basin. The Project itself will not alter the boundaries of the site and would not divide an established community. There would be no impact.

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

No Impact. The Project Site is within an area designated by the Fowler General Plan as Low Density Residential. The Fowler General Plan contains goals and policies to provide services to meet the needs of the existing community and planned growth, and since the Project constitutes improvements to existing water facilities, implementation of the Project would not conflict with any applicable land use plan, policy, or regulation. There would be no impact.

4.12 MINERAL RESOURCES

Table 4-15: Mineral Resources Impacts

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?	☐	☐	☐	☒

4.12.1 Baseline Conditions

The City is located within the Fresno production-consumption (PC) region, which includes parts of Madera and Fresno Counties. The California Geological Survey (CGS), previously known as California Department of Conservation Division of Mines and Geology (DMG), has analyzed this region for the presence of aggregate resources in a 1988 mineral land classification report[16] and a subsequent 1999 update.[17] In each of these reports, CGS has classified the Fresno PC region according to the presence or absence of significant aggregate deposits. The land classification is presented in the form of Mineral Resource Zones (MRZs). MRZ-1 represents areas where information indicates that there are no significant aggregate deposits. MRZ-2 represents areas where adequate information indicates that significant aggregate deposits ae present or where it is judged that a high likelihood exists for their presence. MRZ-3 represents areas containing mineral deposits the significance of which cannot be evaluated from available data. In both CGS reports, the Fowler area is classified as MRZ-3. All areas known to contain significant aggregate deposits within the Fresno PC region are located along the Kings River floodplain and along the San Joaquin River.

Aggregate and petroleum are considered the County's most significant extractive mineral resources. No active or inactive mines are mapped in the vicinity of the Project site according to the California Office of Mine Reclamation Mines Online website.[18]

4.12.2 Impact Analysis

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?

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?

[16] (California Division of Mines and Geology, 1988)
[17] (California Division of Mines and Geology , 1999)
[18] (California Department of Conservation 2022)

a-b) No Impact. According to the CGS's Aggregate Sustainability Map,[19] the Project is not within the vicinity of a site being used for aggregate production. The nearest aggregate production site is the Carmelita Mine located within the Kings River floodplain, approximately 13 miles northeast of the Project. In addition, California's Geologic Energy Management Division (CalGEM) has no record of active or inactive oil or gas wells or petroleum resources on the Project site or in the vicinity.[20] The Project site lies within a large region that has been classified by CGS as MRZ-3, representing an area containing mineral deposits the significance of which cannot be evaluated from available data. However, given the relatively small footprint of the proposed Project and the amount of existing development in the immediate area, it is highly unlikely that any surface mining or mineral recovery operation could feasibly take place in these areas. Therefore, implementation of the Project would not result in the loss of availability of a known mineral resource since no known mineral resources occur in this area. There would be no impact.

[19] (California Geologic Survey , 2018)
[20] (California Geologic Energy Management Division 2023)

4.13 NOISE

Table 4-16: Noise Impacts

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 ground borne vibration or ground borne noise levels?	☐	☐	☒	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

4.13.1 Baseline Conditions

Noise is most often described as unwanted sound. Although sound can be easily measured, the perception of noise and the physical response to sound complicate the analysis of its impact on people. The City of Fowler is impacted by a multitude of noise sources. Principal noise sources include traffic on roadways, agricultural noise, and industrial noise. Mobile sources of noise, especially cars and trucks, are the most common and significant sources of noise in most communities, and they are predominant sources of noise in the City. The Project is located in an area consisting of residential and agricultural uses. The predominant noise sources in the Project site include traffic on local roadways and noise associated with active agriculture south of the Project site. Sensitive receptors (residences) abut the site to the west, east and north.

4.13.2 Applicable Regulations

City of Fowler Noise Ordinance: In addition to General Plan requirements, the City has established a Noise Ordinance in its municipal code. Noise ordinances establish noise limits for which penalties may be imposed or enforcement action may be taken. Therefore, while General Plan limits are to be taken into consideration during the development of a project and may or may not be strictly applied depending on the particular circumstances of the project, a noise ordinance generally must not be exceeded. In preparing a noise element, a city or county must identify local noise sources and analyze and quantify, to the extent practicable, current and projected noise levels for various sources, including highways and freeways; passenger and freight railroad operations; ground rapid transit systems; commercial, general, and military aviation and airport operations; and other ground stationary noise sources.

The Project is subject to the City of Fowler Noise Ordinance, which is covered in Chapter 21, Article 6 of the Municipal Code. It prohibits continued loud noise or noise which disturbs others by placing time constraints on noise producing activities and volume limits on noise amplification devices.

Construction is specifically addressed in Chapter 21, Article 6, Section 5-21.601(d):

The erection (including excavating), demolition, alteration or repair of any building other than between the hours of 7:00 a.m. and 8:00 p.m., except by special permit issued by the City Manager, Building Official, or City Engineer upon a determination that the public health and safety will not be impaired thereby. Nothing in this section shall be deemed to alter construction hours beyond those set forth in the conditions of approval for a development project.

As well construction can occur for long hours and sometimes multiple days, the City will obtain a special permit pursuant to Chapter 21, Article 6, Section 5-21.601(d), to allow for construction outside of the hours stated in the City of Fowler Noise Ordinance.

Furthermore, noise level standards by receiving land use category have been established by the City of Fowler Municipal Code, as illustrated in Table 4-17, below.

Table 4-17: Noise Level Standards

Receiving Land Use Category	Time Period	Noise Level (dBA)
Residential	10:00 p.m.—7:00 a.m.	50
	7:00 a.m.—10:00 p.m.	60
Public Uses *	10:00 p.m.—7:00 a.m.	55
	7:00 a.m.—10:00 p.m.	60
Commercial	10:00 p.m.—7:00 a.m.	60
	7:00 a.m.—10:00 p.m.	65
Industrial	Any time	70

** Public uses include schools, libraries, hospitals, churches, and parks.*

4.13.3 Impact Analysis

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?

Less than Significant Impact. The Project involves the construction of a groundwater well and associated infrastructure in southwest Fowler. The site is located in an area that is dominated by urban residential use and agriculture. The City of Fowler General Plan and the City of Fowler municipal code establish a range of 50 dBA to 60 dBA as the normally acceptable exterior noise criteria for urban residential and noise sensitive receptors or public uses.

Activities associated with construction would result in temporary elevated noise levels, with maximum construction noise levels ranging between 74 dBA to 89 dBA at 50 feet distance. Typical construction equipment would include backhoes, tractors, air compressors, scrapers, drills, concrete mixers, and numerous other miscellaneous tools and equipment. Construction of the Project would result in temporary increased noise levels in the immediate vicinity.

As illustrated in Table 4-18 below, typical construction noise levels could range between 74 to 89 dBA at a distance of 50 feet from the source, according to criteria from the Federal Transit Administration (FTA).[21] Implementation of feasible noise control measures, such as the installation of mufflers or engine casing, would result in noise reduction of 5-10 dBA per source.

Generally, construction will occur between the hours of 7am and 5pm, Monday through Friday, excluding holidays. It is anticipated that well drilling and well construction will take between 12 to 16 weeks and during drilling activity 24/7 operation will be required at various points. A special permit, pursuant to Chapter 21, Article 6, Section 5-21.601 of the Fowler Noise Ordinance, would be obtained by the City to allow for the continuous drilling.

Additionally, as part of the Project a sound wall would be put up during well drilling activities to help further reduce the noise impacts to the nearby residences.

Because of these project features and the fact that construction noise will be temporary in nature, impacts would be less than significant.

Table 4-18: Typical Construction Noise Levels

Equipment	Typical Noise Level (dBA) 50 feet from Source
Roller	74
Concrete Vibrator, Pump, Saw	76
Backhoe	80
Generator, Air Compressor	81
Compactor, concrete pump	82
Crane, Mobile	83
Dozer, Grader, Loader, Concrete Mixer, Impact Wrench, Pneumatic Tool	85
Truck, Jack Hammer	88
Paver, Scraper	89
Drill Rig	85

[21] (Federal Highway Administration 2017)

b) Would the project result in generation of excessive ground borne vibration or ground borne noise levels?

Less than Significant Impact. Typical outdoor sources of perceptible ground borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. Construction vibrations can be transient, random, or continuous. Construction associated with the Project is earthmoving activities associated installing pipelines, installing equipment and well drilling. Well drilling activities would create vibrations and would be continuous during various points of the drilling process. Construction noise and vibration would be temporary. As part of the Project, during the well drilling process, a sound wall will be put up to help reduce any impacts from ground borne noise and vibration. The approximate threshold of vibration perception is 65 VdB, while 85 VdB is the vibration acceptable only if there are an infrequent number of events per day.[22] Operation is not anticipated to create significant noise or vibration at the site. The site will be designed similar to other urban well sites within the City and would not exceed the FTA thresholds for the nearest sensitive receptors. Therefore, impacts would be less than significant.

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The Project site is not located within an airport land use plan or within two miles of an airport. The Fresno Yosemite International Airport is located approximately ten miles north-northwest and the Selma Municipal Airport is located approximately three miles south-southeast of the Project. Furthermore, the Project does not involve the development of habitable structures or require the presence of permanent staff onsite. There would be no impact.

[22] (US Department of Transportaion 2006)

4.14 POPULATION AND HOUSING

Table 4-19: Population and Housing Impacts

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 an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

4.14.1 Baseline Conditions

The City of Fowler's water system is operated by the City's Public Works Department, serving a current population of 6,700 people. [23] The City serves residential, commercial and industrial users through 2,160 service connections.

According to the City of Fowler 2040 General Plan, the City is expected to maintain a 2-3% growth rate over the planning period. This would be consistent with overall Fresno County growth. In 2010, Fowler had a population of 5,570 people while in In 2019, the population in Fowler had increased to 6,605 people. These numbers reflect that over this eight-year span Fowler grew by 18.6 percent (2.3 percent annual growth rate). In 2019, Fowler contained 2,061 dwelling units, resulting in a persons per dwelling unit count of 3.20.[24]

4.14.2 Impact Analysis

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

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

a-b) No Impact. The Project involves construction of a new groundwater well on a vacant site which was most recently used as stormwater retention pond. The Project would not encourage population growth directly or indirectly beyond that previously analyzed by the City's General Plan. No housing or habitable structures would be built, nor will any be removed. Project implementation would not result in displacement of people or existing housing. Therefore, there would be no impact.

[23] (United States Census Bureau 2022)
[24] (City of Fowler 2023)

4.15 PUBLIC SERVICES

Table 4-20: Public Services

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

4.15.1 Baseline Conditions

Fire Protection: The City of Fowler contracts with the Fresno County Fire Protection District for primary fire protection within the city limits. The nearest Fresno County Fire Protection District station, Fresno County Fire Station 82 is located approximately 4.9 miles northeast of the Project site.

Police Protection: The Fowler Police Department, located 0.85 miles northeast of the Project site, provides 24-hour policing services within the city limits.

Schools: Sutter Middle School is the nearest school to the Project site, located approximately one mile northeast.

The Project site is also in the district boundary of the Fowler Unified School District which includes three elementary schools, one middle school, one high school, and Fowler Academy Continuation School, which comprises grades 7 through 12.

Parks: The City has four designated City Parks, all of which are managed by the City's Department of Recreation. Donny Wright Park, the newest and largest park in the City, is located approximately 500 feet north of the Project site. The park covers an area of approximately 6.0 acres and includes an expanse of irrigated lawn and trails for recreation.

Library: The Fowler branch of the Fresno County Public Library is located 0.68 miles northeast of the Project site.

Other Public Facilities: No impacts are anticipated to other public facilities.

4.15.2 Impact Analysis

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 any of the public services:

i. Fire Protection:

ii. Police Protection:

iii. Schools:

iv. Parks:

v. Other public facilities:

No Impact. The Project does not include any features or facilities that would require additional fire protection resources or enhanced levels of police protection. The Project does not have the potential to directly increase or decrease the area's population and would therefore not result in impacts to schools, parks, or other public facilities. Therefore, there would be no impacts.

4.16 RECREATION

Table 4-21: Recreation Impacts

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

4.16.1 Baseline Conditions

There are currently four City Parks in Fowler, all of which are administered by the Department of Parks and Recreation. Panzak Park covers an area of approximately 2.5 acres and includes a covered picnic area, large shade trees, playground equipment, and tennis courts. Donny Wright Park covers an area of approximately 6.0 acres and includes an expanse of irrigated lawn and trails for recreation. Margaret Cowings Park is an approximate 0.05-acre pocket park comprised of irrigated lawn and shade trees near the corner of Merced Street and Ninth Street. Also considered a City Park, the Fowler Veteran's Monument covers an area of approximately 0.10 acres and includes benches on paved surfaces, a scenic fountain, several flag poles, ornamental hedges, and rose gardens. There are no State or regional parks within the Project area.

4.16.2 Impact Analysis

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?

a-b) No Impact. The Project does not include the construction of residential uses and would not directly or indirectly induce population growth. Therefore, the proposed Project would not cause physical deterioration of existing recreational facilities from increased usage or result in the need for new or expanded recreational facilities. The Project would have no impact to existing parks or recreation facilities.

4.17 TRANSPORTATION

Table 4-22: Transportation Impacts

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?	☐	☐	☒	☐

4.17.1 Baseline Conditions

The Project site is located in the southwest area of the City of Fowler within Fresno County. The City is bisected by SR 99, Golden State Boulevard, and an active railroad used for freight trains. All three of these major transportation routes run northwest-southeast, parallel to each other.

4.17.2 Impact Analysis

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

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

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)?

d) Would the project result in inadequate emergency access?

a-d) Less than Significant Impact. The Project includes the construction and operation of a new groundwater well and associated infrastructure to supplement the City's water supplies. Construction activities would be temporary in nature, lasting approximately 17 months and would not cause any road closures that could interfere with any adopted emergency response or evacuation plan. The construction contractor will be required to work with the City and County (public works, police/fire, etc.) if roadway diversions are required to ensure that adequate access is maintained for residents and emergency vehicles. Once installed, the new water well would not generate significant additional traffic trips per day. The only operational trips associated with the Project would be for routine maintenance or inspection. This would include two trips a week (Monday & Fridays) to get gallons pumped readings at each of the well sites and an additional trip once a month for cleaning and routine maintenance. There are no components of the Project that would increase hazards due to a geometric design feature or an

incompatible use. The Project would not conflict with a circulation program plan, ordinance, or policy addressing the circulation system and therefore impacts would be less than significant.

4.18 TRIBAL CULTURAL RESOURCES

Table 4-23: Tribal Cultural Resources Impacts

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

4.18.1 Baseline Conditions

Penutian-speaking Yokuts tribal groups occupied the southern San Joaquin Valley region and much of the nearby Sierra Nevada. For a variety of historical reasons, existing research information emphasizes the central Yokuts tribes who occupied both the valley and particularly the foothills of the Sierra. The northernmost tribes suffered from the influx of Euro-Americans during the Gold Rush and their populations were in substantial decline by the time ethnographic studies began in the early twentieth century. In contrast, the southernmost tribes were partially removed by the Spanish to missions and eventually absorbed into multi-tribal communities on the Sebastian Indian Reservation (on Tejon Ranch), and later the Tule River Reservation and Santa Rosa Rancheria to the north, as well as other reservations in the foothills and Sierras. The result is an unfortunate scarcity of ethnographic detail on valley tribes, especially in relation to the rich information collected from the central foothills tribes where native speakers of the Yokuts dialects are still found. Regardless, the general details of indigenous life-ways were similar across the broad expanse of Yokuts territory, particularly in terms of environmentally influenced subsistence and adaptation and with regard to religion and belief, which were similar everywhere. (See Appendix C:)

Although population estimates vary and population size was greatly affected by the introduction of Euro-American diseases and social disruption, the Yokuts were one of the largest, most successful groups in Native California. It is estimated that the Yokuts region contained 27 percent of the aboriginal population in the state at the time of contact; other estimates are even higher. Many Yokut descendants continue to live in Fresno County, either on tribal reservations, or in local towns and communities. (Appendix C)

Records Search

An archival records search was conducted at the California State University, Bakersfield, Southern San Joaquin Valley Information Center (SSJVIC), by SSJVIC staff members on February 6, 2023, to determine: (i) if prehistoric or historical cultural resources had previously been recorded within the APE; (ii) if the APE had been systematically surveyed by archaeologists prior to the initiation of this field study; and/or (iii) whether the region of the Project was known to contain archaeological sites and to thereby be archaeologically sensitive. (Appendix C)

According to the records search results, no previous studies have been conducted in the Project area, and no resources of any kind are known to exist within it. (Appendix C)

Native American Outreach

In February 2023, ASM contacted the NAHC in Sacramento. ASM provided NAHC a brief description of the project and a map showing its location and requested that the NAHC perform a search of the Sacred Lands File to determine if any Native American resources have been recorded in the immediate study area. The results were negative. Provost & Pritchard also requested NAHC provide a current list of local Native American contacts for the Project APE. The tribes identified by NAHC were contacted in writing via US mail with a letter dated February 24, 2023, informing them about the Project. Follow up emails were sent March 15 and March 27, 2023. One response was received by the Traditional Choinumni Tribe stating that they have no knowledge of cultural resources, areas, or concerns within the project area. No additional correspondence was received. (Appendix C)

The results of the SLF search were negative for the presence of tribal cultural resources.

The City of Fowler has received written correspondence from the Santa Rosa Rancheria Tachi Yokut Tribe pursuant to Public Resources Code Section 21080.3.1 requesting notification of proposed project. On April 20, 2023 an AB 52 letter was mailed to the Tribe. No response has been received from the Tribe.

4.18.2 Applicable Regulations

Public Resources Code Section 21080.3.1, et seq. (Codification of AB 52, 2013-14)

Public Resources Code Section 21080.3.1, et seq. (codification of AB 52, 2013-14) requires that a lead agency, within 14 days of determining that it would undertake a project, must notify in writing any California Native American Tribe traditionally and culturally affiliated with the geographic area of the project if that Tribe has previously requested notification about projects in that geographic area. The notice must briefly describe the project and inquire whether the Tribe wishes to initiate request formal consultation. Tribes have 30 days from receipt of notification to request formal consultation. The lead agency then has 30 days to initiate the consultation, which then continues until the parties come to an agreement regarding necessary mitigation or agree that no mitigation is needed, or one or both parties determine that negotiation occurred in good faith, but no agreement would be made. The City, as a public lead agency, has received a formal request for notification from the Santa Rosa Rancheria Tachi Yokut Tribe. As described above, the Tribe was notified in writing on April 20, 2023. No response has been received. In

addition, no comments or concerns were raised about the areas by the contacted tribes during general tribal consultation. (Appendix C)

4.18.3 Impact Assessment

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

i. Listed or eligible for listing in the California Register of Historical Resources, or in the 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.

