



ATWATER JORDAN ROAD AT ATWATER CANAL BRIDGE REPLACEMENT PROJECT

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

PREPARED FOR:

Merced County Department of Public Works
715 Martin Luther King Jr. Way
Merced, CA 95341

PREPARED BY:

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September 2025

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ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
ADT	Average daily traffic
APE	Area of potential effects
APN	Assessor Parcel Number
AQMP	Air Quality Management Plan
ARB	Air Resources Board
ASR	Archaeological Survey Report
BIOS	Biogeographic Information and Observation System
BMP	Best Management Practice
BSA	Biological Study Area
CAAQS	California Ambient Air Quality Standards
Caltrans	California Department of Transportation
canal	Atwater Jordan Canal
CARB	California Air Resources Board
CBC	California Building Standards Code
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CALFIRE	California Department of Forestry and Fire Protection
CDOC	California Department of Conservation
CEQA	California Environmental Quality Act

CFR	Code of Federal Regulations
CH ₄	Methane
CNDDDB	California Natural Diversity Database
CO	Carbon monoxide
CO ₂	Carbon dioxide
County	County of Merced
CWA	Clean Water Act
dBA	A weighted decibels
DPM	Diesel particulate matter
DTSC	Department of Toxic Substances Control
EIR	Environmental Impact Report
FCAA	Federal Clean Air Act
FSTIP	Federal Statewide Transportation Improvement Program
EPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
General Plan	2030 Merced County General Plan
GHG	Greenhouse gas
HBP	Highway Bridge Program
HFC	Hydrofluorocarbons
HPSR	Historic Property Survey Report
HSC	Health and Safety Code
HWCL	Hazardous Waste Control Law

I-5	Interstate 5
ISA	Initial Site Assessment
IS/MND	Initial Study/Mitigated Negative Declaration
LCFS	Low carbon fuel standard
L _{eq}	Equivalent continuous sound level
L _{max}	Maximum sound level
MBTA	Migratory Bird Treaty Act
MCAG	Merced County Association of Governments
MCFD	Merced County Fire Department
mg/L	milligrams per liter
MID	Merced Irrigation District
MLD	Most Likely Descendant
mph	Miles per hour
MPO	Metropolitan Planning Organization
MSWG	Merced Stormwater Group
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NMFS	National Marine Fisheries Service
N ₂ O	Nitrous oxide
NO ₂	Nitrogen dioxide
NO _x	Oxides of nitrogen
NRHP	National Register of Historic Places
NPDES	National Pollutant Discharge Elimination System

NPL	National Priorities List
NTU	Nephelometric Turbidity Unit
O ₃	Ozone
OHWM	Ordinary high water mark
PB	Lead
PFC	Perfluorocarbons
PM _{2.5}	Particulate matter 2.5 microns or less in diameter
PM ₁₀	Particulate matter 10 microns or less in diameter
ppv	Peak particle velocity
project	Replace the Atwater Jordan Road Bridge structure over the Atwater Canal
PRC	Public Resources Code
RCRA	Resource Conservation and Recovery Act
ROW	Right of way
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
Scoping Plan	AB 32 Climate Change Scoping Plan
SCS	Sustainable Communities Strategy
SF ₆	sulfur hexafluoride
SIP	State Implementation Plan
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District
SO ₂	Sulfur dioxide
SWMP	Stormwater Management Program

SWRCB	State Water Resources Control Board
TCE	Temporary construction easement
U.S.	United States
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
UST	underground storage tanks
VOC	Volatile organic compound
WRMP	Merced Irrigation District Water Resources Management Plan

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1. Introduction

The County of Merced (County) in cooperation with the California Department of Transportation (Caltrans), proposes to replace the Atwater Jordan Road Bridge structure (Bridge No. 39C-0286) over the Atwater Canal (canal), located approximately 0.3 mile west of Central Avenue, near the community of Atwater, in Merced County, California (project). The purpose of the project is to improve public safety by providing a safe, permanent crossing over the Atwater Canal on Atwater Jordan Road. As required by the California Environmental Quality Act (CEQA) (California Public Resources Code (CA PRC) Sections 21000 et seq.), the county has prepared this Initial Study/Mitigated Negative Declaration (IS/MND) to determine whether the project may have a significant effect on the environment.

1.1 Legal Authority and Findings

The County has prepared this Initial Study in accordance with the *Guidelines for the Implementation of CEQA* (CEQA Guidelines) (California Code of Regulations (CCR), Title 14, Chapter 3, Sections 15000 et seq.). Although consultants assisted in the preparation of this IS, all analysis, conclusions, findings, and determinations presented in the IS represent the County, acting as the Lead Agency under CEQA. In accordance with the provisions of CEQA and the state and local CEQA Guidelines, as the Lead Agency, the County would be responsible for reviewing the potential environmental effects, and after consideration, approving or denying the project.

1.2 Document Purpose

Section 15063I of the CEQA Guidelines defines an IS as the proper preliminary method of analyzing the potential environmental consequences of a project. The purposes of an IS are:

- To provide the Lead Agency with the necessary information to decide whether to prepare an Environmental Impact Report (EIR), a MND, or a Negative Declaration;
- To enable the Lead Agency to modify a project and mitigate adverse impacts, thus avoiding the need to prepare an EIR; and
- To provide sufficient technical analysis of the environmental effects of a project to permit a judgment based on the record as a whole, that the environmental effects of a project have been adequately mitigated.

1.3 Document Organization

This IS/MND contains seven sections:

- **Chapter 1. Introduction.** This section provides an overview of the proposed project and the CEQA environmental documentation process.
- **Chapter 2. Project Description.** This section provides a detailed description of the proposed project objectives and components.

- **Chapter 3. Evaluation of Environmental Impacts.** This section presents the CEQA checklist for all impact areas and mandatory findings of significance.
- **Chapter 4. References.** This section provides a list of reference materials used during the preparation of the IS/MND.
- **Chapter 5. Preparers and Contributors.** This section provides a list of key personnel involved in the preparation of the IS/MND.

1.4 Terminology

A “significant effect” is defined by Section 15382 of the CEQA Guidelines as “a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by a project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance.” According to Section 15358 of the CEQA Guidelines, “an economic or social change by itself shall not be considered a significant effect on the environment but may be considered in determining whether the physical change is significant.”

2. Project Description

1. Project Title

Atwater Jordan Road at Atwater Canal Bridge Replacement Project

2. Lead Agency Name and Address

Merced County

Department of Public Works

715 Martin Luther King Jr. Way

Merced, CA 95341

3. Contact Person and Phone Number

Al Buenrostro, Supervising Engineer

(209) 385-7601

alvaro.buenrostro@countyofmerced.com

4. Project Location

Atwater Jordan Road Bridge over the Atwater Canal, located approximately 0.3 mile west of Central Avenue, near the community of Atwater in Merced County.