Less than Significant Impact with Mitigation Incorporated. A search of the NAHC Sacred Lands File was completed for the APE. No tribal cultural resources were identified. Additionally, a records search was conducted at the Southern San Joaquin Valley Archaeological Information Center, California State University, Bakersfield. This search also determined that tribal cultural resources were not present on-site. As stated above, of the tribes notified by mail of the Project, only one response was received, and it did not identify any areas of concern.

There is little chance the Project would cause a substantial adverse change to the significance of a tribal cultural resource as defined. Mitigation Measures **CUL-1 and CUL-2,** described in Section 4.5.3 are recommended in the event cultural materials or human remains are unearthed during excavation or construction. Implementation of mitigation measures outlined above would reduce impacts to tribal cultural resources to less than significant impacts.

4.18.4 Mitigation

See **CUL-1** and **CUL-2** outlined above in Section 4.5.3

4.19 UTILITIES AND SERVICE SYSTEMS

Table 4-24: Utilities and Service Systems Impacts

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 could 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?	☐	☐	☒	☐
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 statutes and regulations related to solid waste?	☐	☐	☒	☐

4.19.1 Baseline Conditions

The City's sanitary sewer service is provided by the Selma-Kingsburg-Fowler County Sanitation District (SKF CSD) and solid waste services are provided by Waste Management, Inc. SKF CSD operates wastewater treatment and disposal facilities on a 550-acre site located approximately 9.5 miles southeast of the Project site. Solid waste within Fresno County is transferred to the American Avenue Landfill in Kerman, CA, approximately 25 miles northwest of the Project site.

The City lies entirely within the Kings Groundwater Subbasin of the San Joaquin Valley Groundwater Basin. Water supply is produced from six groundwater wells located throughout the City and distribution is provided by the Water Division of the City's Public Works Department through a system in which pumps deliver water from beneath the ground to a network of water mains, pipelines and laterals, which distribute water to residents and businesses. Municipal water is tested to ensure quality, according to the City's Annual Water Quality Report the average depth to groundwater is 85 to 95 feet, and currently five of the six existing wells produce drinking water of good quality that does not require treatment.

4.19.2 Impact Analysis

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 could cause significant environmental effects?

No Impact. The proposed Project would not exceed wastewater treatment requirements or require new facilities. The Project entails the construction of a new groundwater well and associated infrastructure, which will not generate wastewater or require expansion of existing facilities. There would be no 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?

Less than Significant Impact. The Project would consist of the construction of a new groundwater well in the City of Fowler. The City currently has six active wells that provide drinking water for the community. Municipal water testing has revealed the presence of TCP at 5 out of 6 supply wells. Wells 4, 5A, 6, and 8A have experienced individual TCP detections at, or greater than the MCL value but have not yet violated the standard, which is based on a running annual average of measurements. Well 7 has TCP levels greater than the allowable standard and the City is in the process of designing a water treatment facility to remove TCP. This treatment facility is located at another site within the City of Fowler. The Project does leave room for future water treatment equipment if needed, but at this time it is not being installed. The new well would supplement the active wells as well as provide an additional source of clean drinking water for the community. Additionally, though the proposed well is expected to add to the City's available water supply, the well would not increase current water demand. Sufficient water supplies are available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years. Impacts would be less than significant.

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?

No Impact. The Project would include the construction and operation of a groundwater well in the City of Fowler. The construction of the groundwater well to provide safe drinking water to Fowler residents will not increase demand on wastewater treatment facilities or services. Therefore, no impact would occur.

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?

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

d-e) Less than Significant Impact. Project construction would generate minimal amounts of solid waste. Apart from occasional routine maintenance, Project operation will be un-manned and therefore would not generate waste on an ongoing basis. The Project would comply with all federal, State, and local statutes and regulations related to solid waste during construction. Any impact would be less than significant.

4.20 WILDFIRE

Table 4-25: Wildfire Impacts

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 uncontrollable spread of 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?	☐	☐	☐	☒

4.20.1 Baseline Conditions

The Project is located in the City of Fowler in the southwest area of the City within Fresno County. The site is in a flat urbanized area of the Central San Joaquin Valley. It is in an urbanized area and would add a new groundwater well to an area that has housing in the vicinity. The Project site would be served by the Fresno County Fire Protection District, and it is not located in or near a State Responsibility Area. Additionally, the Project is not on or near land classified as a very high fire hazard severity zone. The nearest very high fire hazard severity zone is located approximately 25 miles northeast.

4.20.2 Impact Analysis

a) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

b) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, 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?

c) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, 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?

d) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, 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?

a-d) No Impact. The Project is not located in or near State Responsibility Areas or lands classified as very high fire hazard severity zones. The nearest State Responsibility Area (SRA) is 14 miles to the northeast of the Project site. The nearest Federal Responsibility Area (FRA) is 20.4 miles to the northeast of the Project site.[25] Additionally, the site is approximately 25 miles from the nearest Very High classification of Fire Hazard Severity Zone. There would be no impact.

[25] (CAL FIRE 2022)

4.21 CEQA MANDATORY FINDINGS OF SIGNIFICANCE

Table 4-26: CEQA Mandatory Findings of Significance

Does the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☒	☐	☐
c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

4.21.1 Statement of Findings

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?

Less than Significant with Mitigation Incorporated. The analysis conducted in this Initial Study/Mitigated Negative Declaration results in a determination that the Project, with incorporation of mitigation measures, will have a less than significant effect on the environment. The potential for impacts to biological resources, cultural resources, and tribal cultural resources from the implementation of the proposed Project will be less than significant with the incorporation of the mitigation measures discussed in Chapter 5. Accordingly, the Project will involve no potential for significant impacts through the degradation of the quality of the environment, the reduction of habitat or population of fish or wildlife, including endangered plants or animals, the elimination of a plant or animal community or example of a major period 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)?

Less Than Significant Impact with Mitigation Incorporated. CEQA Guidelines Section 15064(i) states that a Lead Agency shall consider whether the cumulative impact of a project is significant and whether the effects of the Project are cumulatively considerable. The assessment of the significance of the cumulative effects of a project must, therefore, be conducted in connection with the effects of past projects, other current projects, and probable future projects. The Project would consist of the construction of a new groundwater well and associated infrastructure for additional water supply to provide drinking water to residents. No additional roads would be constructed as a result of the Project, nor would any additional public services be required. The Project is intended to supplement city water supplies and would not result in direct or indirect population growth beyond what is planned for in the General Plan. Therefore, implementation of the Project would not result in significant cumulative impacts and all potential impacts would be reduced to less than significant through the implementation of mitigation measures and basic regulatory requirements incorporated into future Project design.

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

Less than Significant Impact. The Project would include the construction of a new groundwater well and associated infrastructure. The Project in and of itself would not create a significant hazard to the public or the environment. Construction related air quality exposure impacts could occur as a result of project construction. However, implementation of basic regulatory requirements identified in this IS/MND would ensure that impact is less than significant. Therefore, the Project would not have any direct or indirect adverse impact on humans. This impact would be less than significant.

CHAPTER 5 MITIGATION, MONITORING, AND REPORTING PROGRAM

This Mitigation Monitoring and Reporting Program (MMRP) has been formulated based upon the findings of the Initial Study/Mitigated Negative Declaration (IS/MND) for the Project in the City of Fowler. The MMRP lists mitigation measures recommended in the IS/MND for the Project and identifies monitoring and reporting requirements.

Table 5-1: Mitigation, Monitoring, and Reporting Program presents the mitigation measures identified for the Project. Each mitigation measure is numbered with a symbol indicating the topical section to which it pertains, a hyphen, and the impact number. For example, AIR-2 would be the second mitigation measure identified in the Air Quality analysis of the IS/MND.

The first column of ***Table 5-1: Mitigation, Monitoring, and Reporting*** Program identifies the mitigation measure. The second column, entitled "When Monitoring is to Occur," identifies the time the mitigation measure should be initiated. The third column, "Frequency of Monitoring," identifies the frequency of the monitoring of the mitigation measure. The fourth column, "Agency Responsible for Monitoring," names the party ultimately responsible for ensuring that the mitigation measure is implemented. The last columns will be used by the Lead and Responsible Agencies to ensure that individual mitigation measures have been complied with and monitored.

Table 5-1: Mitigation, Monitoring, and Reporting Program

Mitigation, Monitoring, and Reporting Program						
Item	Mitigation Measure	When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance
Biological Resources						
BIO-1	**Avoidance:** The Project's construction activities would occur, if feasible between September 16 and January 31 (outside of nesting bird season) in an effort to avoid impacts to nesting birds.	Prior to the start of construction activities	7 days prior to the start of construction	City of Fowler	Contractor's construction schedule	
BIO-2	**Pre-construction Surveys**: If activities must occur within nesting bird season (February 1 to September 15), a qualified biologist would conduct pre-construction surveys for Swainson's hawk nests onsite and within a 0.5-mile radius. This survey would be conducted in accordance with the *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (Swainson's Hawk Technical Advisory Committee, 2000) or current guidance. The pre-construction survey would also provide a presence/absence survey for all other nesting birds within the APE and an additional 50 feet, no more than 7 days prior to the start of construction. All raptor nests would be considered "active" upon the nest-building stage.	Prior to the start of construction activities	7 days prior to the start of construction	City of Fowler	Qualified Biologist report of pre-construction survey	
BIO-3	**Establish Buffers:** On discovery of any active nests or breeding colonies near work areas, the biologist would determine appropriate construction setback distances based on applicable CDFW and/or USFWS guidelines and/or the biology of the species in question. Construction buffers would be identified with flagging, fencing, or other easily visible means, and would be maintained until the biologist has determined that the nestlings have fledged.	Prior to the start of construction activities	7 days prior to the start of construction	City of Fowler	Qualified Biologist report of pre-construction survey	
BIO-4	**ITP:** In the event an active Swainson's Hawk nest or other nest is detected during surveys and cannot be avoided, consultation with CDFW would be warranted to discuss how to implement the Project and avoid take. If take cannot be avoided, take	Prior to the start of construction activities	7 days prior to the start of construction	City of Fowler	Acquisition of permit	

Mitigation, Monitoring, and Reporting Program						
Item	Mitigation Measure	When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance
	authorization through the acquisition of an ITP pursuant to Fish and Game Code section 2081, subdivision (b) is necessary to comply with CESA.					
			Cultural Resources			
CUL-1	Should archeological remains or artifacts be unearthed during any stage of project activities, work in the area of the discovery shall cease until the area is evaluated by a qualified archaeologist. If mitigation is warranted, the project proponent shall abide by recommendations of the archaeologist.	During construction activities	Daily	City of Fowler	City of Fowler with assistance of a qualified archaeologist	
CUL-2	In the event that human remains are discovered on the Project site, the Fresno County Coroner must be notified of that discovery (California Health an d Safety Code, Section 7050.5) and all activities in the immediate area if the find or in any nearby area reasonably suspected of overlie adjacent human remains must cease until appropriate and lawful measures have been implemented. If the Coroner determines that the remains are not recent, but rather of Native American origin, the Coroner shall notify the NAHC in Sacramento within 24 hours to permit the NAHC to determine the most likely descendent of the deceased Native American.	During construction activities	Daily	City of Fowler	City of Fowler with assistance of County Coroner	
			Geology and Soils			
GEO-1	Should a unique paleontological resource, site, or unique geological feature be unearthed during any stage of Project activities, work in the area of discovery will cease until the area is evaluated by a qualified geologist and/or paleontologist. If discoveries are uncovered, the Project proponent will abide by recommendations of the geologist or paleontologist.	During construction activities	Daily	City of Fowler	City of Fowler with assistance of a qualified geologist and/or paleontologist	

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Appendix A: CalEEMod Output Files

Fowler Well 9 Custom Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

1.2. Land Use Types

2. Emissions Summary

2.2. Construction Emissions by Year, Unmitigated

2.5. Operations Emissions by Sector, Unmitigated

3. Construction Emissions Details

3.1. Demolition (2023) - Unmitigated

3.3. Site Preparation (2023) - Unmitigated

3.5. Grading (2023) - Unmitigated

3.7. Building Construction (2023) - Unmitigated

3.9. Paving (2023) - Unmitigated

3.11. Architectural Coating (2023) - Unmitigated

4. Operations Emissions Details

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

4.3. Area Emissions by Source

4.3.1. Unmitigated

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.9. Operational Mobile Sources

5.9.1. Unmitigated

5.10. Operational Area Sources

5.10.2. Architectural Coatings

5.11. Operational Energy Consumption

5.11.1. Unmitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Fowler Well 9
Construction Start Date	1/1/2023
Operational Year	2023
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.70
Precipitation (days)	25.4
Location	36.62033636021606, -119.68639615691399
County	Fresno
City	Fowler
Air District	San Joaquin Valley APCD
Air Basin	San Joaquin Valley
TAZ	2536
EDFZ	5
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.21

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

General Light Industry	3.00	1000sqft	0.51	3,000	0.00	0.00	—	—

2. Emissions Summary

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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.73	2.93	5.94	7.06	0.01	0.28	0.10	0.31	0.26	0.02	0.26	—	1,319	1,319	0.05	0.01	0.48	1,324
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	1.56	1.31	12.6	11.6	0.02	0.60	5.35	5.95	0.55	2.58	3.13	—	1,755	1,755	0.07	0.02	0.01	1,762
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.23	0.23	1.93	2.28	< 0.005	0.09	0.04	0.13	0.08	0.02	0.10	—	413	413	0.02	< 0.005	0.01	414
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.04	0.04	0.35	0.42	< 0.005	0.02	0.01	0.02	0.02	< 0.005	0.02	—	68.3	68.3	< 0.005	< 0.005	< 0.005	68.6

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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	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	0.00	0.00	0.00
Area	—	0.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Energy	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	465	465	0.07	0.01	—	469
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	2.00	0.00	2.00	0.20	0.00	—	7.01
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.78	0.78
Off-Road	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
Stationary	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
Total	< 0.005	0.07	0.03	0.03	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	2.00	465	467	0.27	0.01	0.78	477
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	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	0.00	0.00	0.00
Area	—	0.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	465	465	0.07	0.01	—	469
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	2.00	0.00	2.00	0.20	0.00	—	7.01
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.78	0.78
Off-Road	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
Stationary	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
Total	< 0.005	0.07	0.03	0.03	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	2.00	465	467	0.27	0.01	0.78	477
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.18	0.18	< 0.005	< 0.005	< 0.005	0.19
Area	—	0.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	465	465	0.07	0.01	—	469
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	2.00	0.00	2.00	0.20	0.00	—	7.01
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.78	0.78

Off-Road	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
Stationary	0.05	0.04	0.19	0.17	< 0.005	0.01	—	0.01	0.01	—	0.01	—	23.0	23.0	< 0.005	< 0.005	—	23.1
Total	0.05	0.12	0.22	0.20	< 0.005	0.02	< 0.005	0.02	0.02	< 0.005	0.02	2.00	488	490	0.27	0.01	0.78	500
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.03	0.03	< 0.005	< 0.005	< 0.005	0.03
Area	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	76.9	76.9	0.01	< 0.005	—	77.6
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.33	0.00	0.33	0.03	0.00	—	1.16
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13	0.13
Off-Road	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
Stationary	0.01	0.01	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.81	3.81	< 0.005	< 0.005	—	3.82
Total	0.01	0.02	0.04	0.04	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.33	80.7	81.1	0.05	< 0.005	0.13	82.8

3. Construction Emissions Details

3.1. Demolition (2023) - 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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.65	0.54	4.99	5.91	0.01	0.21	—	0.21	0.20	—	0.20	—	852	852	0.03	0.01	—	855

Demolitio	—	—	—	—	—	—	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	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.14	0.16	< 0.005	0.01	—	0.01	0.01	—	0.01	—	23.3	23.3	< 0.005	< 0.005	—	23.4
Demolitio n	—	—	—	—	—	—	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	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.87	3.87	< 0.005	< 0.005	—	3.88
Demolitio n	—	—	—	—	—	—	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	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.03	0.36	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	56.1	56.1	< 0.005	< 0.005	0.01	57.0
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	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	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	—	1.59	1.59	< 0.005	< 0.005	< 0.005	1.62
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	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	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	—	0.26	0.26	< 0.005	< 0.005	< 0.005	0.27
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	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	0.00	0.00	0.00

3.3. Site Preparation (2023) - 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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.64	0.54	5.02	5.57	0.01	0.27	—	0.27	0.25	—	0.25	—	858	858	0.03	0.01	—	861
Dust From Material Movement	—	—	—	—	—	—	0.53	0.53	—	0.06	0.06	—	—	—	—	—	—	—
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	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	—	2.35	2.35	< 0.005	< 0.005	—	2.36
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—

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	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	—	0.39	0.39	< 0.005	< 0.005	—	0.39
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
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	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.18	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	28.0	28.0	< 0.005	< 0.005	< 0.005	28.5
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	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	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	—	0.08	0.08	< 0.005	< 0.005	< 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	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	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	—	0.01	0.01	< 0.005	< 0.005	< 0.005	0.01
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	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	0.00	0.00	0.00

3.5. Grading (2023) - 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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.52	1.28	12.6	11.4	0.02	0.60	—	0.60	0.55	—	0.55	—	1,713	1,713	0.07	0.01	—	1,719
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	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.39	9.39	< 0.005	< 0.005	—	9.42
Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	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	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	—	1.55	1.55	< 0.005	< 0.005	—	1.56

Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
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	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.03	0.27	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	42.1	42.1	< 0.005	< 0.005	0.01	42.7
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	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	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	—	0.24	0.24	< 0.005	< 0.005	< 0.005	0.24
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	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	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	—	0.04	0.04	< 0.005	< 0.005	< 0.005	0.04
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	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	0.00	0.00	0.00