5. Project Proponent's Name and Address

Merced County Department of Public Works

715 Martin Luther King Jr. Way

Merced, CA 95341

6. General Plan Designation

Agriculture (County of Merced, n.d.)

7. Zoning

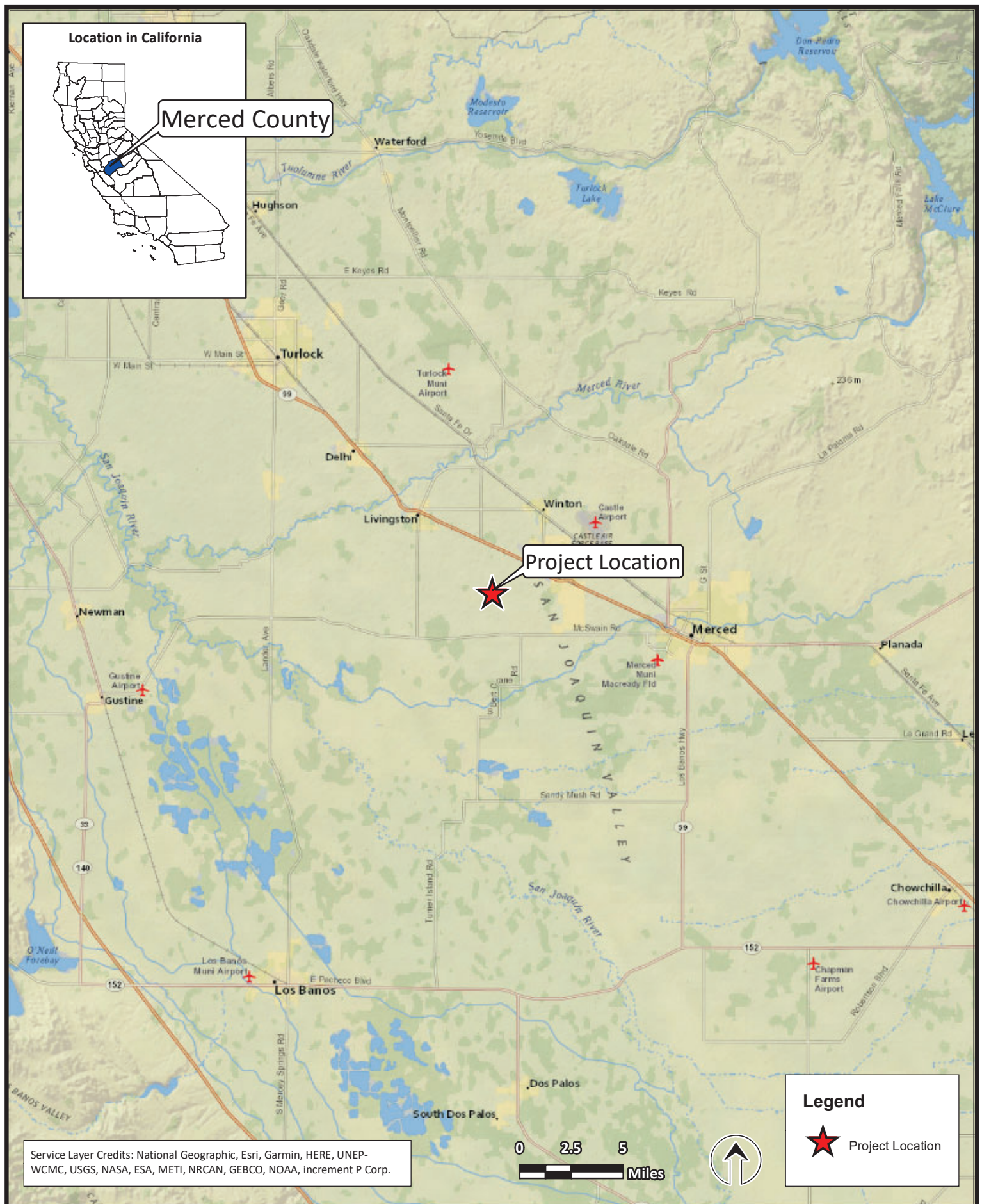
General Agriculture (A-1) (County of Merced, n.d.)

8. Project Description

Introduction

The County of Merced (County), in cooperation with the California Department of Transportation (Caltrans), proposes to replace the Atwater Jordan Road Bridge structure (Bridge No. 39C-0286) over the Atwater Canal (project), located approximately 0.3 mile west of Central Avenue, near the community of Atwater in Merced County, California (see **Figure 1**, Regional Location and **Figure 2**, Project Location).

The existing bridge was built in 1928 and is too narrow for the current average daily traffic (ADT) of 1109 vehicles per day and projected ADT of 1,465 vehicles per day by the year 2040. In addition, the existing concrete bridge railing has substantial deterioration and cracking. According to a Caltrans Bridge Inspection Report prepared on January 25, 2012, the existing reinforced concrete slab bridge was rated as Functionally Obsolete with an overall Sufficiency Rating of 55.8. Caltrans officially approved the Type Selection for the replacement of this structure November 29, 2023





Project Purpose

The purpose of the project is to improve public safety by providing a safe, permanent crossing over the Atwater Canal on Atwater Jordan Road. The project would utilize federal Highway Bridge Program (HBP) funding and a toll credit match. The project was listed in the Merced County Association of Governments (MCAG) 2013 Federal Statewide Transportation Improvement Program (FSTIP), Administrative Modification No. 21, as Project ID 4126 on the 2012/13 – 2017/18 HBP project listing (MCAG, 2013). The project has since been updated in the MCAG FSTIP 2022/23-2027/28 HBP project listing (MCAG, 2025).

Project Need

The existing bridge was built in 1975 with a projected ADT of 181 vehicles per day by the year 2038. The project is needed because there is substantial deterioration from corrosion and rust on the bridge's steel girders. In addition, the existing bridge railings do not meet current standards, and the bridge does not provide guardrail transition, approaches, or ends.

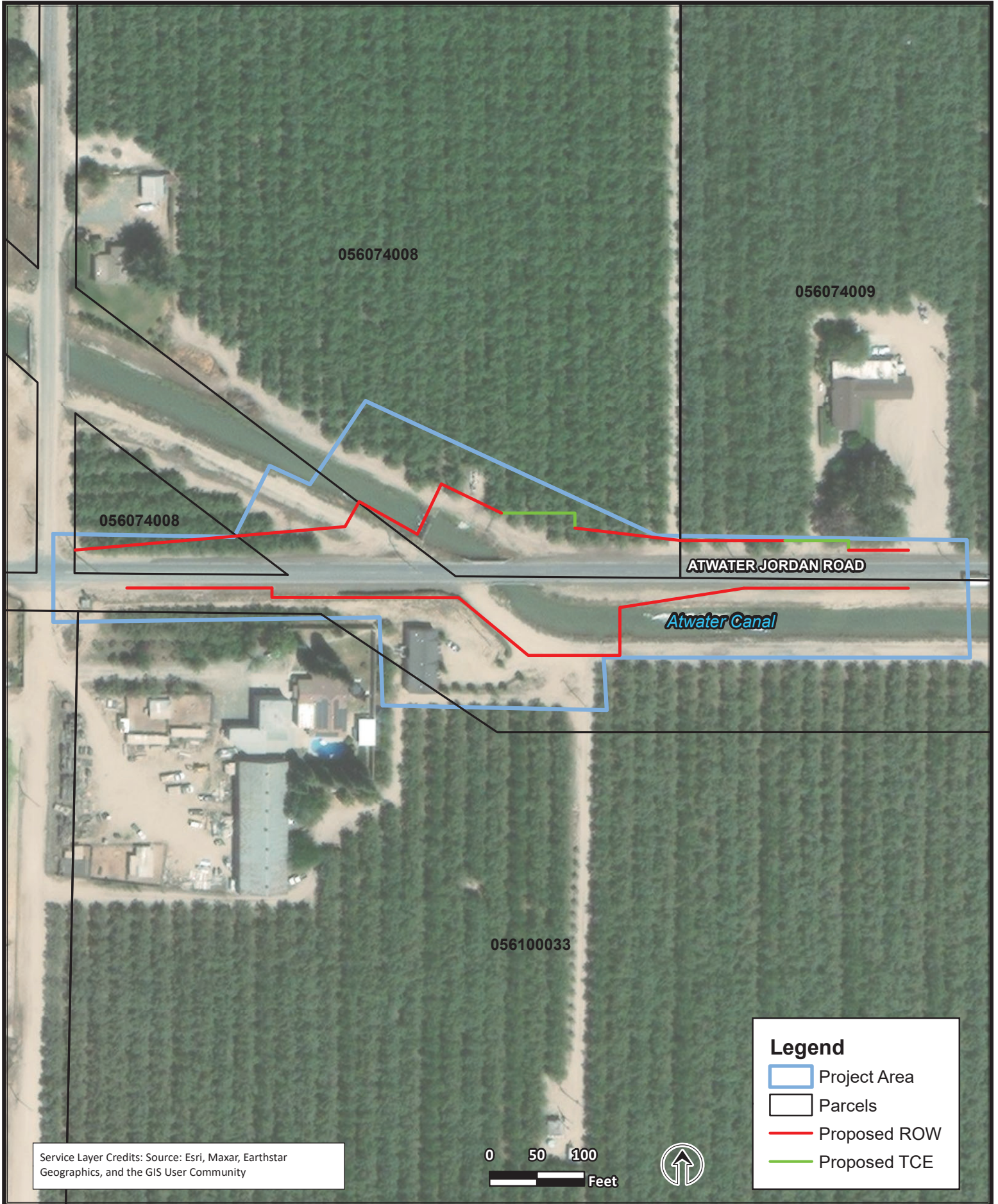
Existing Bridge and Setting

The project area is located in a rural area of Merced County (see **Figure 3**, Project Footprint). Within the project area, Atwater Jordan Road is a 2-lane roadway that is functionally classified as a Minor Collector, with a design speed of 50 miles per hour. The Atwater Canal is a channelized, un-lined waterway with gravel/dirt canal access roads at the tops of the banks. Flows in the canal are controlled artificially to meet the agricultural needs of adjacent properties. The areas adjacent to the canal are disturbed and consist of either agricultural or rural-residential use. A residence is located adjacent to and southwest of the project area and another residence is approximately 300 feet northeast of the project area. Vegetation in and around the project area is limited to sparse, weedy roadside vegetation, urban landscaping in the residential areas, or orchards in the agricultural areas. There is also limited vegetation within and along the banks of the canal.

Proposed Replacement

The existing bridge structure consists of two vehicle lanes, one in the eastbound direction and one in the westbound direction. There are no shoulders on either side of the roadway. The County proposes to replace and widen the existing bridge by approximately 10 feet along the existing horizontal and vertical alignment to provide two 11-foot lanes, a 3-foot shoulder on each side of the roadway, and new concrete barrier bridge rails similar to those on the existing bridge. In addition, the embankment will be covered with rock slope protection to mitigate scour within the limits of the bridge approach fills. Improvements to the canal access roads may also be needed to accommodate the widened bridge.

The County assessor maps do identify a 40 foot roadway right of way (ROW) for Atwater Jordan Road. Therefore, the existing roadway and bridge are within the presumed County easements (Quincy Engineering, 2013). Additional ROW and temporary construction easements (TCE) from surrounding properties may be required to complete the project. Any ROW acquisition and/or TCEs will be included in the project impact analysis.



Construction Schedule

Construction is anticipated to begin in October of 2027 and end March 2028.

Construction Methods

Construction of the project would be conducted during non-irrigation season and last approximately five months. It is anticipated that construction would begin in October and end in March. No night work would be required during construction.

Construction would begin with the fencing and clearing of the project area; minor vegetation removal would be required. The demolition of the existing bridge would follow. Work inside the canal would be completed during the removal of the existing bridge and construction of the replacement bridge. Temporary water diversion would be required to move low-flow water around the construction area; cofferdams and pipe diversions would be used. Bridge removal would be performed with a medium-sized excavator, hydraulic breakers, and dump trucks which would be placed in the canal. Following bridge removal, the replacement concrete bridge would be constructed. The foundation of the replacement bridge would require an excavator to grade out abutments and excavate footing locations to install piles. Ten steel piles, 14 inches in diameter, would be driven into the ground utilizing a pile-driving hammer attached to leads on a hydraulic crane. RSP would be placed on the embankment of the canal. Construction of the project would require excavation to a maximum depth of 10 feet. Falsework would be erected in order to construct the bridge deck. Concrete for the bridge deck would be cast-in-place utilizing timber and steel forms, concrete boom pumps, and concrete trucks. Cranes or lifts would be utilized for hoisting materials. Following the completion of in-canal work, the water diversion would be removed, and the bridge barrier and roadway approach would be constructed. Construction staging would be on the existing roadway and road shoulders as well as the levee roads, if needed.

Utilities

Overhead PG&E electrical distribution and transmission lines run along the north side of Atwater Jordan Road. In addition, an underground telecommunications cable line owned by Frontier Communications runs along the south side of Atwater Jordan Road west of the bridge, crosses to the north side of Atwater Jordan Road just west of the bridge, is attached to the existing bridge's north edge of deck, and then continues running east along Atwater Jordan Road on the north side of the road. Overhead PG&E power poles within the project area would be relocated. The Frontier telecommunication cable would be detached from the bridge during construction and either run overhead to cross the canal or reattach to the new bridge. All utility relocations would be conducted in coordination with the service providers.