3.7. Building Construction (2023) - 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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.69	0.58	5.93	7.00	0.01	0.28	—	0.28	0.26	—	0.26	—	1,305	1,305	0.05	0.01	—	1,309
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	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.69	0.58	5.93	7.00	0.01	0.28	—	0.28	0.26	—	0.26	—	1,305	1,305	0.05	0.01	—	1,309
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	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.16	1.62	1.92	< 0.005	0.08	—	0.08	0.07	—	0.07	—	357	357	0.01	< 0.005	—	359
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	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.30	0.35	< 0.005	0.01	—	0.01	0.01	—	0.01	—	59.2	59.2	< 0.005	< 0.005	—	59.4
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	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.97	7.97	< 0.005	< 0.005	0.03	8.11
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.69	6.69	< 0.005	< 0.005	0.02	7.00
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	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.07	7.07	< 0.005	< 0.005	< 0.005	7.18
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.70	6.70	< 0.005	< 0.005	< 0.005	7.00
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	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	—	2.01	2.01	< 0.005	< 0.005	< 0.005	2.04
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.83	1.83	< 0.005	< 0.005	< 0.005	1.92
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	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	—	0.33	0.33	< 0.005	< 0.005	< 0.005	0.34
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.30	0.30	< 0.005	< 0.005	< 0.005	0.32
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	0.00	0.00	0.00

3.9. Paving (2023) - 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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.64	0.53	4.61	5.32	0.01	0.22	—	0.22	0.20	—	0.20	—	823	823	0.03	0.01	—	826
Paving	—	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	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.3	11.3	< 0.005	< 0.005	—	11.3
Paving	—	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	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	—	1.87	1.87	< 0.005	< 0.005	—	1.87
Paving	—	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	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.09	0.05	0.78	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	111	111	0.01	< 0.005	0.48	113
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	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	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	—	1.39	1.39	< 0.005	< 0.005	< 0.005	1.42
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	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	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	—	0.23	0.23	< 0.005	< 0.005	< 0.005	0.23
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	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	0.00	0.00	0.00

3.11. Architectural Coating (2023) - 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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	0.15	0.93	1.15	< 0.005	0.04	—	0.04	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	2.78	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	1.83	< 0.005	< 0.005	—	1.84
Architectural Coatings	—	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	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	0.30	< 0.005	< 0.005	—	0.30
Architectural Coatings	—	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	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.59	1.59	< 0.005	< 0.005	0.01	1.62
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	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	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	—	0.02	0.02	< 0.005	< 0.005	< 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	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	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	< 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	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	0.00	0.00	0.00

4. Operations Emissions Details

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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	19.9	19.9	< 0.005	< 0.005	—	20.1
undefined	—	—	—	—	—	—	—	—	—	—	—	—	405	405	0.07	0.01	—	409
Total	—	—	—	—	—	—	—	—	—	—	—	—	425	425	0.07	0.01	—	429
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	19.9	19.9	< 0.005	< 0.005	—	20.1
undefined	—	—	—	—	—	—	—	—	—	—	—	—	405	405	0.07	0.01	—	409
Total	—	—	—	—	—	—	—	—	—	—	—	—	425	425	0.07	0.01	—	429
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	3.29	3.29	< 0.005	< 0.005	—	3.33
undefined	—	—	—	—	—	—	—	—	—	—	—	—	67.1	67.1	0.01	< 0.005	—	67.8
Total	—	—	—	—	—	—	—	—	—	—	—	—	70.4	70.4	0.01	< 0.005	—	71.1

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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	39.4	39.4	< 0.005	< 0.005	—	39.5
Total	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	39.4	39.4	< 0.005	< 0.005	—	39.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	39.4	39.4	< 0.005	< 0.005	—	39.5
Total	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	39.4	39.4	< 0.005	< 0.005	—	39.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.52	6.52	< 0.005	< 0.005	—	6.54
Total	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.52	6.52	< 0.005	< 0.005	—	6.54

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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architect Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	0.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	0.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	2.00	0.00	2.00	0.20	0.00	—	7.01
Total	—	—	—	—	—	—	—	—	—	—	—	2.00	0.00	2.00	0.20	0.00	—	7.01
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Light Industry	—	—	—	—	—	—	—	—	—	—	—	2.00	0.00	2.00	0.20	0.00	—	7.01
Total	—	—	—	—	—	—	—	—	—	—	—	2.00	0.00	2.00	0.20	0.00	—	7.01
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.33	0.00	0.33	0.03	0.00	—	1.16
Total	—	—	—	—	—	—	—	—	—	—	—	0.33	0.00	0.33	0.03	0.00	—	1.16

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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.78	0.78
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.78	0.78
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.78	0.78
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.78	0.78
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13	0.13
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13	0.13

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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pumps	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
Total	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pumps	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
Total	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pumps	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
Total	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

4.8. 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)

Equipme Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	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
Total	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	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
Total	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.01	0.01	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.81	3.81	< 0.005	< 0.005	—	3.82
Total	0.01	0.01	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.81	3.81	< 0.005	< 0.005	—	3.82

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	1/1/2023	1/15/2023	5.00	10.0	—
Site Preparation	Site Preparation	1/16/2023	1/17/2023	5.00	1.00	—
Grading	Grading	1/18/2023	1/20/2023	5.00	2.00	—

Building Construction	Building Construction	1/21/2023	6/10/2023	5.00	100	—
Paving	Paving	6/11/2023	6/18/2023	5.00	5.00	—
Architectural Coating	Architectural Coating	6/19/2023	6/26/2023	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
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	7.70	LDA,LDT1,LDT2
Demolition	Vendor	—	4.00	HHDT,MHDT
Demolition	Hauling	0.00	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	5.00	7.70	LDA,LDT1,LDT2
Site Preparation	Vendor	—	4.00	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	7.50	7.70	LDA,LDT1,LDT2
Grading	Vendor	—	4.00	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	1.26	7.70	LDA,LDT1,LDT2
Building Construction	Vendor	0.49	4.00	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—

Paving	Worker	17.5	7.70	LDA,LDT1,LDT2
Paving	Vendor	—	4.00	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.25	7.70	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	4.00	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

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	4,500	1,500	—

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 (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	0.00	—
Site Preparation	0.00	0.00	0.50	0.00	—
Grading	0.00	0.00	1.50	0.00	—
Paving	0.00	0.00	0.00	0.00	0.00

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt

General Light Industry	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2023	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
Total all Land Uses	0.00	0.00	0.00	24.0	0.00	0.00	0.00	72.0

5.10. Operational Area Sources

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	4,500	1,500	—

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)
General Light Industry	35,592	204	0.0330	0.0040	122,917

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Light Industry	3.72	—

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
General Light Industry	Other commercial A/C and heat pumps	R-410A	2,088	0.30	4.00	4.00	18.0

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
Pumps	Electric	Average	1.00	24.0	150	0.74

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	Diesel	1.00	0.00	100	50.0	0.73

8. User Changes to Default Data

Screen	Justification
Land Use	Per site plan
Operations: Landscape Equipment	No landscape equipment
Operations: Water and Waste Water	No water consumption

*HARP - HRACalc v21081 4/11/2023 11:00:02 AM - Cancer Risk - Input File: G:\Fowler_City of-2619\261922024-Water Well No. 9\200 Technical\215 Env Planning\Appendices\App A -Name\WELL9\hra\WELL9_HRAInput.hra

REC	GRP	NETID	X	Y	CONC	POLID	POLABBRE	RISK_SUM	SCENARIO	DETAILS	INH_RISK	SOIL_RISK	DERMAL_R	MMILK_RIS	WATER_RI	FISH_RISK	CROP_RISK	BEEF_RISK	DAIRY_RISI	PIG_RISK	CHICKEN_F	EGG_RISK	1ST_DRIVE	2ND_DRIVER
1	SENSITIV		259761	4056147	0.082136	9901	DieselExhP	2.81E-05	2YrCancerI	*	2.81E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INHALATION	
2	SENSITIV		259811	4056142	0.03156	9901	DieselExhP	1.08E-05	2YrCancerI	*	1.08E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INHALATION	
3	SENSITIV		259813	4056120	0.081794	9901	DieselExhP	2.80E-05	2YrCancerI	*	2.80E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INHALATION	
4	SENSITIV		259803	4056100	0.224226	9901	DieselExhP	7.67E-05	2YrCancerI	*	7.67E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INHALATION	
5	SENSITIV		259702	4056134	0.104235	9901	DieselExhP	3.57E-05	2YrCancerI	*	3.57E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INHALATION	
6	SENSITIV		259674	4056117	0.07312	9901	DieselExhP	2.50E-05	2YrCancerI	*	2.50E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INHALATION	
7	SENSITIV		259673	4056048	0.041093	9901	DieselExhP	1.41E-05	2YrCancerI	*	1.41E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INHALATION	
8	SENSITIV		259694	4056042	0.040611	9901	DieselExhP	1.39E-05	2YrCancerI	*	1.39E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INHALATION	
9	SENSITIV		259708	4056024	0.029873	9901	DieselExhP	1.02E-05	2YrCancerI	*	1.02E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INHALATION	

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REC	GRP	NETID	X	Y	CONC	POLID	POLABBRE	RISK_SUM	SCENARIO	DETAILS	INH_RISK	SOIL_RISK	DERMAL_R	MMILK_RIS	WATER_RI	FISH_RISK	CROP_RISK	BEEF_RISK	DAIRY_RIS	PIG_RISK	CHICKEN_F	EGG_RISK	1ST_DRIVE	2ND_DRIVER
1	SENSITIV		259761	4056147	0.00036	9901	DieselExhP	3.55E-07	70YrCance	*	3.55E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INHALATION	
2	SENSITIV		259811	4056142	0.000276	9901	DieselExhP	2.72E-07	70YrCance	*	2.72E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INHALATION	
3	SENSITIV		259813	4056120	0.000526	9901	DieselExhP	5.18E-07	70YrCance	*	5.18E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INHALATION	
4	SENSITIV		259803	4056100	0.002417	9901	DieselExhP	2.38E-06	70YrCance	*	2.38E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INHALATION	
5	SENSITIV		259702	4056134	0.000659	9901	DieselExhP	6.49E-07	70YrCance	*	6.49E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INHALATION	
6	SENSITIV		259674	4056117	0.00034	9901	DieselExhP	3.36E-07	70YrCance	*	3.36E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INHALATION	
7	SENSITIV		259673	4056048	0.000147	9901	DieselExhP	1.45E-07	70YrCance	*	1.45E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INHALATION	
8	SENSITIV		259694	4056042	0.000158	9901	DieselExhP	1.56E-07	70YrCance	*	1.56E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INHALATION	
9	SENSITIV		259708	4056024	0.000144	9901	DieselExhP	1.42E-07	70YrCance	*	1.42E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INHALATION	

Appendix B: Biological Evaluation

Biological Evaluation

CITY OF FOWLER

NEW WATER WELL NO. 9

MARCH 2023

Roman Endicott, Biologist
PROVOST & PRITCHARD CONSULTING GROUP | 455 W. FIR AVE, CLOVIS CA 93611

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Table of Contents

I. Introduction 1
Project Description 1
Report Objectives 1
Study Methodology 5
II. Existing Conditions 6
Regional Setting 6
Topography 6
Climate 6
Hydrology 6
Soils 6
Biotic Habitats 6
Ruderal 6
Urban 7
Natural Communities of Special Concern 7
Designated Critical Habitat of the APE 7
Wildlife Movement Corridors 7
Special Status Plants and Animals 8
III. Impacts and Mitigation 14
Significance Criteria 14
CEQA 14
Relevant Goals, Policies, and Laws 15
City of Fowler General Plan 15
Threatened and Endangered Species 15
Designated Critical Habitat 15
Migratory Birds 15
Birds of Prey 15
Nesting Birds 16
Wetlands and other "Jurisdictional Waters" 16
Potentially Significant Project-Related Impacts and Mitigation 17
Project-Related Mortality and/or Disturbance of Nesting Raptors, Migratory Birds, and Special Status Birds 17
Less Than Significant Project-Related Impacts 18

Project-Related Impacts to Special Status Animal Species Absent From, or Unlikely to Occur on, the Project Site 18
Project-Related Impacts to Special Status Plant Species Absent From, or Unlikely to Occur on, the Project Site 18
Project-Related Impacts to Special Status Fishes Absent From, or Unlikely to Occur on, the Project Site 18
Project-Related Impacts to Riparian Habitat and Natural Communities of Special Concern 19
Project-Related Impacts to Regulated Waters, Wetlands, and Water Quality 19
Project-Related Impacts to Wildlife Movement Corridors and Native Wildlife Nursery Sites 19
Project-Related Impacts to Critical Habitat 19
Local Policies or Habitat Conservation Plans 19
IV. References 20

List of Figures

Figure 1. Regional Location Map 2
Figure 2. Topographic Quadrangle Map 3
Figure 3. Area of Potential Effect 4

List of Tables

Table 1. List of Special Status Animals with Potential to Occur Onsite and/or in the Vicinity 8
Table 2. List of Special Status Plants with Potential to Occur Onsite and/or in the Vicinity 11

List of Appendices

Appendix A: Photos of the Project Area
Appendix B: CNDDB 9-Quad Search
Appendix C: IPaC Search
Appendix D: NRCS Soils Report

I. Introduction

The following technical report, prepared by Provost & Pritchard Consulting Group, in compliance with the California Environmental Quality Act (CEQA) includes a description of the biological resources present or with potential to occur within the proposed New Water Well No. 9 Project (Project) and surrounding areas, and evaluates potential Project-related impacts to those resources.

Project Description

The Project is located in the City of Fowler, within Fresno County, California, between the City of Fresno and the City of Selma (see **Figure 1** and **Figure 2**). The Project's Area of Potential Effect (APE) includes an approximately 0.5 acre property, previously used as a stormwater retention pond, acquired by the City of Fowler (City) and an additional 50-foot buffer to include the large trees adjacent to the property (see **Figure 3**). The total area of the APE is approximately 1.4 acres.

The Project involves backfilling the stormwater retention pond in order to develop the new well site. The well will produce approximately 1,200 gallons per minute (GPM) and will increase the City's potable water supply. The new groundwater well will be constructed at a depth similar to the existing wells, between 386 to 525 feet in depth. The well will be drilled and constructed to comply with the requirements of the Division of Drinking Water (DDW).

Report Objectives

Construction activities such as that proposed by the Project could potentially damage biological resources or modify habitats that are crucial for sensitive plant and wildlife species. In cases such as these, development may be regulated by State or federal agencies, and/or addressed by local regulatory agencies.

This report addresses issues related to the following:

1. The presence of sensitive biological resources onsite, or with the potential to occur onsite.
2. The federal, State, and local regulations regarding these resources.
3. Mitigation measures that may be required to reduce the magnitude of anticipated impacts and/or comply with permit requirements of state and federal resource agencies.

Therefore, the objectives of this report are:

1. Summarize all site-specific information related to existing biological resources.
2. Make reasonable inferences about the biological resources that could occur onsite based on habitat suitability and the proximity of the site to a species' known range.
3. Summarize all State and federal natural resource protection laws that may be relevant to the APE.
4. Identify and discuss Project impacts to biological resources likely to occur onsite within the context of CEQA and/or State or federal laws.
5. Identify and publish a set of avoidance and mitigation measures that would reduce impacts to a less-than-significant level (as identified by CEQA) and are generally consistent with recommendations of the resource agencies for affected biological resources.