Right-of-Way

In order to accommodate proposed improvements, partial ROW acquisitions and temporary construction easements would be required from Accessor Parcel Numbers (APN) 056-074-008 and 056-074-009. Roadway easements and temporary construction easements would also be required from MID (Merced Irrigation District) which owns the canal.

Detour Route

Within the project area, Atwater Jordan Road would be closed for the duration of construction. Access to adjacent driveways would be maintained throughout construction. A detour (approximately 1.5 miles in length) would be required to allow traffic access around the project area. Expected roads to be used for the detour include Steinberg Road, Sunset Drive, and Central Avenue.

9. Surrounding Land Uses and Setting

Merced County is in the Central Valley of California, which dominates the central portion on the state, and is a major agricultural region. The project area is located in unincorporated Merced County, approximately two miles southwest from the City of Atwater. The project area is surrounded by land designated as Agriculture. According to the County's General Plan Land Policy Diagram the project area is designated as Agriculture and is zoned as A-1.

10. Other Public Agencies whose Approval is Required

- Clean Water Act (CWA) Section 404 Nationwide Permit 14 from the USACE
- CWA Section 401 Water Quality Certification from the RWQCB
- California Fish and Game Code Section 1602 Streambed Alteration Agreement from the CDFW
- Best Management Practices would be implemented in accordance with EO 13112

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code (PRC) section 21080.3.1?

☐ Yes ☒ No

If yes, ensure that consultation and heritage resource confidentiality follow PRC sections 21080.3.1 and 21080.3.2 and California Government Code 65352.4

A Native American Tribes contact list was provided and the listed tribes were notified of the project via mail on November 5, 2018. Due to a time-lapse since initial consultation were sent anew letter on June 21, 2023. Follow up phone calls and emails were then made on August 4, 2023.

Responses received in 2018 were from the following tribes:

- Amah Mutsun Tribal Band: Valentin Lopez, Chairperson: Replied via email on November 13, 2018 stating the APE was outside the traditional tribal territory and that the tribe had no comment.
- Dumna Wo-Wah Tribal Government: Robert Ledger, Sr., Chairperson: No response.
- North Valley Yokuts Tribe: Katherine Erolinda Perez, Chairperson: No response.
- Southern Sierra Miwuk Nation: Bill Leonard, Chairperson: No response.

Responses received in 2023 were from the following tribes:

- Amah Mutsun Tribal Band: Valentin Lopez, Chairperson: No response.
- Dumna Wo-Wah Tribal Government: Robert Ledger, Sr., Chairperson: No response.
- North Fork Rancheria of Mono Indians: Elaine Fink, Chairperson: No response.
- North Valley Yokuts Tribe: Katherine Erolinda Perez (Chairperson) and Timothy Perez: No response.
- Southern Sierra Miwuk Nation: Sandra Chapman, Chairperson: No response.

- Tule River Indian Tribe: Neil Peyron (Chairperson) and Joey Garfield (Tribal Archaeologist): No response.

Based on the feedback given in the tribal correspondence, no information indicated any traditional or cultural use of the project site. Therefore, no further consultation is required.

12. Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project. Please see the checklist beginning on page 15 for additional information.

- | | |
|--|--|
| ☐ Aesthetics | ☐ Agriculture and Forestry |
| ☐ 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/Service Systems | ☐ Wildfire |
| ☒ Mandatory Findings of Significance | |

3. Determination

On the basis of this initial evaluation:

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

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

☐ I find that the 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 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

09/05/2025

Date

Alvaro Buenrostro

Printed Name

County of Merced

For

4. Evaluation of Environmental Impacts

Potential environmental effects of the project are classified and described within the *CEQA Environmental Checklist* under the following general headings:

“No Impact” applies where the impact simply does not apply to projects like the one involved. For example, if the project area is not located in a fault rupture zone, then the item asking whether the project would result in or expose people to potential impacts involving fault rupture should be marked as “No Impact.”

“Less Than Significant Impact” applies where the impact would occur, but the magnitude of the impact is considered insignificant or negligible. For example, a development which would only slightly increase the amount of surface water runoff generated at a project area would be considered to have a less than significant impact on surface water runoff.

“Potentially Significant Unless Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact.” Incorporated mitigation measures should be outlined within the checklist and a discussion should be provided which explains how the measures reduce the impact to a less than significant level. This designation is appropriate for a Mitigated Negative Declaration, where all potentially significant issues have been analyzed and mitigation measures have been recommended that reduces all impacts to levels that are less than significant.

“Potentially Significant Impact” applies where the project has the potential to cause a significant and unmitigable environmental impact. If there are one or more items marked as “Potentially Significant Impact,” an EIR is required.

4.1 AESTHETICS

Except as provided in Public Resources Code Section 21099, would the project:

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

REGULATORY SETTING:

Local Regulations

2030 Merced County General Plan

The Natural Resources Element of the General Plan identifies the following policies as they relate to aesthetics for the project (County of Merced, 2013).

- Policy NR-4.1: Scenic Resource Preservation. Promote the preservation of agricultural land, ranch land, and other open space areas as a means of protecting the county's scenic resources.
- Policy NR-4.4: New Roads. Consider the surrounding landscape, topography, and existing scenic values when determining the location and construction of new roads.

AFFECTED ENVIRONMENT:

The project area is relatively flat and surrounded mostly by agricultural and rural residential land uses. A residence is located adjacent to and southwest of the project area and another residence is approximately 300 feet northeast of the project area. Vegetation in and around the project area is primarily limited to sparse, weedy roadside vegetation or row crops and orchards in the adjacent agricultural areas. There is also limited vegetation within and along the banks of the canal.

DISCUSSION OF CHECKLIST RESPONSES:

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

No Impact. According to the General Plan, designated scenic vistas of the Merced County include the Coastal and Sierra Nevada Mountain ranges, and the Los Banos Creek, Merced, San Joaquin, and Bear Creek River corridors. The project area is not designated as a scenic vista. The closest scenic vista is the Merced River which is located approximately six miles north and is not visible from the project area. The project area is not visible from any scenic vistas. Therefore, the project would result in no impact related to a scenic vista.

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

No Impact. According to the State Scenic Highway Map, all of Interstate 5 (I-5) within Merced County is designated as a state scenic highway.” The project area is located approximately 25 miles east of I-5 and is not visible from the highway. Therefore, the project would result in no impact on scenic resources within a state scenic highway.

c. Would the project substantially degrade the existing visual character or quality of the site and its surroundings?

Less Than Significant Impact. According to the General Plan, agricultural land and open space are considered scenic resources. The project area is located in a rural area of Merced County. During construction of the project, there could be temporary visual impacts associated with vegetation removal and onsite storage of construction materials and debris; however, these impacts would be temporary, and following construction, the area would be largely restored to pre-project conditions. The project would include replacing the existing Atwater Jordan Road Bridge over the Atwater Canal, which would widen the bridge by approximately 10 feet. The project would not include any vertical elements that would block or otherwise distort views of the surrounding areas. The new bridge would be similar in appearance as the existing bridge. Therefore, the project would result in less than significant impact related to visual character.

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

No Impact. Existing lighting at the project includes lighting from vehicles on the roadway and nearby residents. The project would not create new sources of light or glare that would adversely affect day or nighttime views in the area. Therefore, the project would result in no impact related to lighting.

AVOIDANCE, MINIMIZATION, AND MITIGATION MEASURES:

The project would result in less than significant impacts on Aesthetics. Therefore, the project would not require avoidance, minimization, and/or mitigation measures for Aesthetics.

4.2 AGRICULTURAL AND FORESTRY RESOURCES

Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

Question	CEQA Determination
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?	Less Than Significant Impact
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	Less Than Significant Impact
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))?	No Impact
d) Result in the loss of forest land or conversion of forest land to non-forest use?	No Impact
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?	Less Than Significant Impact

REGULATORY SETTING:

State Regulations

The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments which are much lower than normal because they are based upon farming and open space uses as opposed to full market value (California Department of Conservation, 2015). The intent of the Williamson Act is to encourage voluntary land conservation, particularly conservation of agricultural land in California.

Local Regulations

2030 Merced County General Plan

The Agricultural Element of the General Plan identifies the following policies as they relate to agriculture and forestry resources for the project (County of Merced, 2013)

- Policy AG-2.4: Preservation Programs. Encourage property owner participation in programs that preserve farmland, including the Williamson Act, conservation easements, and United States Department of Agriculture (USDA) funded conservation practices.
- Policy AG-2.9: Infrastructure Extension. Oppose the extension of urban services, such as sewer lines, water lines, or other urban infrastructure, into areas designated for agricultural use, unless necessary to protect public health, safety, and welfare.

AFFECTED ENVIRONMENT:

All parcels adjacent to the project area are zoned as General Agriculture (A-1) and designated for Agriculture land use (Merced County, n.d.). According to the California Department of Conservation (CDOC), there is Prime Farmland and Rural Residential Land adjacent to the project area (CDOC, 2015)..

DISCUSSION OF CHECKLIST RESPONSES:

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

Less Than Significant Impact. According to the CDOC, there is Prime Farmland and Rural Residential Land adjacent to the project area. The County assessor maps identifies a 40-foot roadway ROW for Atwater Jordan Road (Quincy Engineering, 2013). Partial ROW acquisitions and TCEs would be required from APNs 056-074-008 and 056-074-009. Roadway easements and temporary construction easements would also be required from MID. However, these are anticipated to be minimal. Therefore, the project would result in a less than significant impact related to farmland conversion.

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

Less Than Significant Impact. According to the 2010 Williamson Act Map for Merced County, there are no parcels with Williamson Act contracts within or in proximity to the project area (Conservation Biology Institute, 2010). The project area and surrounding land are zoned A-1. As discussed in response (a) above, ROW and TCE from surrounding properties may be required to complete the project, which could result in the conversion or use of adjacent parcels of farmland. Therefore, the project would result in less than significant related to existing zoning for agricultural use, or a Williamson Act contract.

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

No Impact. The project area and surrounding land are zoned as A-1. The project area is not zoned for forest land or timberland (County of Merced, n.d.). In addition, there are no forest or timber resources within or surrounding the project area. Therefore, the project would result in no impact related to zoning of forest land, timberland, or timberland zoned timberland production.

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

No Impact: As discussed in response (c) above, there are no forest resources within or surrounding the project area. Therefore, the project would result in no impact related to forest land.

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

Less than Significant Impact. As discussed in response (c) above, there is no forest land within or surrounding the project area. In addition, as stated in response (a) above, proposed improvements would require ROW acquisition from APNs 056-074-008 and 056-074-009 that would result in conversion of farmland to non-agricultural use. Therefore, the project would result in less than significant impact related to farmland or forest land conversion.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES:

The project would result in less than significant impacts on Agricultural and Forestry Resources. Therefore, the project would not require avoidance, minimization, and/or mitigation measures for Agricultural and Forestry Resources.

4.3 AIR QUALITY

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:

Question	CEQA Determination
a) Conflict with or obstruct implementation of the applicable air quality plan?	Less Than Significant Impact
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?	Less Than Significant Impact
c) Expose sensitive receptors to substantial pollutant concentrations?	Less Than Significant Impact
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	Less Than Significant Impact

REGULATORY SETTING:

Federal Regulations

Federal Clean Air Act

The National Ambient Air Quality Standards (NAAQS) were established by the Federal Clean Air Act of 1970 (FCAA), as amended in 1977 and 1990. The FCAA requires the United States (U.S.) Environmental Protection Agency (EPA) to establish NAAQS for six criteria pollutants including, carbon monoxide (CO), ozone (O₃), particulate matter equal to or smaller than 10 microns (PM₁₀) or 2.5 microns (PM_{2.5}) in diameter, sulfur dioxide (SO₂), nitrogen dioxide (NO₂), and lead (Pb).

State Regulations

California Clean Air Act

The California Air Resources Board (CARB) administers air quality policy in California. The California Ambient Air Quality Standards (CAAQS) were established in 1969 pursuant to the Mulford-Carrell Act. These standards are generally more stringent and apply to more pollutants than NAAQS (i.e., visibility reducing particulates, hydrogen sulfide, vinyl chloride, and sulfates (SO₄)).

Under the California Clean Air Act (CCAA), the CARB requires that each local air district prepare and maintain an air quality management plan to achieve compliance with CAAQS. These standards are generally more stringent and apply to more pollutants than the NAAQS. The CCAA requires that each local air district prepare and maintain an air quality management plan (AQMP) to achieve compliance with CAAQS.

These AQMPs also serve as the basis for preparation of the State Implementation Plan (SIP) for the State of California. CARB also administers the state's mobile source emissions control program and oversees air

quality programs established by state statute, such as Assembly Bill (AB) 2588, the Air Toxics “Hot Spots” Information and Assessment Act of 1987.

California Air Resource Board Rules and Regulations

The following CARB Rules and Regulations are applicable to the project:

In-Use Off-Road Diesel Vehicle Regulations

This regulation limits vehicle idling to no more than five consecutive minutes and requires equipment to be reported to CARB and labeled.