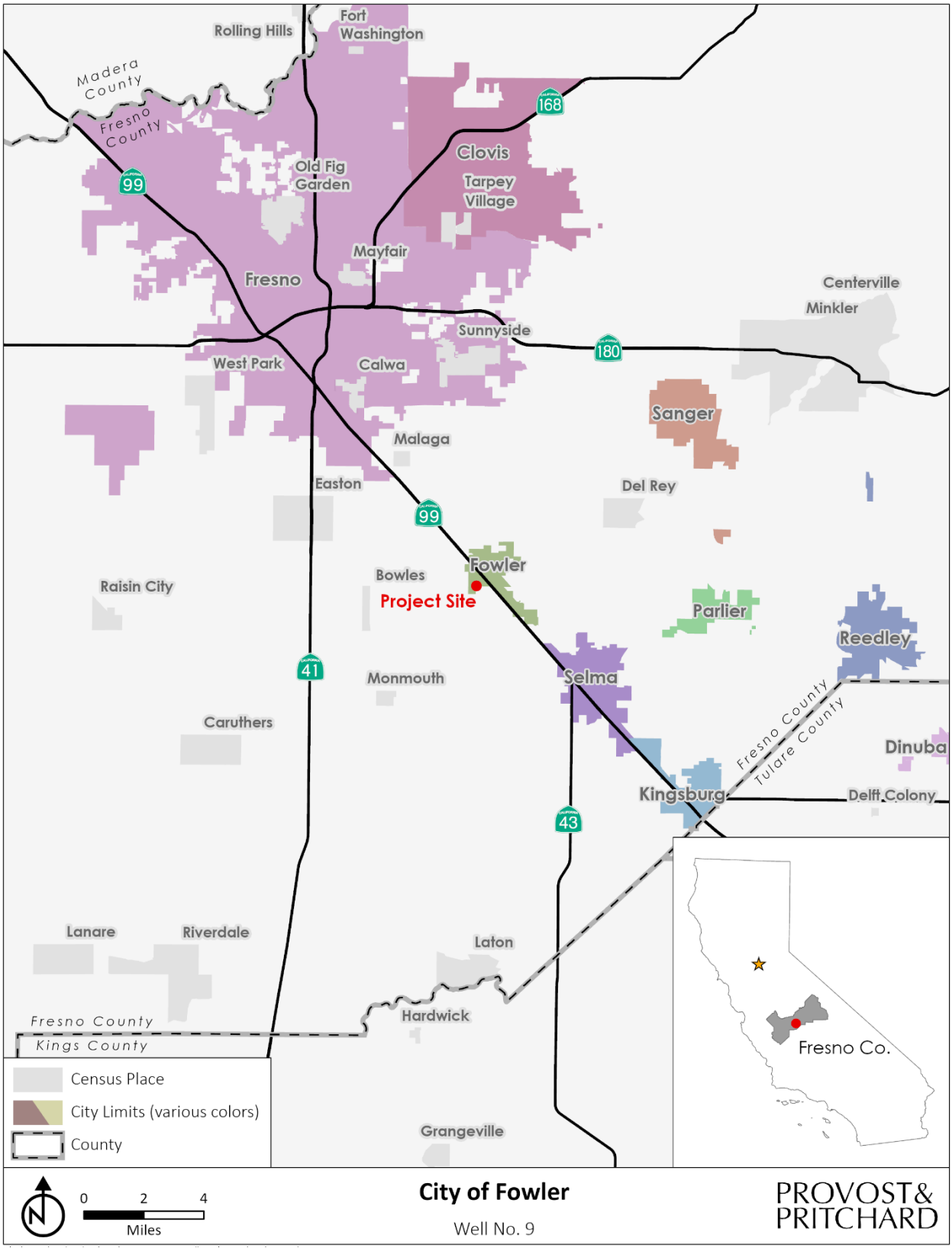

Figure 1. Regional Location Map

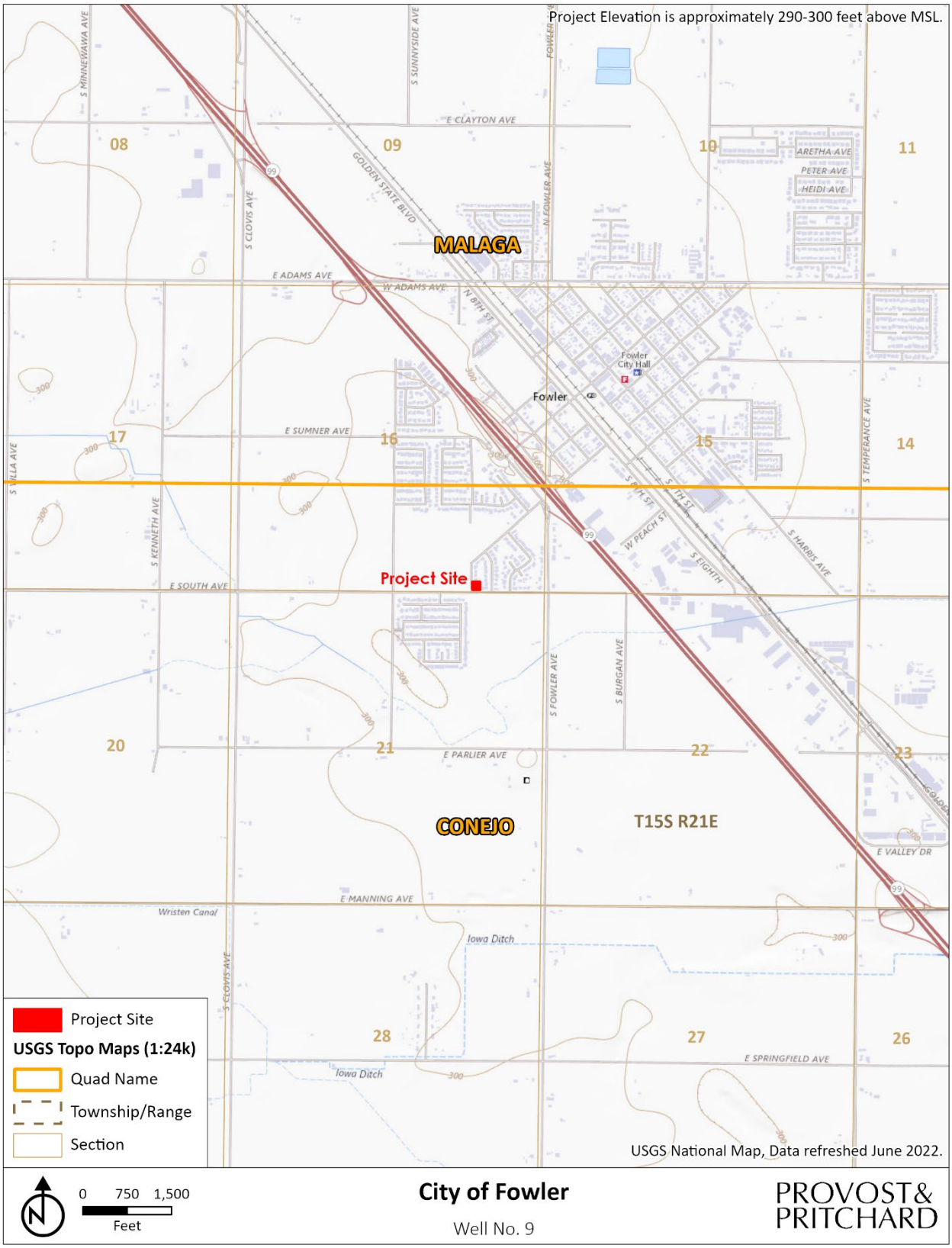

Figure 2. Topographic Quadrangle Map

Figure 3. Area of Potential Effect

Study Methodology

A reconnaissance-level field survey of the APE (**Figure 3**) was conducted on February 2, 2023 by Provost & Pritchard biologist, Roman Endicott. The survey consisted of walking thoroughly through the APE while identifying and noting land uses, biological habitats and communities, plant and animal species encountered and assessed for suitable habitats of various wildlife species.

The biologist conducted an analysis of potential Project-related impacts to biological resources based on the resources known to exist or with potential to exist within the APE. Sources of information used in preparation of this analysis included: the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB); the California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Vascular Plants of California; CalFlora's online database of California native plants; the Jepson Herbarium online database (Jepson eFlora); United States Fish and Wildlife Service (USFWS) Environmental Conservation Online System (ECOS); Information for Planning and Consultation (IPaC) system; USFW National Wetlands Inventory (NWI); iNaturalist; the NatureServe Explorer online database; the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Plants Database; CDFW California Wildlife Habitat Relationships (CWHR) database; the California Herps online database; and various manuals, reports, and references related to plants and animals of the San Joaquin Valley region.

The field investigation did not include focused surveys for special status species. The field survey conducted included the appropriate level of detail to assess the significance of potential impacts to sensitive biological resources resulting from the Project. Furthermore, the field survey was sufficient to generally describe those features of the Project that could be subject to the jurisdiction of federal and/or State agencies, such as the United States Army Corps of Engineers (USACE) *1987 Corps of Engineers Wetland Delineation Manual,* and the *Arid West Regional Supplement*, CDFW, Regional Water Quality Control Board (RWQCB) and the State Water Resources Control Board (SWRCB) *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State*, and used to support CEQA documents.

II. Existing Conditions

Regional Setting

Topography

The APE is located in Fowler, California. Fowler is located in Fresno County within the San Joaquin Valley, south of the City of Fresno (see **Figure 1** and **Figure 2**). There is a shallow depression approximately 10 feet deep within the APE, which forms the existing stormwater detention basin. The topography of the surrounding area is relatively flat with elevations ranging from approximately 300 to 310 feet.

Climate

Like most of California, the San Joaquin Valley experiences a Mediterranean climate. Warm, dry summers are followed by cool, moist winters. Summer temperatures often reach above 90 degrees Fahrenheit (°F), and the humidity is generally low. Winter temperatures are often below 60 °F during the day and rarely exceed 70 °F. On average, the San Joaquin Valley receives approximately 12 inches of precipitation in the form of rainfall yearly, most of which occurs between October and March.

Hydrology

A watershed is the topographic region that drains into a stream, river, or lake. Watersheds are made up of many smaller subwatersheds that drain into a particular stream, river, or lake. The Project site lies within the Kennedy Pond-Fresno Slough watershed; Hydrologic Unit Code (HUC): 1803000902 and the Kennedy Pond subwatershed; HUC: 18030090206. The nearest surface water to the Project is Kirby Ditch, which is located approximately 0.3 miles south of the APE.

The Kennedy Pond-Fresno Slough watershed is comprised of stormwater and snowmelt collected in upland areas which flows down into streams and creeks which feed into the Kings River. The Kings River flows through Pine Flat Lake and feeds Consolidated Canal. Consolidated Canal feeds Fowler Switch Canal, which flows into Kirby Ditch Canal. Kirby Ditch Canal flows near the APE, into Wristen Canal which then terminates in agricultural fields near Caruthers.

Soils

The only soil identified within the APE was Hesperia fine sandy loam, very deep. This soil is well drained, has negligible runoff, and has moderately rapid permeability. Typical vegetation for this soil type within the San Joaquin Valley consists of sparse annual grasses. This soil is considered prime farmland if irrigated.

None of the identified major or minor soil map units were identified as hydric. Hydric soils are defined as soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions such that under sufficiently wet conditions, hydrophytic vegetation can be supported.

The complete Natural Resources Conservation Service (NRCS) Web Soil Survey report is available in **Appendix D** at the end of this document.

Biotic Habitats

Ruderal

The Project area consists of a vacant lot, previously utilized as a stormwater retention pond. The lot is currently enclosed by a chain-linked fence. Drainage into the pond ceased in approximately 2020, as part of construction

activities for the subdivision of single family residences to the north and east of the APE. Since then, stormwater has not been directed into the retention pond. The APE now consists of primarily herbaceous vegetation, such as common chickweed (*Stellaria media*), curly dock (*Rumex crispus*), various grasses, hairy bittercress (*Cardamine hirsuta*), horseweed (*Conyza canadensis*), rough cocklebur (*Xanthium strumarium*), telegraph weed (*Heterotheca grandiflora*), and turkey mullein (*Croton setigerus*). There are several coast redwoods (*Sequoia sempervirens*) on the south and west sides of the APE.

The soil in the bed of the pond was especially sandy and was dominated by common tule (*Schoenoplectus acutus*). The common tule appeared to be under severe water stress due to lack of water in the basin. White-crowned Sparrows (*Zonotrichia leucophrys*) were observed foraging within the thicket of tule.

There were no active mammal burrows or signs of mammals (i.e. tracks, scat, fur, burrows) within the APE.

Urban

The surrounding area to the west, north, and east of the APE are residential and consist of single-family residences. Directly adjacent to the Project area, there are single family residences and fall within the 50-foot buffer of the APE to the north and the east, as well as sidewalks and paved roads to the south and the west. There are several ornamental trees and shrubs within the residential areas. There is also an active vineyard to the south of the APE.

Bird species adapted to surviving in urban environments such as American Crow (*Corvus brachyrhynchos*), House Finch (*Carpodacus mexicanus*), and Northern Mockingbird (*Mimus polyglottos*) were seen in the surrounding areas.

Representative photographs of the site at the time of the survey are available in **Appendix A** at the end of this document.

Natural Communities of Special Concern

Natural communities of special concern are those that are of limited distribution, distinguished by significant biological diversity, or home to special status species. CDFW is responsible for the classification and mapping of all-natural communities in California. Just as the special status plant and animal species, these natural communities of special concern can be found within the CNDDB.

The nearest natural community of special concern is Valley Sacaton Grassland approximately 20 miles southeast of the APE. Additionally, no natural communities of special concern were observed during the biological survey.

Designated Critical Habitat of the APE

The USFWS often designates areas of "Critical Habitat" when it lists species as threatened or endangered. Critical Habitat is a specific geographic area that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. According to CNDDB and IPaC, designated critical habitat is absent from the APE and vicinity.

Wildlife Movement Corridors

Wildlife movement corridors are routes that animals regularly and predictably follow during seasonal migration, dispersal from native ranges, daily travel within home ranges, and inter-population movements. Movement corridors in California are typically associated with valleys, ridgelines, and rivers and creeks supporting riparian vegetation.

The APE does not contain features that would be likely to function as wildlife movement corridors. It is possible for the area to be used by species more tolerant of nearby human activities, such as some birds and gophers, but is not ideal due to the heavy disturbance of human activities, which would discourage dispersal and migration.

Special Status Plants and Animals

California contains several "rare" plant and animal species. In this context, rare is defined as species known to have low populations or limited distributions. As the human population grows, urban expansion encroaches on the already-limited suitable habitat. This results in sensitive species becoming increasingly more vulnerable to extirpation. State and federal regulations have provided the CDFW and the USFWS with a mechanism for conserving and protecting the diversity of plant and animal species native to California. Numerous native plants and animals have been formally designated as "threatened" or "endangered" under State and federal endangered species legislation. Other formal designations include "candidate" for listing or "species of special concern" by CDFW. The CNPS has its list of native plants considered rare, threatened, or endangered. Collectively these plants and animals are referred to as "special status species." This survey was conducted outside of the blooming season for most plants. Further investigation of special status plants is recommended to occur inside the plants' blooming seasons.

A thorough search of the CNDDB for published accounts of special status plant and animal species was conducted for the *Conejo* 7.5-minute quadrangle that contains the APE in its entirety, and for the 8 surrounding quadrangles: *Caruthers, Fresno South, Malaga, Sanger, Selma, Burris Park, Laton,* and *Riverdale.* These species, and their potential to occur within the APE, are listed in **Table** and **Table 2** on the following pages. Raw data obtained from CNDDB is available in **Appendix B** at the end of this document. All relevant sources of information, as discussed in the Study Methodology section of this report, as well as field observations, were used to determine if any special status species are known to be within the APE. **Figure 2** shows the Project's 7.5-minute quadrangle, according to United States Geological Survey Topographic Maps.

Table 1. List of Special Status Animals with Potential to Occur Onsite and/or in the Vicinity

Species	Status	Habitat	Occurrence within Project Site
Blunt-nosed leopard lizard (*Gambelia sila*)	FE, CE, CFP	Inhabits semi-arid grasslands, alkali flats, low foothills, canyon floors, large washes, and arroyos, usually on sandy, gravelly, or loamy substrate, sometimes on hardpan. Often found where there are abundant rodent burrows in dense vegetation or tall grass. Cannot survive on lands under cultivation. Known to bask on kangaroo rat mounds and often seeks shelter at the base of shrubs, in small mammal burrows, or in rock piles. Adults may excavate shallow burrows but rely on deeper pre-existing rodent burrows for hibernation and reproduction.	**Absent.** Suitable habitat for this species is absent from the APE. There is not enough undeveloped land present to support this species and there are no mammal burrows within the APE to support this species. There are no recorded observations of this species within the nine-quad search.
Burrowing Owl (*Athene cunicularia*)	CSC	Resides in open, dry annual or perennial grasslands, deserts, and scrublands with low growing vegetation. Nests underground in existing burrows created by mammals, most often ground squirrels.	**Absent.** Suitable habitat for this species is absent from the APE. There are no burrows within the APE to support this species and there are high levels of disturbance in the area. The nearest recorded observation of this

Species	Status	Habitat	Occurrence within Project Site
			species occurred in non-native grassland approximately 13.5 miles south of the APE in 2017.
California glossy snake (*Arizona elegans occidentalis*)	CSC	Inhabits arid scrub, rocky washes, grasslands, and chaparral. Prefers open areas with loose soil for easy burrowing.	**Absent.** Suitable habitat and soil for this species is absent from the APE. The APE is outside of the current known range of this species. The nearest recorded observation of this species is from a historical collection dated more than 80 years ago approximately seven miles southwest of the APE.
California tiger salamander (*Ambystoma californiense*)	FT, CT, CWL	Requires vernal pools or seasonal ponds for breeding and small mammal burrows for aestivation. Generally found in grassland and oak savannah plant communities in central California from sea level to 1500 feet in elevation.	**Absent.** Suitable habitat for this species is absent from the APE. There are no vernal pools for breeding or burrows for aestivation present. The nearest recorded extant observation of this species occurred approximately 19.5 miles south of the APE in 1999.
Coast horned lizard (*Phrynosoma blainvillii*)	CSC	Found in grasslands, coniferous forests, woodlands, and chaparral, primarily in open areas with patches of loose, sandy soil and low-lying vegetation in valleys, foothills, and semi-arid mountains. Frequently found near ant hills and along dirt roads in lowlands along sandy washes with scattered shrubs.	**Absent.** Suitable habitat and soil for this species is absent from the APE. The only recorded observation of this species in the nine-quad search is from a historical collection from 130 years ago and occurred somewhere in the vicinity of Fresno.
Crotch's bumble bee (*Bombus crotchii*)	CCE	Occurs throughout coastal California, as well as east to the Sierra-Cascade crest, and south into Mexico. Food plant genera include *Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia*, and *Eriogonum*.	**Unlikely.** The APE does not offer high quality foraging or overwintering habitat for this species. The nearest recorded observation of this species is from a historical collection dated more than 110 years ago and occurred approximately four miles southeast of the APE.
Fresno kangaroo rat (*Dipodomys nitratoides exilis*)	FE, CE	An inhabitant of alkali sinks open grassland environments in western Fresno County. Prefers bare, alkaline, clay-based soils subject to seasonal inundation with more friable soil mounds around shrubs and grasses.	**Absent.** Suitable habitat for this species is absent from the APE and surrounding area. There are no burrows within the APE to support this species. There are no recorded observations of this species within the nine-quad search.
Monarch Butterfly (*Danaus plexippus*)	FC	Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby. Larval host plants consist of milkweeds (*Asclepias* sp.). Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico.	**Unlikely.** Suitable habitat for foraging, roosting, or depositing eggs is absent from the APE. This species is frequently seen in the region, but only as part of its migration route. There are no recorded observations of this species within the nine-quad search.
Northern California legless lizard (*Anniella pulchra*)	CSC	Found primarily underground, burrowing in loose, sandy soil. Forages in loose soil and leaf litter during the	**Absent.** Suitable habitat for this species is absent from the APE. The nearest recorded observation of this species is a historical collection dated

Species	Status	Habitat	Occurrence within Project Site
		day. Occasionally observed on the surface at dusk and night.	more than 130 years ago and occurred somewhere in the vicinity of Fresno.
Pallid bat (*Antrozous pallidus*)	CSC	Found in grasslands, chaparral, and woodlands, where it feeds on ground- and vegetation-dwelling arthropods, and occasionally takes insects in flight. Prefers to roost in rock crevices, but may also use tree cavities, caves, bridges, and other man-made structures.	**Unlikely.** Suitable roosting habitat for this species is absent from the APE. Project activities would deter this species from foraging near the APE. The nearest recorded observation of this species occurred approximately nine miles north of the APE in 1909.
San Joaquin kit fox (*Vulpes macrotis mutica*)	FE, CT	Underground dens with multiple entrances in alkali sink, valley grassland, and woodland in valleys and adjacent foothills.	**Absent.** Suitable habitat for this species is absent from the APE. The APE is outside of the current known range of this species (United States Fish & Wildlife Service 2020). The nearest recorded observation of this species occurred approximately eight miles northeast of the APE on an unknown date in the 1880's.
Swainson's Hawk (*Buteo swainsoni*)	CT	Nests in large trees in open areas adjacent to grasslands, grain or alfalfa fields, or livestock pastures suitable for supporting rodent populations.	**Possible.** This species could potentially nest within the large coast redwoods in the APE. The nearest recorded observation of this species occurred approximately four miles west of the APE in 2016.
Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*)	FT	Lives in mature elderberry shrubs of the Central Valley and foothills. Adults are active from March to June.	**Absent.** There are no elderberry shrubs within the APE or surrounding area. The nearest recorded observation of this species occurred approximately nine miles northeast of the APE in 1998.
Vernal pool fairy shrimp (*Branchinecta lynchi*)	FT	Occupies vernal pools, clear to tea-colored water, in grass or mud-bottomed swales, and basalt depression pools.	**Absent.** Suitable habitat for this species is absent from the APE. Vernal pools are not present. The only recorded observation of this species in the nine-quad search occurred in vernal pools within non-native grassland approximately 19 miles southeast of the APE in 2017.
Vernal pool tadpole shrimp (*Lepidurus packardi*)	FE	Occurs in vernal pools, clear to tea-colored water, in grass or mud-bottomed swales, and basalt depression pools.	**Absent.** Suitable habitat for this species is absent from the APE. Vernal pools are not present. The nearest recorded observation of this species occurred approximately 19 miles southeast of the APE in 2017.
Western mastiff bat (*Eumops perotis californicus*)	CSC	Found in open, arid to semi-arid habitats, including dry desert washes, flood plains, chaparral, oak woodland, open ponderosa pine forest, grassland, and agricultural areas, where it feeds on insects in flight. Roosts most commonly in crevices in cliff faces but may also use high buildings and tunnels.	**Unlikely.** Suitable roosting habitat for this species is absent from the APE. Project activities would deter this species from foraging near the APE. The nearest recorded observation of this species occurred approximately 5.5 miles west of the APE in 1958.