Local Regulations

San Joaquin Valley Air Pollution Control District Air Quality Plans

The San Joaquin Valley Air Pollution Control District (SJVAPCD) is the local air quality agency with jurisdiction in the eight counties of California’s Central Valley, including Merced County where the project area is located. To work towards attainment of O₃, PM_{2.5}, and PM₁₀ standards, the SJVAPCD has adopted the following air quality plans:

- 2004 Extreme Ozone Attainment Demonstration Plan
- 2007 Ozone Plan
- 2009 Reasonably Available Control Technology SIP
- 2012 PM_{2.5} Plan
- 2008 PM_{2.5} Plan
- 2007 PM₁₀ Maintenance Plan

San Joaquin Valley Air Pollution Control District Rules

The following SJVAPCD Rules are applicable to the project:

Rule 8021 Construction, Demolition, Excavation, Extraction, And Other Earthmoving Activities

This rule requires fugitive dust emissions to be controlled through the application of water or chemical/organic stabilizers/suppressants to the area prior to demolition, extraction and earth moving activities. In addition, speed limit signs shall also be posted at least every 500 feet on uncontrolled unpaved access/haul roads and the speed of vehicles traveling within these areas would be limited to a maximum of 15 miles per hour.

2030 Merced County General Plan

The Air Quality Element of the General Plan identifies the following policies that are applicable to the project (County of Merced, 2013).

- Policy AQ-2.1: Air Quality Plan Compliance. Require all development projects to comply with applicable regional air quality plans and policies.

- Policy AQ-2.2: Development Review Process. Use the development review process to achieve measurable reductions in criteria pollutant, toxic air contaminants, and greenhouse gas (GHG) emissions.
- Policy AQ-2.4: Mitigation. Require that local and regional air quality impacts identified during CEQA review for projects reviewed and approved by the county are consistently and fairly mitigated.

AFFECTED ENVIRONMENT:

Local Climate and Meteorological Conditions

The San Joaquin Valley Air Basin (SJVAB), which occupies the southern half of California's Central Valley is located within both the Sacramento and San Joaquin Valley and foothills and the Sacramento and San Joaquin Valley watersheds. Approximately 250 miles long and 35 miles wide on average, the SJVAB is a well-defined climatic region with distinct topographic features on three sides. The Coast Ranges, which have an average elevation of 3,000 feet, are located on the western border of the SJVAB. The San Emigdio Mountains, which are part of the Coast Ranges, and the Transverse Ranges, which are part of the Sierra Nevada, are both located on the south side of the SJVAB. The Sierra Nevada forms the eastern border of the SJVAB. No topographic feature delineates the northern edge of the basin. The SJVAB can be considered a "bowl" open only to the north. The SJVAB is basically flat with a downward gradient in terrain to the northwest. Air flows into the SJVAB through the Carquinez Strait, the only breach in the western mountain barrier, and moves across the Delta from the San Francisco Bay Area. The mountains surrounding the SJVAB create a barrier to airflow, which leads to entrapment of air pollutants when meteorological conditions are unfavorable for transport and dilution. Temperature and precipitation in the SJVAB are similar to meteorological conditions in the Sacramento Valley, but with somewhat less precipitation.

Ambient Air Quality Attainment Status

The project is within the San Joaquin Valley Air Pollution Control District (SJVAPCD). According to the U.S. EPA, Merced County is in an extreme non-attainment area for O₃ and a serious non-attainment area for PM_{2.5} (EPA, 2025). According to the Caltrans Division of Environmental Analysis, Merced County is in a maintenance area for PM_{2.5} (Merced County, 2012a). Therefore, the project area is in a NAAQS non-attainment and maintenance area, and the project is subject to the transportation conformity requirements in California.

DISCUSSION OF CHECKLIST RESPONSES:

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

No Impact. Operation of the project would not generate new stationary or mobile sources of emissions because the project would maintain the same number of through lanes (one in each direction) and would not increase the capacity or result in additional vehicles on the roadway. Therefore, no long-term air quality impacts would result from the project. Project construction would also comply with CARB and SJVAPCD Rules and regulations such as, In-Use Off-Road Diesel Vehicle Regulation and Rule 8021. With

compliance of applicable regulations, such as applying water or dust suppressants to unpaved surface areas in compliance with applicable regulations listed above, the project would be consistent with the goals of applicable air quality plans. Therefore, the project would result in no impact related to air quality plans.

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. Construction of the project would generate temporary, short-term emissions of various air pollutants. Pollutant emissions would vary from day to day depending on the intensity and type of construction activity. The types of construction emissions that would most likely result from the project are fugitive dust emissions and mobile source emissions. Fugitive dust emissions include any solid PM that is lifted into the ambient air. Construction activities with the potential to result in fugitive dust emissions include excavation and other earth-moving activities. Mobile source emissions include primarily oxides of nitrogen (NO_x), CO, volatile organic compounds, PM₁₀, PM_{2.5}, and diesel particulate matter (DPM). Emissions could also lead to the formation of O₃, which is a regional pollutant that is derived from NO_x and VOCs in the presence of sunlight and heat. Construction activities that have the potential to result in mobile source emissions include the use of construction equipment (bulldozers, trucks, and scrapers), truck delivery of construction materials, hauling of construction debris, and workers commuting to and from the project area. Mobile source emissions from construction equipment are highest during use of heavy-duty, diesel-fueled equipment. As discussed in response (a) above, construction would also comply with CARB and SJVAPCD Rules and regulations such as, In-Use Off-Road Diesel Vehicle Regulation and Rule 8021. Compliance with In-Use Off-Road Diesel Vehicle Regulation would limit equipment idling to no more than five consecutive minutes. Compliance with Rule 8021 would minimize fugitive dust emissions through dust suppressant applications prior to construction. Compliance with these rules and regulations would reduce fugitive dust and mobile source emissions during construction.

Operation of the project would not generate new stationary or mobile sources of emissions because the project would maintain the same number of through lanes and would not increase capacity or result in additional vehicles on the roadway. Therefore, no long-term air quality impacts would result from the project. Therefore, the project would result in less than significant impacts related to air quality standards.

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

Less Than Significant Impact. Sensitive receptors are land uses where persons who are more susceptible to air pollution than the general population, including children, athletes, the elderly, and the chronically ill. Typical land uses where substantial numbers of sensitive receptors are often found are schools, daycare centers, parks, recreation areas, medical facilities, nursing homes, and convalescent care facilities. Residential areas are also considered to be sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to pollutants. The nearest sensitive receptors to the project area are residences located 300 feet northwest of the project area.

Construction activities would result in short-term, project-generated emissions of DPM from the exhaust of off-road, heavy-duty diesel equipment used for grading and paving activities. However, there would be relatively few pieces of off-road, heavy-duty diesel equipment in operation, and the construction period would be relatively short (approximately four months total). In addition, DPM is highly dispersive, and construction-related emissions of DPM would not be expected to result in substantial pollutant concentrations. Construction would be limited to the daytime hours of 7:00 a.m. to 6:00 p.m., in accordance with County ordinances. In addition, construction would comply with rules and regulations discussed in responses (a) and (b) above, to minimize construction emissions.

The project is not expected to increase criteria pollutant emissions during operation since the project would maintain the same number of through lanes and would not increase capacity or result in additional cars on the roadway. No long-term air quality impacts would result from the project. Therefore, the project would result in less than significant impacts related to sensitive receptors.

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

Less Than Significant Impact. Operation of construction equipment (diesel exhaust) and paving operations could result in the generation of odors; however, these odorous emissions would be temporary in nature, would be completed during daytime hours only, and would be isolated within the immediate vicinity of construction activities. The project area is not in a densely populated location. Therefore, the project would result in less than significant impacts related to emissions affecting a substantial number of people.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES:

The project would result in less than significant impacts on Air Quality. Therefore, the project would not require avoidance, minimization, and/or mitigation measures for Air Quality.

4.4 BIOLOGICAL RESOURCES

Would the project:

Question	CEQA Determination
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, U.S. Fish and Wildlife Service, or NOAA Fisheries?	Less Than Significant with Mitigation Incorporated
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?	Less Than Significant with Mitigation Incorporated
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	Less Than Significant with Mitigation Incorporated
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?	Less Than Significant Impact
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	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 following discussion incorporates the results of the Natural Environment Study (Minimal Impacts) (NES(MI)) and Aquatic Resource Delineation Report (ARD) that were prepared for the project (GPA Consulting, 2025; GPA Consulting, 2023).

REGULATORY SETTING:

Federal Regulations

Clean Water Act

The USACE regulates the placement of dredged and fill material into waters of the United States (U.S.), including wetlands, under Section 404 of the Clean Water Act (CWA). No discharge of dredged or fill material into jurisdictional features is permitted unless authorized under an USACE Nationwide Permit or

Individual Permit. For all work subject to an USACE Section 404 permit, project proponents must obtain a Water Quality Certification from the applicable RWQCB under CWA Section 401 stating that the project would comply with applicable water quality regulations.

Waters of the United States

The USACE Regulatory Program regulates activities within federal wetlands and waters of the U.S. pursuant to Section 404 of the CWA. Waters of the U.S. are divided into several categories as defined by the Code of Federal Regulations (CFR). Under the CFR (CFR 33 Section 328.3), waters of the U.S. include, but are not limited to:

1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce (including sightseeing or hunting), including all waters subject to the ebb and flow of the tide;
2. All interstate waters including interstate wetlands;
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats; sand flats; wetlands; sloughs; prairie potholes; wet meadows; playa lakes; or natural ponds where the use, degradation, or destruction of which could affect interstate or foreign commerce. This includes any such waters which are or could be used by interstate or foreign travelers for recreational or other purposes, and from which fish or shellfish could be taken and sold in interstate or foreign commerce, or which are used or could be used for industrial purposes in interstate commerce.

In streams and rivers where adjacent wetlands are absent, the USACE jurisdiction extends to the ordinary high water mark (OHWM). The OHWM is defined as “the line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas” (33 CFR Section 328.3[e]). If the OHWM is not readily distinguishable, the USACE jurisdiction within streams extends to the “bankfull discharge” elevation, which is the level at which water begins to leave the channel and move into the floodplain (Rosgen, 1996). This level is reached at a discharge which generally has a recurrence interval of approximately 1.5 to two years on the annual flood series (Leopold, 1994).

In 2015, the USACE and EPA published the Clean Water Rule, which more clearly defined waters of the U.S. The intent of the rule was to make the definition of waters of the U.S. easier to understand, more predictable, and more consistent with current science, while better protecting waters of the U.S. The rule went into effect on August 28, 2015; however, on October 9, 2015, the U.S. Court of Appeals for the Sixth Circuit stayed the Clean Water Rule nationwide pending further action of the court. In response, the USACE and EPA resumed using the prior regulations defining waters of the U.S. This report uses the current definition of waters of the U.S., provided above.

Federal wetlands are transitional areas between well-drained upland habitats and permanently flooded (deepwater) aquatic habitats and are defined differently by different resource agencies. The USACE and the EPA define wetlands as “those areas that are inundated or saturated by surface or groundwater at a

frequency and duration sufficient to support, and under normal circumstances, do support a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 CFR Section 328.3[b]).

Federal Endangered Species Act

The Federal Endangered Species Act (FESA) was established in 1973 to provide a framework to conserve and protect endangered and threatened species and their habitat. Section 10 of the FESA allows for the “incidental take” of endangered and threatened wildlife species by non-federal entities. Incidental take is defined by the FESA as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. The term “take” means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Section 10(a)(1)(B) of the FESA authorizes the taking of federally listed wildlife or fish through an incidental take permit. Section 10(a)(2)(A) of the FESA requires an applicant for an incidental take permit to submit a conservation plan that specifies, among other things, the impacts likely to result from the taking of the species, and the measures the permit applicant will take to minimize and mitigate impacts on the species.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (50 CFR Part 10 and Part 21) protects migratory birds, their occupied nests, and their eggs from disturbance and/or destruction. “Migratory birds” include all nongame, wild birds found in the U.S. except for the house sparrow (*Passer domesticus*), European starling (*Sturnus vulgaris*), and rock pigeon (*Columba livia*).

Executive Order 13112

Executive Order 13112 directs all federal agencies to refrain from authorizing, funding, or carrying out actions or projects that may spread invasive species. This order further directs federal agencies to prevent the introduction of invasive species, control and monitor existing invasive species populations, restore native species to invaded ecosystems, research and develop prevention and control methods for invasive species, and promote public education on invasive species. MRCA, as the project proponent, would be responsible for complying with Executive Order 13112 and ensuring that the project would not contribute to the spread of invasive species

State Regulations

Porter Cologne Act

The Regional Water Quality Control Board (RWQCB) also asserts authority over waters of the state under the Porter-Cologne Act, which establishes a regulatory program to protect water quality and to protect beneficial uses of state waters. The Porter-Cologne Act empowers the RWQCB to formulate and adopt a Water Quality Control Plan that designates beneficial uses and establishes such water quality objectives that in its judgment will ensure reasonable protection of beneficial uses. Each RWQCB establishes water quality objectives that will ensure the reasonable protection of beneficial uses and the prevention of water quality degradation. Dredge or fill activities with the potential to affect water quality in these waters must comply with Waste Discharge Requirements issued by the RWQCB. Waters of the state are defined by the Porter-Cologne Act as any surface or subsurface water or groundwater, including saline waters, within the boundaries of the state

Clean Water Act

Waters of the State

The term “waters of the state,” under jurisdiction of the RWQCB, is defined by California Water Code as “any surface water or groundwater, including saline waters, within the boundaries of the state” (California Water Code Section 13050(e)).