Species	Status	Habitat	Occurrence within Project Site
Western spadefoot (*Spea hammondii*)	CSC	Prefers open areas with sandy or gravelly soils, in a variety of habitats including mixed woodlands, grasslands, coastal sage scrub, chaparral, sandy washes, lowlands, river floodplains, alluvial fans, playas, alkali flats, foothills, and mountains. Vernal pools or temporary wetlands, lasting a minimum of three weeks, which do not contain bullfrogs, fish, or crayfish are necessary for breeding.	**Unlikely.** Aquatic habitats required by this species are absent from the APE and surrounding area. The nearest recorded observation of this species occurred approximately 19 miles southeast of the APE in 2017 in vernal pool habitat adjacent to Cross Creek.
Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*)	FT, CE	Suitable nesting habitats in California includes dense riparian willow-cottonwood and mesquite habitats along a perennial river. Once a common breeding species in riparian habitats of lowland California, this species currently breeds consistently in only two locations in the State: along the Sacramento and South Fork Kern Rivers.	**Absent.** Suitable nesting habitat for this species is absent from the APE. This species has not been observed in the region in over a century. The nearest recorded observation of this species occurred approximately 4.5 miles southeast of the APE in 1898.

Table 2. List of Special Status Plants with Potential to Occur Onsite and/or in the Vicinity

Species	Status	Habitat	Occurrence within Project Site
Alkali-sink goldfields (*Lasthenia chrysantha*)	CNPS 1B	Found in vernal pool and wet saline flat habitats. Occurrences documented in the San Joaquin and Sacramento Valleys at elevations below 656 feet. Blooms February - April.	**Absent.** Suitable habitat for this species is absent from the APE. There are no vernal pools or saline soils present. The nearest recorded observation of this species occurred approximately eight miles south of the APE in 1934 and is listed as possibly extirpated.
Bristly sedge (*Carex comosa*)	CNPS 2B	Found on lake margins and wet places in marshes, swamps, coastal prairie, valley grassland, and foothill grassland at elevations between -15 and 3,300 feet. Blooms May - September.	**Unlikely.** Suitable habitat for this species is absent from the APE as the presence of water is inconsistent. The only recorded observation of this species in the nine-quad search occurred in a drainage canal approximately nine miles east of the APE in 1989.
Brittlescale (*Atriplex depressa*)	CNPS 1B	Found in the San Joaquin Valley and Sacramento Valley in alkaline or clay soils, typically in meadows or annual grassland in at elevations below 1050 feet. Sometimes associated with vernal pools. Blooms June–October.	**Absent.** Suitable habitat for this species is absent from the APE. There is no alkaline or clay soil within the APE. The only recorded observation of this species in the nine-quad search occurred approximately 12 miles south of the APE on an unknown date.
California alkali grass (*Puccinellia simplex*)	CNPS 1B	Found in the San Joaquin Valley and other parts of California in saline flats and mineral springs within valley grassland and wetland-riparian communities at elevations below 3000 feet. Blooms March–May.	**Absent.** Suitable habitat for this species is absent from the APE. The only recorded observation of this species in the nine-quad search occurred approximately 13.5 miles

Species	Status	Habitat	Occurrence within Project Site
			south of the APE in 1935 and is listed as possibly extirpated.
California jewelflower (*Caulanthus californicus*)	FE, CE, CNPS 1B	Found in the San Joaquin Valley and Western Transverse Ranges in sandy soils. Occurs on flats and slopes, generally in non-alkaline grassland at elevations between 230 feet and 6100 feet. Blooms February–April.	**Absent.** This species has not been seen in the region in over a century. The APE is not suitable for this species. The only recorded observation of this species in the nine-quad search occurred somewhere in the vicinity of Fresno on an unknown date and is listed as extirpated.
California satintail (*Imperata brevifolia*)	CNPS 2B	Although this facultative species is equally likely to occur in wetlands and non-wetlands, it is often found in wet springs, meadows, streambanks, and floodplains at elevations below 1600 feet. Blooms September – May.	**Unlikely.** This species has not been observed in the region in over a century. The only recorded observation of this species in the nine-quad search occurred somewhere in the vicinity of Fresno in 1893.
Greene's tuctoria (*Tuctoria greenei*)	FE, CR, CNPS 1B	Found in the San Joaquin Valley and other parts of California in vernal pools within valley grassland, wetland, and riparian communities at elevations below 3500 feet. Blooms May – September.	**Absent.** Suitable habitat for this species is absent from the APE. There are no vernal pools present within the APE. The only recorded observation of this species in the nine-quad search occurred approximately 11.5 miles northeast of the in 1954 and is listed as extirpated.
Lesser saltscale (*Atriplex minuscula*)	CNPS 1B	Found in the San Joaquin Valley in sandy, alkaline soils in alkali scrub, valley and foothill grassland, and alkali sink communities at elevations below 750 feet. Blooms April–October.	**Absent.** Suitable habitat and soil for this species is absent from the APE. The only recorded observation of this species within the nine-quad search occurred approximately 19 miles southeast of the APE in 2016.
Madera leptosiphon (*Leptosiphon serrulatus*)	CNPS 1B	Found in openings in foothill woodland, often yellow-pine forest, and chaparral at elevations between 1000 feet and 4300 feet. Blooms April – May.	**Absent.** The APE is outside of the lower elevational range of this species. The only recorded observation of this species in the nine-quad search occurred somewhere in the vicinity of Fresno in 1922.
Panoche pepper-grass (*Lepidium jaredii* ssp. *album*)	CNPS 1B	Found on steep slopes, washes, alluvial-fans, and clay, sometimes alkaline, within Valley and Foothill Grassland communities in western Fresno County at elevations between 600–2400 feet. Blooms February–June.	**Absent.** This species has not been observed in the region in over a century and the APE is outside of the lower elevational range of this species. The only recorded observation of this species in the nine-quad search occurred approximately 15.5 miles southwest of the APE in 1893.

EXPLANATION OF OCCURRENCE DESIGNATIONS AND STATUS CODES

Present:	Species observed on the site at time of field surveys or during recent past.
Likely:	Species not observed on the site, but it may reasonably be expected to occur there on a regular basis.
Possible:	Species not observed on the site, but it could occur there from time to time.
Unlikely:	Species not observed on the site, and would not be expected to occur there except, perhaps, as a transient.
Absent:	Species not observed on the site and precluded from occurring there due to absence of suitable habitat.

STATUS CODES

FE	Federally Endangered	CE	California Endangered
FT	Federally Threatened	CT	California Threatened
FC	Federal Candidate	CFP	California Fully Protected
		CSC	California Species of Concern
		CWL	California Watch List
		CCE	California Endangered (Candidate)
		CR	California Rare

CNPS LISTING

1B	Plants Rare, Threatened, or Endangered in California and elsewhere.	2B	Plants Rare, Threatened, or Endangered in California, but more common elsewhere.

III. Impacts and Mitigation

Significance Criteria

CEQA

General plans, area plans, and specific projects are subject to the provisions of CEQA. The purpose of CEQA is to assess the impacts of proposed projects on the environment prior to project implementation. Impacts to biological resources are just one type of environmental impact assessed under CEQA and vary from project to project in terms of scope and magnitude. Projects requiring removal of vegetation may result in the mortality or displacement of animals associated with this vegetation. Animals adapted to humans, roads, buildings, and pets may replace those species formerly occurring on a site. Plants and animals that are State and/or federally listed as threatened or endangered may be destroyed or displaced. Sensitive habitats such as wetlands and riparian woodlands may be altered or destroyed. Such impacts may be considered either "significant" or "less than significant" under CEQA. According to CEQA, Statute and Guidelines (AEP 2012), "significant effect on the environment" means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic interest. Specific project impacts to biological resources may be considered "significant" if they would:

- 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 CDFW or USFWS;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS;
- 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;
- 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.
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.

Furthermore, CEQA Guidelines Section 15065(a) states that a project may trigger the requirement to make a "mandatory finding of significance" if the project has 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, reduce the number or restrict the range of an endangered, rare or threatened species, or eliminate important examples of the major periods of California history or prehistory."

Relevant Goals, Policies, and Laws

City of Fowler General Plan

The Project is located within the City of Fowler. The City of Fowler General Plan Policy Document (City of Fowler 2023) contains the following goals and policies related to the Project:

Community Resiliency and Safety

Goal SAF-3: Local watersheds, waterbodies, and groundwater resources are responsibly managed.

Water Quality and Conservation

Policy SAF-14: Maintain the domestic water system in accordance with applicable water quality standards.

Water Supply and Distribution

Policy PF-17: Design and construct water system infrastructure as needed to meet current and future water demands and system requirements.

Threatened and Endangered Species

Permits may be required from the USFWS and/or CDFW if activities associated with a project have the potential to result in the "take" of a species listed as threatened or endangered under the federal and/or state Endangered Species Acts. Take is defined by the State of California as "to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill" (California Fish and Game Code, Section 86). Take is more broadly defined by the federal Endangered Species Act to include "harm" (16 USC, Section 1532(19), 50 CFR, Section 17.3). CDFW and USFWS are responsible agencies under CEQA and National Environmental Policy Act (NEPA). Both agencies review CEQA and NEPA documents in order to determine the adequacy of their treatment of endangered species issues and to make project-specific recommendations for their conservation.

Designated Critical Habitat

When species are listed as threatened or endangered, the USFWS often designates areas of "Critical Habitat" as defined by section 3(5)(A) of the federal Endangered Species Act (ESA). Critical Habitat is a term defined in the ESA as a specific geographic area that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. Critical Habitat is a tool that supports the continued conservation of imperiled species by guiding cooperation with the federal government. Designations only affect federal agency actions or federally funded or permitted activities. Critical Habitat does not prevent activities that occur within the designated area. Only activities that involve a federal permit, license, or funding and are likely to destroy or adversely modify Critical Habitat will be affected.

Migratory Birds

The Federal Migratory Bird Treaty Act (MBTA: 16 USC 703-712) prohibits killing, possessing, or trading in any bird species covered in one of four international conventions to which the United States is a party, except in accordance with regulations prescribed by the Secretary of the Interior. The name of the act is misleading, as it actually covers almost all bird's native to the United States, even those that are non-migratory. The MBTA encompasses whole birds, parts of birds, and bird nests and eggs. Additionally, California Fish and Game Code makes it unlawful to take or possess any non-game bird covered by the MBTA (Section 3513), as well as any other native non-game bird (Section 3800).

Birds of Prey

Birds of prey are protected in California under provisions of Fish and Game Code (Section 3503.5), which states that it is unlawful to take, possess, or destroy any birds in the order Falconiformes (hawks and eagles) or

Strigiformes (owls), as well as their nests and eggs. The bald eagle and golden eagle are afforded additional protection under the federal Bald and Golden Eagle Protection Act (16 USC 668), which makes it unlawful to kill birds or their eggs.

Nesting Birds

In California, protection is afforded to the nests and eggs of all birds. California Fish and Game Code (Section 3503) states that it is "unlawful to take, possess, or needlessly destroy the nest or eggs of any bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Breeding-season disturbance that causes nest abandonment and/or loss of reproductive effort is considered a form of "take" by the CDFW.

Wetlands and other "Jurisdictional Waters"

Natural drainage channels and adjacent wetlands may be considered "Waters of the United States" or "jurisdictional waters" subject to the jurisdiction of the USACE. The extent of jurisdiction has been defined in the Code of Federal Regulations but has also been subject to interpretation of the federal courts. Jurisdictional waters generally include:

- All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- All interstate waters including interstate wetlands;
- All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce;
- All impoundments of waters otherwise defined as Waters of the United States under the definition;
- Tributaries of waters identified in paragraphs (a)(1)-(4) (i.e., the bulleted items above).

As determined by the United States Supreme Court in its 2001 Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers (SWANCC) decision, channels and wetlands isolated from other jurisdictional waters cannot be considered jurisdictional on the basis of their use, hypothetical or observed, by migratory birds. Similarly, in its 2006 consolidated Carabell/Rapanos decision, the Supreme Court ruled that a significant nexus between a wetland and other navigable waters must exist for the wetland itself to be considered a navigable and therefore jurisdictional water. Furthermore, the Supreme Court clarified that the United States Environmental Protection Agency (USEPA) and the USACE will not assert jurisdiction over ditches excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water.

The USACE regulates the filling or grading of Waters of the United States. under the authority of Section 404 of the Clean Water Act. The extent of jurisdiction within drainage channels is defined by "ordinary high-water marks" on opposing channel banks. All activities that involve the discharge of dredge or fill material into Waters of the United States are subject to the permit requirements of the USACE. Such permits are typically issued on the condition that the applicant agrees to provide mitigation that results in no net loss of wetland functions or values. No permit can be issued until the RWQCB issues a Section 401 Water Quality Certification (or waiver of such certification) verifying that the proposed activity will meet State water quality standards.

Under the Porter-Cologne Water Quality Control Act of 1969, the SWRCB has regulatory authority to protect the water quality of all surface water and groundwater in the State of California ("Waters of the State"). Nine RWQCBs oversee water quality at the local and regional level. The RWQCB for a given region regulates discharges of fill or pollutants into Waters of the State through the issuance of various permits and orders. Discharges into Waters of the State that are also Waters of the United States require a Section 401 Water Quality Certification from the RWQCB as a prerequisite to obtaining certain federal permits, such as a Section 404 Clean Water Act permit. Discharges into all Waters of the State, even those that are not also Waters of the

United States., require Waste Discharge Requirements (WDRs), or waivers of WDRs, from the RWQCB. The RWQCB also administers the Construction Storm Water Program and the federal National Pollution Discharge Elimination System (NPDES) program. Projects that disturb one acre or more of soil must obtain a Construction General Permit under the Construction Storm Water Program. A prerequisite for this permit is the development of a Storm Water Pollution Prevention Plan (SWPPP) by a certified Qualified SWPPP Developer. Projects that discharge wastewater, storm water, or other pollutants into a Water of the United States may require an NPDES permit.

CDFW has jurisdiction over the bed and bank of natural drainages and lakes according to provisions of Section 1601 and 1602 of the California Fish and Game Code. Activities that may substantially modify such waters through the diversion or obstruction of their natural flow, change or use of any material from their bed or bank, or the deposition of debris require a notification of a Lake or Streambed Alteration. If CDFW determines that the activity may adversely affect fish and wildlife resources, a Lake or Streambed Alteration Agreement will be prepared. Such an agreement typically stipulates that certain measures will be implemented to protect the habitat values of the lake or drainage in question.

Potentially Significant Project-Related Impacts and Mitigation

Swainson's Hawk was the only species identified as candidate, sensitive, or special status species in local or regional plans, policies, or regulations by CDFW or USFWS to have the potential to be impacted by the Project. Corresponding mitigation measures can be found below.

Project-Related Mortality and/or Disturbance of Nesting Raptors, Migratory Birds, and Special Status Birds

The APE contains suitable nesting and/or foraging habitat for a variety of avian species. The survey was conducted outside nesting bird season, so no active nests were observed. It is anticipated that during nesting bird season, numerous species of birds could use the APE for nesting, as habitat is present. Swainson's Hawk was deemed the only special status bird species likely to occur within the APE. Birds nesting within the APE during construction have the potential to be injured or killed by Project-related activities. In addition to the direct "take" of nesting birds, nesting birds within the APE or adjacent areas could be disturbed by Project-related activities resulting in nest abandonment. Projects that adversely affect the nesting success of raptors and migratory birds or result in the mortality of individual birds is considered a violation of State and federal laws and are considered a potentially significant impact under CEQA.

Implementation of the following measures will reduce potential impacts to nesting raptors, migratory birds, and special status birds to a less than significant level under CEQA and will ensure compliance with State and federal laws protecting these avian species.

Mitigation. The following measures would be implemented prior to the start of construction:

> **Mitigation Measure BIO-1a (Avoidance):** The Project's construction activities would occur, if feasible, between September 16 and January 31 (outside of nesting bird season) in an effort to avoid impacts to nesting birds.
>
> **Mitigation Measure BIO-1b (*Pre-construction Surveys*):** If activities must occur within nesting bird season (February 1 to September 15), a qualified biologist would conduct a pre-construction survey for Swainson's Hawk nests onsite and within a 0.5-mile radius. This survey will be conducted in accordance with the *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (Swainson's Hawk Technical Advisory Committee 2000) or current guidance. The Swainson's Hawk survey would not be completed between April 21 to June 10 due to the difficulty

of identifying nests during this time of year. The pre-construction survey would also provide a presence/absence survey for all other nesting birds within the APE and an additional 50 feet, no more than seven (7) days prior to the start of construction. All raptor nests would be considered "active" upon the nest-building stage.

Mitigation Measure BIO-1c (Establish Buffers): On discovery of any active nests or breeding colonies near work areas, the biologist would determine appropriate construction setback distances based on applicable CDFW and/or USFWS guidelines and/or the biology of the species in question. Construction buffers would be identified with flagging, fencing, or other easily visible means, and would be maintained until the biologist has determined that the nestlings have fledged.

Mitigation Measure BIO-1d (*ITP*): In the event an active Swainson's Hawk nest or other nest is detected during surveys and cannot be avoided, consultation with CDFW would be warranted to discuss how to implement the Project and avoid take. If take cannot be avoided, take authorization through the acquisition of an ITP pursuant to Fish and Game Code section 2081, subdivision (b) is necessary to comply with CESA.

Less Than Significant Project-Related Impacts

Project-Related Impacts to Special Status Animal Species Absent From, or Unlikely to Occur on, the Project Site

Of the 18 regionally occurring special status animal species, 17 are considered absent from or unlikely to occur within the APE due to past or ongoing disturbance and/or the absence of suitable habitat. These species include: blunt-nosed leopard lizard, Burrowing Owl, California glossy snake, California tiger salamander, coast horned lizard, Crotch's bumble bee, Fresno kangaroo rat, monarch butterfly, Northern California legless lizard, pallid bat, San Joaquin kit fox, valley elderberry longhorn beetle, vernal pool fairy shrimp, vernal pool tadpole shrimp, western mastiff bat, western spadefoot, and Western Yellow-billed Cuckoo.

Since it is unlikely that these species would occur onsite, implementation of the Project should have no impact on these 17 special status species through construction mortality, disturbance, or loss of habitat. Mitigation measures are not warranted.

Project-Related Impacts to Special Status Plant Species Absent From, or Unlikely to Occur on, the Project Site

Of the 10 regionally occurring special status plant species, all are considered absent from or unlikely to occur within the APE due to past or ongoing disturbance and/or the absence of suitable habitat. These species include: alkali-sink goldfields, bristly sedge, brittlescale, California alkali grass, California jewelflower, California satintail, Greene's tuctoria, lesser saltscale, Madera leptosiphon, and Panoche pepper-grass.

Since it is unlikely that these species would occur onsite, implementation of the Project should have no impact on these 10 special status species through construction mortality, disturbance, or loss of habitat. Mitigation measures are not warranted.

Project-Related Impacts to Special Status Fishes Absent From, or Unlikely to Occur on, the Project Site

At the time of the survey, special status fishes are not considered present or likely to occur within the APE. Mitigation measures are not warranted.

Project-Related Impacts to Riparian Habitat and Natural Communities of Special Concern

There are no CNDDB-designated "natural communities of special concern" recorded within the APE or vicinity. The nearest natural community of special concern is Valley Sacaton Grassland approximately 20 miles southeast of the APE. Mitigation is not warranted.

Project-Related Impacts to Regulated Waters, Wetlands, and Water Quality

The APE was recently used for the detention of stormwater runoff and is not a natural wetland. The APE has likely previously functioned as a wetland as evidenced by the presence of hydrophytic vegetation. However, the primary water source was blocked in 2020. NWI does not identify the basin as a wetland feature. The APE does not meet the definition Water of the United States, and the State Water Resources Control Board exempts artificially constructed wetlands used for stormwater runoff from the definition of a Water of the State. Mitigation measures are not warranted.

Project-Related Impacts to Wildlife Movement Corridors and Native Wildlife Nursery Sites

The APE does not contain features that would be likely to function as wildlife movement corridors. Furthermore, the APE is surrounded by chain-link fence, which would discourage dispersal and migration. Therefore, the Project would have no impact on wildlife movement corridors. Mitigation measures are not warranted.

Project-Related Impacts to Critical Habitat

Designated critical habitat is absent from the APE and surrounding lands. Therefore, there would be no impact to critical habitat, and mitigation is not warranted.

Local Policies or Habitat Conservation Plans

The Project appears to be consistent with the goals and policies of the Fresno County General Plan. There are no known habitat conservation plans (HCPs) or a Natural Community Conservation Plan (NCCP) in the Project vicinity. Mitigation measures are not warranted.

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Appendix A: Photos of the Project Area

CITY OF FOWLER

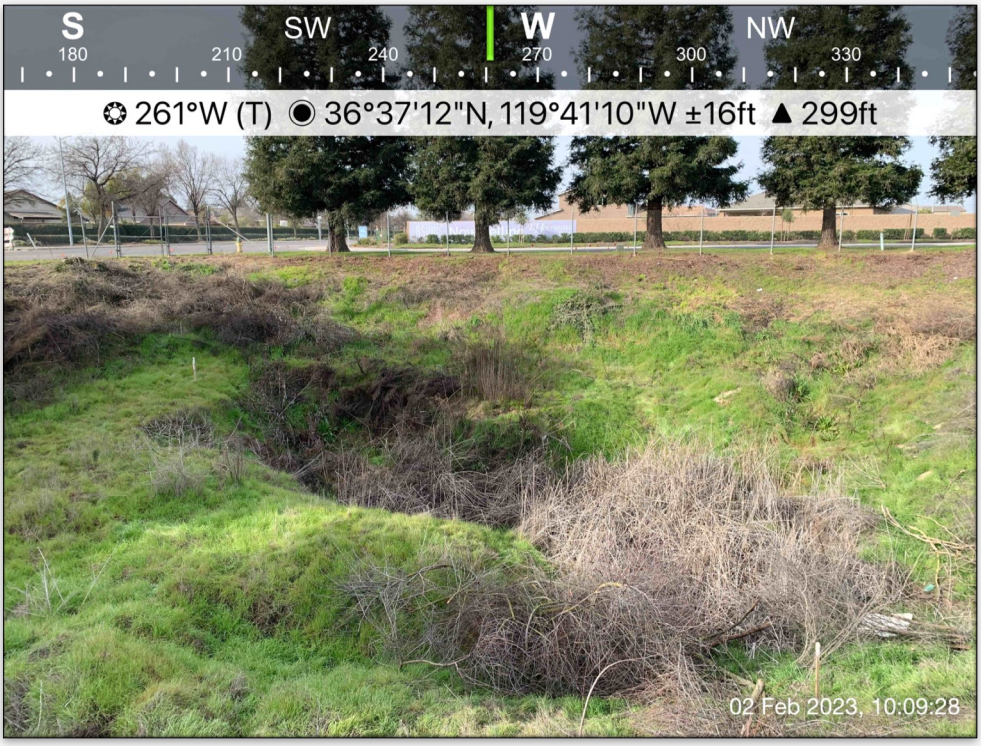
NEW WATER WELL NO. 9

Photograph 1

Overview of the APE facing south. Three coast redwoods can be seen in the background.

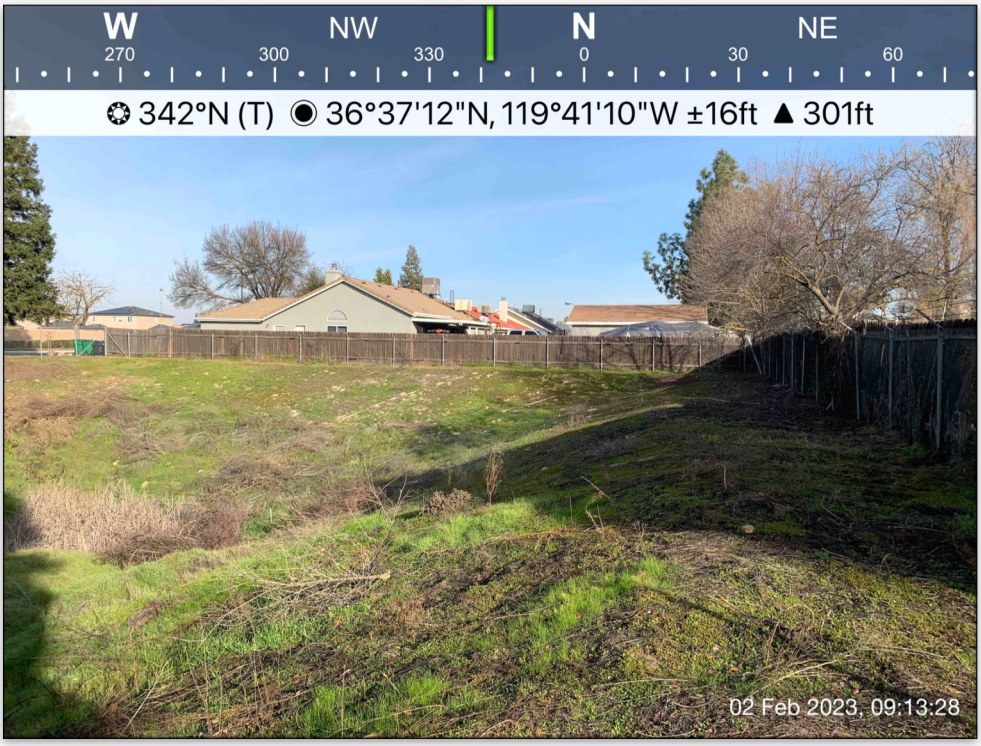
Photograph 2

Overview of the basin previously used for stormwater retention facing east.



Photograph 3

Overview of the basin previously used for stormwater retention facing west.



Photograph 4

Overview of the east side of the APE facing north.

Photograph 5

Overview of the south side of the APE facing west. Additional coast redwoods can be seen on the west side of the APE.

Photograph 6

Overview of the surrounding area to the north.

Photograph 7

Overview of the surrounding area to the west.

Photograph 8

Overview of the west end of the APE from Stanford Avenue facing south.

Appendix B: CNDDB 9-Quad Search

CITY OF FOWLER

NEW WATER WELL NO. 9

Selected Elements by Common Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Conejo (3611956) OR Caruthers (3611957) OR Fresno South (3611967) OR Malaga (3611966) OR Sanger (3611965) OR Selma (3611955) OR Burris Park (3611945) OR Laton (3611946) OR Riverdale (3611947))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
alkali-sink goldfields *Lasthenia chrysantha*	PDAST5L030	None	None	G2	S2	1B.1
Antioch efferian robberfly *Efferia antiochi*	IIDIP07010	None	None	G1G2	S1S2	
bristly sedge *Carex comosa*	PMCYP032Y0	None	None	G5	S2	2B.1
brittlescale *Atriplex depressa*	PDCHE042L0	None	None	G2	S2	1B.2
burrowing owl *Athene cunicularia*	ABNSB10010	None	None	G4	S3	SSC
California alkali grass *Puccinellia simplex*	PMPOA53110	None	None	G2	S2	1B.2
California glossy snake *Arizona elegans occidentalis*	ARADB01017	None	None	G5T2	S2	SSC
California jewelflower *Caulanthus californicus*	PDBRA31010	Endangered	Endangered	G1	S1	1B.1
California linderiella *Linderiella occidentalis*	ICBRA06010	None	None	G2G3	S2S3	
California satintail *Imperata brevifolia*	PMPOA3D020	None	None	G3	S3	2B.1
California tiger salamander - central California DPS *Ambystoma californiense pop. 1*	AAAAA01181	Threatened	Threatened	G2G3T3	S3	WL
coast horned lizard *Phrynosoma blainvillii*	ARACF12100	None	None	G3G4	S4	SSC
Crotch bumble bee *Bombus crotchii*	IIHYM24480	None	Candidate Endangered	G2	S1S2	
Greene's tuctoria *Tuctoria greenei*	PMPOA6N010	Endangered	Rare	G1	S1	1B.1
hoary bat *Lasiurus cinereus*	AMACC05032	None	None	G3G4	S4	
Hurd's metapogon robberfly *Metapogon hurdi*	IIDIP08010	None	None	G1G2	S1S2	
lesser saltscale *Atriplex minuscula*	PDCHE042M0	None	None	G2	S2	1B.1
Madera leptosiphon *Leptosiphon serrulatus*	PDPLM09130	None	None	G3	S3	1B.2
molestan blister beetle *Lytta molesta*	IICOL4C030	None	None	G2	S2	

Selected Elements by Common Name

California Department of Fish and Wildlife

California Natural Diversity Database

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Northern California legless lizard *Anniella pulchra*	ARACC01020	None	None	G3	S2S3	SSC
pallid bat *Antrozous pallidus*	AMACC10010	None	None	G4	S3	SSC
Panoche pepper-grass *Lepidium jaredii ssp. album*	PDBRA1M0G2	None	None	G2G3T2T3	S2S3	1B.2
San Joaquin kit fox *Vulpes macrotis mutica*	AMAJA03041	Endangered	Threatened	G4T2	S2	
San Joaquin pocket mouse *Perognathus inornatus*	AMAFD01060	None	None	G2G3	S2S3	
Swainson's hawk *Buteo swainsoni*	ABNKC19070	None	Threatened	G5	S3	
valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	IICOL48011	Threatened	None	G3T2T3	S3	
Valley Sacaton Grassland *Valley Sacaton Grassland*	CTT42120CA	None	None	G1	S1.1	
vernal pool fairy shrimp *Branchinecta lynchi*	ICBRA03030	Threatened	None	G3	S3	
vernal pool tadpole shrimp *Lepidurus packardi*	ICBRA10010	Endangered	None	G4	S3	
western mastiff bat *Eumops perotis californicus*	AMACD02011	None	None	G4G5T4	S3S4	SSC
western spadefoot *Spea hammondii*	AAABF02020	None	None	G2G3	S3S4	SSC
western yellow-billed cuckoo *Coccyzus americanus occidentalis*	ABNRB02022	Threatened	Endangered	G5T2T3	S1	

Record Count: 32

Appendix C: IPaC Search

CITY OF FOWLER

NEW WATER WELL NO. 9

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To:
Project Code: 2023-0047039
Project Name: Fowler Well 9

February 18, 2023

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)

(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

PROJECT SUMMARY

Project Code: 2023-0047039
Project Name: Fowler Well 9
Project Type: Water Supply Facility - Withdrawal - Groundwater
Project Description: The Project involves backfilling the stormwater retention pond in order to develop the new well site. An initial mobilization would occur to drill a test well and conduct water quality sampling and a separate mobilization would be required to construct a final production well.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@36.62018755,-119.68642667996725,14z

Counties: Fresno County, California

ENDANGERED SPECIES ACT SPECIES

There is a total of 6 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. 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.

MAMMALS

NAME	STATUS
Fresno Kangaroo Rat *Dipodomys nitratoides exilis* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5150	Endangered
San Joaquin Kit Fox *Vulpes macrotis mutica* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2873	Endangered

REPTILES

NAME	STATUS
Blunt-nosed Leopard Lizard *Gambelia silus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/625	Endangered

AMPHIBIANS

NAME	STATUS
California Tiger Salamander *Ambystoma californiense* Population: U.S.A. (Central CA DPS) There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2076	Threatened

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus*	Candidate

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/9743

CRUSTACEANS

NAME	STATUS
Vernal Pool Fairy Shrimp *Branchinecta lynchi*	Threatened

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/498

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

IPAC USER CONTACT INFORMATION

Agency: Provost & Pritchard Consulting Group
Name: Roman Endicott
Address: 455 W. Fir Ave
City: Clovis
State: CA
Zip: 93611
Email rendicott@ppeng.com
Phone: 5594492700

Appendix D: NRCS Soils Report

CITY OF FOWLER

NEW WATER WELL NO. 9

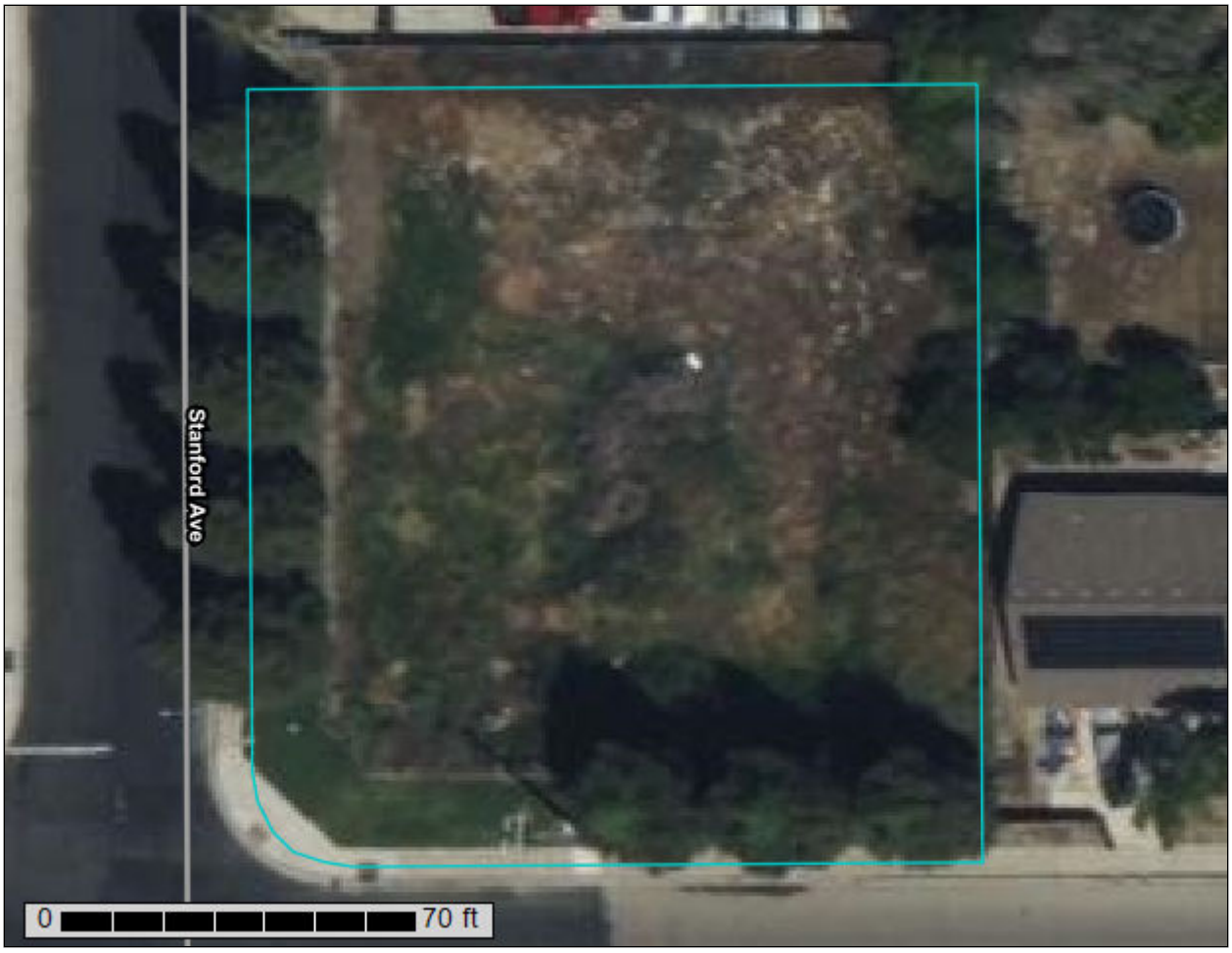
United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Eastern Fresno Area, California



December 28, 2022

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

Preface.....2
How Soil Surveys Are Made.....5
Soil Map.....8
Soil Map.....9
Legend.....10
Map Unit Legend.....11
Map Unit Descriptions.....11
Eastern Fresno Area, California.....13
Hsr—Hesperia fine sandy loam, very deep.....13
References.....15

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

Map Scale: 1:342 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 5 10 20 30

Feet: 0 15 30 60 90

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Eastern Fresno Area, California
Survey Area Data: Version 15, Sep 1, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 16, 2022—May 30, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Hsr	Hesperia fine sandy loam, very deep	0.5	100.0%
Totals for Area of Interest		**0.5**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Eastern Fresno Area, California

Hsr—Hesperia fine sandy loam, very deep

Map Unit Setting

National map unit symbol: 2yc9f
Elevation: 240 to 320 feet
Mean annual precipitation: 10 to 12 inches
Mean annual air temperature: 63 to 64 degrees F
Frost-free period: 316 to 327 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Hesperia and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hesperia

Setting

Landform: Alluvial fans
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite

Typical profile

Ap1 - 0 to 5 inches: fine sandy loam
Ap2 - 5 to 11 inches: fine sandy loam
Bt - 11 to 32 inches: fine sandy loam
Btk - 32 to 60 inches: fine sandy loam
2Bdk - 60 to 67 inches: stratified silt loam
2Cd - 67 to 79 inches: stratified silt loam

Properties and qualities

Slope: 0 percent
Depth to restrictive feature: 60 inches to densic material
Drainage class: Well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low (0.01 to 0.14 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Rare
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Moderate (about 7.8 inches)

Interpretive groups

Land capability classification (irrigated): 1
Land capability classification (nonirrigated): 4c
Hydrologic Soil Group: B
Ecological site: R017XY905CA - Dry Alluvial Fans and Terraces
Hydric soil rating: No

Minor Components

Unnamed, loam surface

Percent of map unit: 10 percent
Landform: Alluvial fans
Hydric soil rating: No

Unnamed

Percent of map unit: 5 percent
Landform: Alluvial fans
Hydric soil rating: No

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Appendix C: Phase I Survey

Draft

PHASE I SURVEY, FOWLER WELL NUMBER 9 PROJECT, FRESNO COUNTY, CALIFORNIA

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PN 36510.30

TABLE OF CONTENTS

Chapter **Page**

MANAGEMENT SUMMARY ..... **iii**

1. INTRODUCTION AND REGULATORY CONTEXT **1**
1.1 STUDY AREA LOCATION 1
1.2 PROJECT DESCRIPTION 1
1.3 REGULATORY CONTEXT 2
1.3.1 California Environmental Quality Act 2

2. ENVIRONMENTAL AND CULTUAL BACKGROUND **5**
2.1 ENVIRONMENTAL BACKGROUND 5
2.2 ETHNOGRAPHIC BACKGROUND 5
2.3 PRE-CONTACT ARCHAEOLOGICAL BACKGROUND 7
2.4 HISTORICAL BACKGROUND 9

3. ARCHIVAL RECORDS SEARCH **13**

4. METHODS AND RESULTS **15**
4.1 INVENTORY RESULTS 15

5. SUMMARY AND RECOMMENDATIONS **17**
5.1 RECOMMENDATIONS 17

REFERENCES **19**

CONFIDENTIAL APPENDIX A **23**

LIST OF FIGURES

Page

Figure 1. Location of the Fowler Well Number 9 Project, Fowler, Fresno County, California. 3
Figure 2a: Fowler Well Number 9 Project study area looking toward the intersection of E. South and Stanford Avenues. View toward the southwest. 16
Figure 2b: Fowler Well Number 9 Project study area looking toward residential areas along Stanford Avenue. View toward the northwest. 16

LIST OF TABLES

Page

Table 1. Survey Reports within 0.5 Miles of the Study Area 13

MANAGEMENT SUMMARY

An intensive Phase I cultural resources survey was conducted for the Fowler Well Number 9 Project (Project), Fowler, Fresno County, California. This study was conducted by ASM Affiliates, Inc. (ASM), with Peter A. Carey, M.A., RPA, serving as Principal Investigator. Background studies and fieldwork for the survey were completed in February 2023. The study was undertaken to assist with California Environmental Quality Act (CEQA) compliance.

A records search of site files and maps was completed February 6th, 2023, at the Southern San Joaquin Valley Information Center (SSJVIC), California State University, Bakersfield. A search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed March 15th, 2023. These investigations determined that the study area had not been previously surveyed and no sacred sites or traditional cultural places had been identified within or adjacent to this area. There have been ten previous studies conducted with 0.5-mile (mi) of the study area, and there are three recorded resources within 0.5-mi of the study area.

The study area for this Project totals approximately 0.61-acres (ac). The Phase I survey fieldwork was conducted on February 14th, 2023, with parallel transects spaced at 15-meter (m) intervals across the study area. No cultural resources were identified within the study area during the Phase I survey.

No historical resources or historic properties were discovered within the study area, and the potential for buried subsurface remains, given that the study area consists of an existing basin which will be filled in, is low. Based on these findings, the construction of the Project does not have the potential to result in adverse impacts to significant historical resources or properties, and no additional cultural resource studies are recommended.

In the unlikely event that cultural resources are identified during the project, it is recommended that a qualified archaeologist be contacted to evaluate the newly discovered resource. Further mitigation, including subsurface testing, may be required to determine the discovery's eligibility for California Register of Historical Resources (CRHR).

1. INTRODUCTION AND REGULATORY CONTEXT

ASM Affiliates was retained by Provost & Pritchard Consulting Group on behalf of the City of Fowler Water Department to conduct an intensive Phase I cultural resources survey for the Fowler Well Number 9 Project (Project), Fowler, Fresno County, California. The purpose of this archaeological investigation was to assist with compliance with the California Environmental Quality Act (CEQA).

This current investigation included:

- A background records search and literature review to determine if any known archaeological sites were present in the project zone and/or whether the study area had been previously and systematically studied by archaeologists;
- A search of the NAHC *Sacred Lands File* to determine if any traditional cultural places or cultural landscapes have been identified within the area;
- An on-foot, intensive inventory of the study area to identify and record previously undiscovered cultural resources and to examine known sites; and
- A preliminary assessment of any such resources found within the subject property.

This study was conducted by ASM Affiliates, Inc., of Tehachapi, California, in February 2023. Peter A. Carey, M.A., RPA, served as Principal Investigator, and ASM Assistant Archaeologist Maria Silva, B.A., conducted the fieldwork.

This manuscript constitutes a report on the Phase I survey. Subsequent chapters provide background to the investigation, including historic context studies; the findings of the archival records search; a summary of the field surveying techniques employed; and the results of the fieldwork. We conclude with management recommendations for the study area.

1.1 STUDY AREA LOCATION

The study area is located within the city limits of Fowler, Fresno County, California (Figure 1). The study area consists of 0.61-ac on the northeast corner of Stanford Avenue and East South Avenue with residential neighborhoods on the north, east, and west. An agricultural field is located to the south. The Project study area is located in the southeast corner of Section 16 in Township 15 South, Range 21 East (T13S/R21E), Mount Diablo Base and Meridian (MDBM). This places the Project area on the open flats of the San Joaquin Valley, at an elevation of approximately 300-feet (ft) above mean sea level.

1.2 PROJECT DESCRIPTION

The City of Fowler Water Department proposes the construction of a new water well (Well No. 9) within City limits. The area currently consists of an existing water basin which will be filled back to grade. The proposed well will be constructed atop the new ground surface.

1.3 REGULATORY CONTEXT

1.3.1 California Environmental Quality Act

CEQA is applicable to discretionary actions by state or local lead agencies. Under CEQA, lead agencies must analyze impacts to cultural resources. Significant impacts under CEQA occur when "historically significant" or "unique" cultural resources are adversely affected, which occurs when such resources could be altered or destroyed through project implementation. Historically significant cultural resources are defined by eligibility for or by listing in the California Register of Historical Resources (CRHR). In practice, the federal NRHP criteria for significance applied under Section 106 are generally (although not entirely) consistent with CRHR criteria (see PRC § 5024.1, Title 14 CCR, Section 4852 and § 15064.5(a)(3)).

Significant cultural resources are those archaeological resources and historical properties that:

(A) Are associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

(B) Are associated with the lives of persons important in our past;

(C) Embody the distinctive characteristics of a type, period, region, or method of construction, or represent the work of an important creative individual, or possess high artistic values; or

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

Unique resources under CEQA, in slight contrast, are those that represent:

An archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

(1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.

(2) Has a special and particular quality such as being the oldest of its type or the best available example of its type.

(3) Is directly associated with a scientifically recognized important prehistoric or historic event or person (PRC § 21083.2(g)).

Preservation in place is the preferred approach under CEQA to mitigating adverse impacts to significant or unique cultural resources.

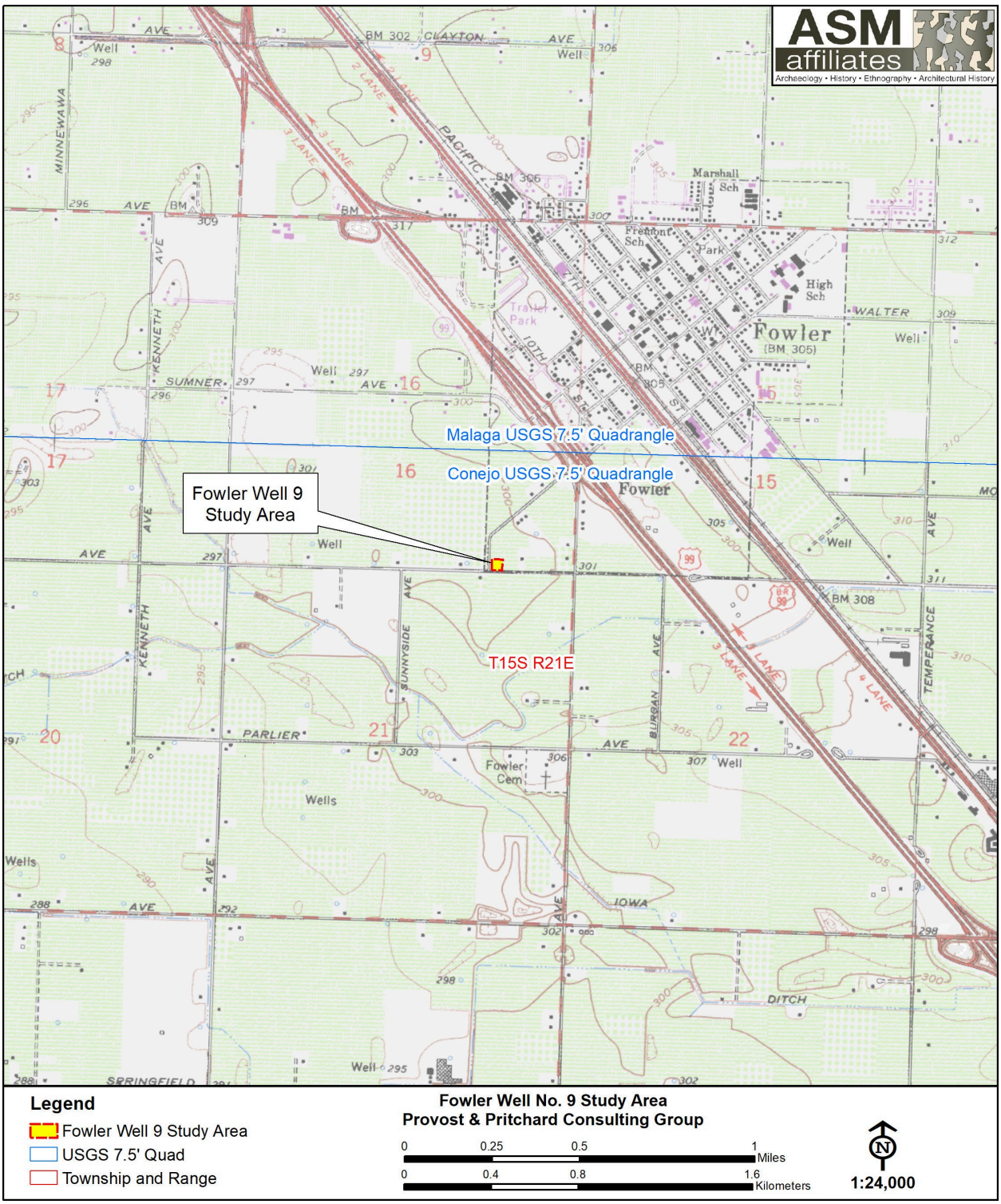

Figure 1. Location of the Fowler-Well Number 9 Project study area, Fowler, Fresno County, California.

2. ENVIRONMENTAL AND CULTURAL BACKGROUND

2.1 ENVIRONMENTAL BACKGROUND

As noted above, the study area is located at about 300-ft elevation on the open flats of the San Joaquin Valley, about 9-mi southeast of Fresno, within the limits of Fowler, California. Prior to the appearance of agriculture, starting in the nineteenth century, this location would have been prairie grasslands (Preston 1981). The study area and immediate surroundings have been urbanized and/or farmed and grazed for many years and no native vegetation is present. Perennial bunchgrasses such as purple needlegrass and nodding needlegrass most likely would have been the dominant plant cover in the study area prior to cultivation. Currently, the study area consists of an open lot surrounded by commercial and residential properties.

At the time of the Phase I survey, the Project study area consisted of an excavated stormwater catchment basin with residential housing to the north, west, and east. Although the study area has been impacted by the excavation of the basin and modern landscaping, the landscape has likely not changed much historically. Vegetation in the study area currently consists of sparse forbs and grasses.

2.2 ETHNOGRAPHIC BACKGROUND

Penutian-speaking Yokuts tribal groups occupied the southern San Joaquin Valley region and much of the nearby Sierra Nevada. Ethnographic information about the Yokuts was collected primarily by Powers (1971, 1976 [originally 1877]), Kroeber (1925), Gayton (1930, 1948), Driver (1937), Latta (1977), and Harrington (n.d.). For a variety of historical reasons, existing research information emphasizes the central Yokuts tribes who occupied both the valley and particularly the foothills of the Sierra. The northernmost tribes suffered from the influx of Euro-Americans during the Gold Rush and their populations were in substantial decline by the time ethnographic studies began in the early twentieth century. In contrast, the southernmost tribes were partially removed by the Spanish to missions and eventually absorbed into multi-tribal communities on the Sebastian Indian Reservation (on Tejon Ranch), and later the Tule River Reservation and Santa Rosa Rancheria to the north, as well as other reservations in the foothills and Sierras. The result is an unfortunate scarcity of ethnographic detail on valley tribes, especially in relation to the rich information collected from the central foothills tribes where native speakers of the Yokuts dialects are still found. Regardless, the general details of indigenous life-ways were similar across the broad expanse of Yokuts territory, particularly in terms of environmentally influenced subsistence and adaptation and with regard to religion and belief, which were similar everywhere.

Following Kroeber (1925: Plate 47), the study area most likely lies in Wechihit territory. The nearest village to the study area for this group was *Musahau*, approximately 8.5-mi northeast near Sanger.

Most Yokuts groups, regardless of specific tribal affiliation, were organized as a recognized and distinct tribelet; a circumstance that almost certainly pertained to the tribal groups noted above. Tribelets were land-owning groups organized around a central village and linked by shared territory and descent from a common ancestor. The population of most tribelets ranged from about 150 to 500 peoples (Kroeber 1925).

Each tribelet was headed by a chief who was assisted by a variety of assistants, the most important of whom was the *winatum*, a herald or messenger and assistant chief. A shaman also served as religious officer. While shamans did not have any direct political authority, as Gayton (1930) has illustrated, they maintained substantial influence within their tribelet.

Shamanism is a religious system common to most Native American tribes. It involves a direct and personal relationship between the individual and the supernatural world enacted by entering a trance or hallucinatory state (usually based on the ingestion of psychotropic plants, such as jimsonweed or more typically native tobacco). Shamans were considered individuals with an unusual degree of supernatural power, serving as healers or curers, diviners, and controllers of natural phenomena (such as rain or thunder). Shamans also produced the rock art of this region, depicting the visions they experienced in vision quests believed to represent their spirit helpers and events in the supernatural realm (Whitley 1992, 2000).

The centrality of shamanism to the religious and spiritual life of the Yokuts was demonstrated by the role of shamans in the yearly ceremonial round. The ritual round, performed the same each year, started in the spring with the jimsonweed ceremony, followed by rattlesnake dance and (where appropriate) first salmon ceremony. After returning from seed camps, fall rituals began in the late summer with the mourning ceremony, followed by first seed and acorn rites and then bear dance (Gayton 1930:379). In each case, shamans served as ceremonial officials responsible for specific dances involving a display of their supernatural powers (Kroeber 1925).

Subsistence practices varied from tribelet to tribelet based on the environment of residence. Throughout Native California, and Yokuts territory in general, the acorn was a primary dietary component, along with a variety of gathered seeds. Valley tribes augmented this resource with lacustrine and riverine foods, especially fish and wildfowl. As with many Native California tribes, the settlement and subsistence rounds included the winter aggregation into a few large villages, where stored resources (like acorns) served as staples, followed by dispersal into smaller camps, often occupied by extended families, where seasonally available resources would be gathered and consumed.

Although population estimates vary and population size was greatly affected by the introduction of Euro-American diseases and social disruption, the Yokuts were one of the largest, most successful groups in Native California. Cook (1978) estimates that the Yokuts region contained 27 percent of the aboriginal population in the state at the time of contact; other estimates are even higher. Many Yokut descendants continue to live in Fresno County, either on tribal reservations, or in local towns and communities.

2.3 PRE-CONTACT ARCHAEOLOGICAL BACKGROUND

The southern San Joaquin Valley region has received much less archaeological attention than other areas of the state. In part, this is because the majority of California archaeological work has concentrated in the Sacramento Delta, Santa Barbara Channel, and central Mojave Desert areas (see Moratto 1984). Although knowledge of the region's prehistory is limited, enough is known to determine that the archaeological record is broadly similar to south-central California as a whole (see Gifford and Schenk 1926; Hewes 1941; Wedel 1941; Fenenga 1952; Elsasser 1962; Fredrickson and Grossman 1977; Schiffman and Garfinkel 1981; Rosenthal et al. 2007). Indeed, Gifford and Schenk (1926) were the first to identify the similarity between southern San Joaquin Valley prehistory and the archaeological record along the Santa Barbara Channel, a specific observation that was analytically verified more recently by Siefkin (1999). This circumstance, overlooked by some subsequent researchers, has resulted in confusion in the literature due to the application of the Sacramento Delta chronology on the local archaeological record, where it has never really fit. Based on these sources and this observation, the general prehistory of the region can be outlined in south-central California terms, as follows.

Initial occupation of the region occurred at least as early as the *Paleoindian Period*, or prior to about 10,000 years before present (YBP). Evidence of early use of the region is indicated by characteristic fluted and stemmed points found around the margin of Tulare Lake, in the foothills of the Sierra, and in the Mojave Desert proper. Both fluted and stemmed points are particularly common around lake margins (e.g., Wallace and Riddell 1993), suggesting a terminal Pleistocene/early Holocene lakeshore adaptation similar to that found throughout the far west at the same time. Little else is known about these earliest peoples at this point, however, in part because the locations of their recorded sites occur in lakeshore contexts that have experienced repetitive transgressive and regressive shorelines, resulting in mixed archaeological deposits.

Substantial evidence for human occupation of California first occurs during the Early Holocene, roughly 7500 to 4000 YBP. This period is known as the *Early Horizon*, or alternatively as the Early Millingstone along the Santa Barbara Channel. In the south, populations concentrated along the coast with minimal visible use of inland areas. Adaptation emphasized hard seeds and nuts with tool-kits dominated by mullers and grindstones (manos and metates). Little evidence for Early Horizon occupation exists in most inland portions of the state with (again) the exceptions being along lakeshores, partly due to a severe cold and dry paleoclimatic period occurring at this time. Regardless of specifics, Early Horizon population density was low with a subsistence adaptation more likely tied to plant food gathering than hunting.

Environmental conditions improved dramatically after about 4000 YBP during the *Middle Horizon* (or Intermediate Period). This period known climatically as the Holocene Maximum (circa 3800 YBP) and was characterized by significantly warmer and wetter conditions than previously experienced. Archaeologically, it was marked by large population increase and radiation into new environments along coastal and interior south-central California and the Mojave Desert (Whitley 2000). In the Delta region to the north, this same period of favorable environmental conditions was characterized by the appearance of the Windmiller culture, which exhibited a high degree of ritual elaboration (especially in burial practices) and perhaps even a rudimentary mound-building tradition (Meighan, personal communication 1985). Along with ritual elaboration, Middle Horizon

times experienced increasing subsistence specialization, perhaps correlating with the appearance of acorn processing technology. Penutian speaking peoples (including the Yokuts) are also hypothesized to have entered the state roughly at the beginning of this period and, perhaps to have brought this technology with them (cf. Moratto 1984). Likewise it appears the so-called "Shoshonean Wedge" in southern California or the Takic speaking groups that include the Gabrielino/Fernandeño, Tataviam, and Kitanemuk, may have moved into the region at this time, rather than at about 1500 YBP as first suggested by Kroeber (1925).

Evidence for Middle Horizon occupation of interior south-central California is substantial. For example, in northern Los Angeles County along the upper Santa Clara River, to the south of the San Joaquin Valley, the Agua Dulce village complex indicates occupation extending back to the Intermediate Period, when the population of the village may have been 50 or more people (King et al. n.d.). Similarly, inhabitation of the Hathaway Ranch region near Lake Piru, and the Newhall Ranch near Valencia, appears to date to the Intermediate Period (W&S Consultants 1994). To the west, little or no evidence exists for pre-Middle Horizon occupation in the upper Sisquoc and Cuyama River drainages; populations first appear there at roughly 3500 YBP (Horne 1981). The Carrizo Plain, the valley immediately west of the San Joaquin, experienced a major population expansion during the Middle Horizon (W&S Consultants 2004; Whitley et al. 2007), and recently collected data indicates the Tehachapi Mountains region was first significantly occupied during the Middle Horizon (W&S Consultants 2006). A parallel can be drawn to the inland Ventura County region where a similar pattern has been identified (Whitley and Beaudry 1991), as well as the western Mojave Desert (Sutton 1988a, 1988b), the southern Sierra Nevada (W&S Consultants 1999), and the Coso Range region (Whitley et al. 1988). In all of these areas a major expansion in settlement, the establishment of large site complexes, and an increase in the range of environments exploited appear to have occurred sometime roughly around 4,000 years ago. Although most efforts to explain this expansion have focused on local circumstances and events, it is increasingly apparent this was a major southern California-wide occurrence, and any explanation must be sought at a larger level of analysis (Whitley 2000). Additionally, evidence from the Carrizo Plain suggests the origins of the tribelet level of political organization developed during this period (W&S Consultants 2004; Whitley et al. 2007). Whether this same demographic process holds for the southern San Joaquin Valley, including the study area, is yet to be determined.

The beginning of the *Late Horizon* is set variously at 1500 and 800 YBP, with a consensus for the shorter chronology. Increasing evidence suggests the importance of the Middle-Late Horizon transition (A.D. 800 to 1200) in the understanding of south-central California. This corresponds to the so-called Medieval Climatic Anomaly, a period of climatic instability that included major droughts and resulted in demographic disturbances across much of the west (Jones et al. 1999). It is also believed to have resulted in major population decline and abandonments across south-central California, involving as much as 90 percent of the interior populations in some regions including the Carrizo Plain (Whitley et al. 2007). It is not clear whether site abandonment was accompanied by a true reduction in population or an agglomeration of the same numbers of people into fewer but larger villages. What is clear is that Middle Period villages and settlements were widely dispersed across the landscape; many at locations that lack contemporary evidence of fresh water sources. Late Horizon sites, in contrast, are typically located where fresh water was available during the historical period, if not currently.

The Late Horizon then can be best understood as a period of recovery from a major demographic collapse. One result is the development of regional archaeological cultures as the precursors to ethnographic Native California; suggesting that ethnographic life-ways recorded by anthropologists extend at least 800 years into the past.

The position of southern San Joaquin Valley prehistory relative to patterns seen in surrounding areas is still somewhat unknown. The presence of large lake systems in the valley bottoms can be expected to have mediated some of the desiccation seen elsewhere. But, as the reconstruction of Soda Lake in the Carrizo Plain demonstrates (see Whitley et al. 2007) environmental perturbations had serious impacts on lake systems too. Identifying certain of the prehistoric demographic trends for the southern San Joaquin Valley and determining how these trends (if present) correlate with those seen elsewhere, is a current important research objective.

2.4 HISTORICAL BACKGROUND

Spanish explorers first visited the San Joaquin Valley in 1772, but its lengthy distance from the missions and presidios along the Pacific Coast delayed permanent settlement for many years, including during the Mexican period of control over the Californian region. In the 1840s, Mexican rancho owners along the Pacific Coast allowed their cattle to wander and graze in the San Joaquin Valley. The Mexican government granted the first ranchos in the southern part of the San Joaquin Valley in the early 1840s, but these did not result in permanent settlement. It was not until the annexation of California in 1848 that the exploitation of the southern San Joaquin Valley began (Pacific Legacy 2006).

The discovery of gold in northern California in 1848 resulted in a dramatic increase of population, consisting in good part of fortune seekers and gold miners, who began to scour other parts of the state. After 1851, when gold was discovered in the Sierra Nevada Mountains in eastern Kern County, the population of the area grew rapidly. Some new immigrants began ranching in the San Joaquin Valley to supply the miners and mining towns. Ranchers grazed cattle and sheep, and farmers dry-farmed or used limited irrigation to grow grain crops, leading to the creation of small agricultural communities throughout the valley (Caltrans 2007).

After the American annexation of California, the southern San Joaquin Valley became significant as a center of food production for this new influx of people in California. The expansive unfenced and principally public foothill spaces were well suited for grazing both sheep and cattle (Boyd 1997). As the Sierra Nevada gold rush presented extensive financial opportunities, ranchers introduced new breeds of livestock, consisting of cattle, sheep and pig (Boyd 1997).

With the increase of ranching in the southern San Joaquin came the dramatic change in the landscape, as non-native grasses more beneficial for grazing and pasture replaced native flora (Preston 1981). After the passing of the Arkansas Act in 1850, efforts were made to reclaim small tracts of land in order to create more usable spaces for ranching. Eventually, as farming supplanted ranching as a more profitable enterprise, large tracts of land began to be reclaimed for agricultural use, aided in part by the extension of the railroad in the 1870s (Pacific Legacy 2006).

Following the passage of state-wide 'No-Fence' laws in 1874, ranching practices began to decline, while farming expanded in the San Joaquin Valley in both large land holdings and smaller, subdivided properties. As the farming population grew, so did the demand for irrigation. Settlers began reclamation of swampland in 1866 and built small dams across the Kern River to divert water into the fields. By 1880, 86 different groups were taking water from the Kern River. Ten years later, 15 major canals provided water to thousands of acres in Kern County.

During the period of reclaiming unproductive land in the southern San Joaquin Valley, grants were given to individuals who had both the resources and the finances to undertake the operation alone. One small agricultural settlement, founded by Colonel Thomas Baker in 1861 after procuring one such grant, took advantage of reclaimed swampland along the Kern River. This settlement became the City of Bakersfield in 1869, and quickly became the center of activity in the southern San Joaquin Valley, and in the newly formed Kern County. Located on the main stage road through the San Joaquin Valley, the town became a primary market and transportation hub for stock and crops, as well as a popular stopping point for travelers on the Los Angeles and Stockton Road. The Southern Pacific Railroad reached the Bakersfield area in 1873, connecting it with important market towns elsewhere in the state, dramatically impacting both agriculture and oil production (Pacific Legacy 2006).

Three competing partnerships developed during this period which had a great impact on control of water, land reclamation and ultimately agricultural development in the San Joaquin Valley: Livermore and Chester, Haggin and Carr, and Miller and Lux, perhaps the most famous of the enterprises. Livermore and Chester were responsible, among other things, for developing the large Hollister plow (three feet wide by two feet deep), pulled by a 40-mule team, which was used for ditch digging. Haggin and Carr were largely responsible for reclaiming the beds of the Buena Vista and Kern lakes, and for creating the Calloway Canal, which drained through the Rosedale area in Bakersfield to Goose Lake (Morgan 1914). Miller and Lux ultimately became one of the biggest private property holders in the country, controlling the rights to over 22,000 square miles. Miller and Lux's impact extended beyond Kern County, however. They recognized early-on that control of water would have important economic implications, and they played a major role in the water development of the region (http://www.mariposaresearch.net/santaclararesearch/SCBIOS/hmiller.html). They were also embroiled for many years in litigation against Haggin and Carr over control of the water rights to the Kern River.

The San Joaquin Valley was dominated by agricultural pursuits until the oil boom of the early 1900s, which saw a shift in the region, as some reclaimed lands previously used for farming were leased to oil companies. Nonetheless, the shift of the San Joaquin Valley towards oil production did not halt the continued growth of agriculture (Pacific Legacy 2006). The Great Depression of the 1930s brought with it the arrival of great number of migrants from the drought-affected Dust Bowl region, looking for agricultural labor. These migrants established temporary camps in the valley, staying on long past the end of the drought and the Great Depression, eventually settling in towns such as Bakersfield where their descendants live today (Boyd 1997).

The city of Fresno (originally "Fresno Station"), the county seat for Fresno County, located a short distance east of the APE, was founded in 1872 and incorporated in 1885. It was initially developed

as a railway station along the Central Pacific Railroad, but quickly expanded with the development of irrigation in the region. Farmers saw success with the cultivation of wheat, grapes, and cattle. Eventually, Fresno County became one of the most agriculturally-rich counties in the United States (https://www.fresno.gov/darm/historic-preservation/history-of-fresno/).

Following the completion of the transcontinental railroad in 1869, the Central Pacific Railroad, predecessor to the Southern Pacific Railroad, began construction of a Central Valley route to connect southern California with the commerce center of the San Francisco Bay. The segment through Fowler was laid around 1872. Thomas Fowler, a State Senator from 1869–1872, owned the ranch where a railroad switch was built by the Central Pacific Railroad (HMdb.org 2010). The town developed around the railroad switch and became known as Fowler's Switch. The Valley branch of the historic Southern Pacific Railroad is presently owned and operated by the Union Pacific Railroad. (State of California Office of Historic Preservation 2019). A post office branch was established in Fowler in 1882 (Durham 1998), the name was eventually shortened and the City of Fowler was incorporated in 1908 (CALAFCO 2013). In May 1973, Fowler's Switch was registered as a California Point of Interest for its local significance to Fowler. The marker for the Fowler Switch is located at the intersection of East Merced Street and South 7th Street (City of Fowler 2022).

3. ARCHIVAL RECORDS SEARCH

In order to determine whether the Project study area had been previously surveyed for cultural resources, and/or whether any such resources were known within it, an archival records search was conducted by the staff of the SSJVIC on February 6th, 2023. This study is included in Confidential Appendix A of this report and is summarized below.

The records search was completed to determine: (i) if prehistoric or historical archaeological sites had previously been recorded within the study area; (ii) if the study area had been systematically surveyed by archaeologists prior to the initiation of this field study; and/or (iii) whether the surrounding region was known to contain archaeological sites and to thereby be archaeologically sensitive. Records examined included archaeological site files and maps, the NRHP, Historic Property Data File, California Inventory of Historic Resources, and the California Points of Historic Interest. The NAHC SLF were also searched to determine whether tribal cultural resources are present.

According to the IC records search (Confidential Appendix A), no previous studies have been conducted for the project area, and no resources of any kind are known to exist within it. According to the records search, three surveys have previously been conducted within 0.5-mi of the Project study area (Table 1) but there are no known resources located within a 0.5-mi radius of the Project.

Table 1. Survey Reports within 0.5-mi of the Study Area

Report No	Year	Author (s)/Affiliation	Title
FR-01636	1998	Price, Barry A. / Applied EarthWorks, Inc.	Cultural Resources Assessment - Pacific Bell Mobile Services Facility CV-520-04, Fowler, Fresno County, California
FR-01837	2000	Billat, Lorna / EarthTouch, LLC.	Nextel Communications Wireless Telecommunications Service Facility, Fresno County
FR-02108	2005	Martinez, Al / Michael Brandman Associates	Request for SHPO Review of FCC Undertaking (FAT-054A-Fowler)

An SLF request was reviewed by the NAHC on March 15th, 2023. The results for the SLF search were negative. Additionally, the NAHC provided a list of Native American tribes who have knowledge of the project area. ASM wrote to contacts provided by the NAHC for additional information pertaining to the project on February 24th, 2023 and March 15th, 2023. Additional follow-up emails were sent on March 27th, 2023. One response was received by the Traditional Choinumni Tribe stating that they have no knowledge of cultural resources, areas, or concerns within the project area. The results of the previous consultation are available in Confidential Appendix A.

4. METHODS AND RESULTS

An intensive Phase I survey of the Fowler Well Number 9 Project study area was conducted by ASM Assistant Archaeologist Maria Silva, B.A. The field methods employed included intensive pedestrian examination of the ground surface for evidence of archaeological sites in the form of artifacts, surface features (such as bedrock mortars, historical mining equipment), and archaeological indicators (e.g., organically enriched midden soil, burnt animal bone); the identification and location of any discovered sites, should they be present; tabulation and recording of surface diagnostic artifacts; site sketch mapping; preliminary evaluation of site integrity; and site recording, following the California Office of Historic Preservation Instructions for Recording Historic Resources, using DPR 523 forms. Parallel survey transects spaced at 15-m intervals were employed for the inventory.

The study area was surveyed on February 14th, 2023. Soils throughout the study area are alluvial sandy loam with gravels. The study area currently consists of an excavated stormwater run-off catchment basin with a narrow collar of intact native soils along the perimeter of the property. Vegetative cover was minimal and consisted of invasive weed species (see Figures 2a and 2b) and ground surface visibility overall can be considered very good and adequate for Phase I coverage.

4.1 INVENTORY RESULTS

No cultural resources of any kind were identified during the field survey. A substantial portion of the study area had been excavated to create the existing basin, and it is likely that much of the surrounding surface has been disturbed due to its location near a major intersection and surrounding suburban development, as well as potential infrastructural improvements on-site.

Figure 2a: Fowler Well Number 9 Project study area looking toward the intersection of E. South and Stanford Avenues. View toward the southwest.

Figure 2b: Fowler Well Number 9 Project study area looking toward residential areas along Stanford Avenue. View toward the northwest.

5. SUMMARY AND RECOMMENDATIONS

A Phase I survey was conducted for the Fowler Well Number 9 Project, Fresno County, California. A records search was conducted at the SSJVIC, California State University, Bakersfield. This indicated that the study area had not been the subject of any previous studies and no previously identified resources were present. Three previous surveys have been conducted within 0.5-mi of the study area, but no resources had been recorded within that same radius. The NAHC Sacred Lands Files were also consulted with negative results. Outreach letters and follow-up emails were sent to tribal organizations on the NAHC contact list. One response was received by the Traditional Choinumni Tribe stating that they have no knowledge of cultural resources, areas, or concerns within the project area.

The Phase I survey fieldwork was conducted with parallel transects spaced at 15-m intervals across the APE. No cultural resources of any kind were identified within the study area.

5.1 RECOMMENDATIONS

An intensive Phase I survey demonstrated that the Fowler Well Number 9 Project, Fresno County, California, does not contain significant or unique historical resources. A finding of No Significant Impact is recommended.

In the unlikely event that archaeological materials are discovered during construction of the project, it is recommended that a qualified archaeologist be contacted to evaluate the discovery.

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CONFIDENTIAL APPENDIX A:

Records Search and Native American Heritage Commission Outreach Materials