Currently, the RWQCB relies upon the definition used in the CWA to define wetlands. However, the State Water Resources Control Board is in the process of redefining wetlands as part of their proposed Procedures for Discharges of Dredged or Fill Material to Waters of the State (State Water Resources Control Board, 2017). The new definition, which is currently not adopted, is “an area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area’s vegetation is dominated by hydrophytes or the area lacks vegetation.” This report uses the current definition of wetlands.

The California Department of Fish and Wildlife (CDFW) also has jurisdictional authority over waters of the state, including wetlands. In practice, CDFW follows the United States Fish and Wildlife Service (USFWS) definition of wetlands in Cowardin’s Classification of Wetlands and Deepwater Habitats of the U.S: “Wetlands are lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For purposes of this classification, wetlands must have one or more of the following three attributes: 1) at least periodically, the land supports hydrophytes; 2) the substrate is predominantly undrained hydric soil; and 3) the substrate is non-soil and is saturated with water or covered by shallow water at some time during the growing season of each year” (Cowardin, Carter, Golet, & LaRoe, 1979).

California Fish and Game Code

Section 1602 of the California Fish and Game Code governs construction activities that substantially divert or obstruct natural stream flow or substantially change the bed, channel, or bank of any river, stream, or lake under the jurisdiction of the CDFW. Under the California Fish and Game Code, the limits of CDFW’s jurisdiction within streams and other drainages extends from the top of the stream bank to the top of the opposite bank, to the outer drip line in areas containing riparian vegetation, and/or within the 100-year floodplain of a stream or river system containing fish or wildlife resources. Streams are defined in the CCR (14 CCR Section 1.72) as “a body of water that follows at least periodically or intermittently through a bed or channel having banks and that support fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation.” Under Section 1602, a Streambed Alteration Agreement must be issued by the CDFW prior to the initiation of construction activities that may substantially divert or obstruct the natural flow of any river, stream, or lake; substantially change or use any material from the bed, channel, or bank, of any river, stream, or lake; or deposit debris, waste, or other materials that could pass into any river, stream, or lake under CDFW’s jurisdiction.

Section 2126 of the California Fish and Game Code states that it is unlawful for any person to take any mammal that are identified within Section 2118, including all species of bats.

Sections 3503, 3513, and 3800 of the California Fish and Game Code prohibit the take of birds protected under the MBTA and protects their occupied nests. In addition, Section 3503.5 of the California Fish and Game Code prohibits the take of any birds in the order Falconiformes or Strigiformes (birds-of-prey) and protects their occupied nests. State-listed species and those petitioned for listing by the CDFW are fully protected under the California Endangered Species Act. Under Section 2080.1 of the California Fish and Game Code, if a project would result in take of a species that is both federally and state listed, a consistency determination with the findings of the FESA determination is required. Under Section 2081, if a project would result in take of a species that is state-only listed as threatened or endangered, then an incidental take permit from the CDFW is required.

Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code prohibit the take or possession of 37 fully protected bird, mammal, reptile, amphibian, and fish species. Each of the statutes states that no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to “take” the species, and states that no previously issued permit or licenses for take of the species “shall have any force or effect” for authorizing take or possession. The CDFW will not authorize incidental take of fully protected species when activities are proposed in areas inhabited by those species.

Local Regulations

2030 Merced County General Plan

The Natural Resources Element of the General Plan identifies the following policies related to biological resources that are applicable to the project (County of Merced, 2013).

- Policy NR-1.1: Habitat Protection. Identify areas that have significant long-term habitat and wetland values including riparian corridors, wetlands, grasslands, rivers and waterways, oak woodlands, vernal pools, and wildlife movement and migration corridors, and provide information to landowners.
- Policy NR-1.4: Important Vegetative Resource Protection. Minimize the removal of vegetative resources which stabilize slopes, reduce surface water runoff, erosion, and sedimentation.
- Policy NR-1.5: Wetland and Riparian Habitat Buffer. Identify wetlands and riparian habitat areas and designate a buffer zone around each area sufficient to protect them from degradation, encroachment, or loss.
- Policy NR-1.12: Wetland Avoidance. Avoid or minimize loss of existing wetland resources by careful placement and construction of any necessary new public utilities and facilities, including roads, railroads, high speed rail, sewage disposal ponds, gas lines, electrical lines, and water/wastewater systems.

AFFECTED ENVIRONMENT:

Biological Study Area

The Biological Study Area (BSA) is in a rural, agricultural area of Merced County and is surrounded by orchards and agricultural land. The BSA encompasses approximately 3.53 acres and the limits of the BSA

extend approximately 100 feet to the north and south of the bridge and approximately 450 feet east and west of the canal (see **Figure 4**, Biological Survey Area)

Special Status Species

A California Natural Diversity Database (CNDDDB) species lists were obtained on December 12, 2014, March 29, 2016, August 2, 2018, March 20, 2019, August 3, 2022, and updated on August 12, 2024 to identify special-status natural communities, plants, and wildlife with the potential to be in the BSA based on their recorded geographical distribution. USFWS species lists were also obtained on December 22, 2014, February 1, 2016, August 2, 2018, March 20, 2019, August 3, 2022, August 12, 2024, and updated on January 27, 2025 and a National Marine Fisheries Service (NMFS) species list was obtained September 19, 2018, March 20, 2019, August 5, 2022, and updated on October 23, 2024.

Natural Communities

According to the CNDDDB search five special-status natural communities have the potential to be in the BSA based on recorded distribution, including Cismontane Alkali Marsh, Northern Claypan Vernal Pool, Northern Hardpan Vernal Pool, Valley Sacation Grassland, and Coastal and Valley Freshwater Marsh. Only one special-status natural community was identified within the BSA, Western North American Ruderal Marsh, Wet Meadow & Shrubland Macrogroup, which is equivalent to the Holland classification of Coastal and Valley Freshwater Marsh community (see **Table 1**) (Holland, 1986).

Special-Status Plants

According to the CNDDDB, CNPS, and USFWS searches, 26 special-status plant species have the potential to be in the BSA based on recorded geographical distribution. Based on the results of research and field surveys, two special-status plant species have potential to be in the BSA, including Sanford's arrowhead (*Sagittaria sanfordii*) and Wright's trichocornis (*Trichocoronis wrightii* var. *wrightii*) (see **Table 1**).

Special-Status Animals

According to the CNDDDB, USFWS, and NMFS searches, 36 special-status wildlife species have the potential to be in the BSA based on recorded geographical distribution. Based on the results of research and field surveys, four special-status wildlife species have potential to be in the BSA, including northwestern pond turtle (*Actinemys marmorata*), Swainson's hawk (*Buteo swainsoni*), northern harrier (*Circus hudsonius*), pallid bat (*Antrozous pallidus*), and yuma myotis (*Myotis yumanensis*) (see **Table 1**).

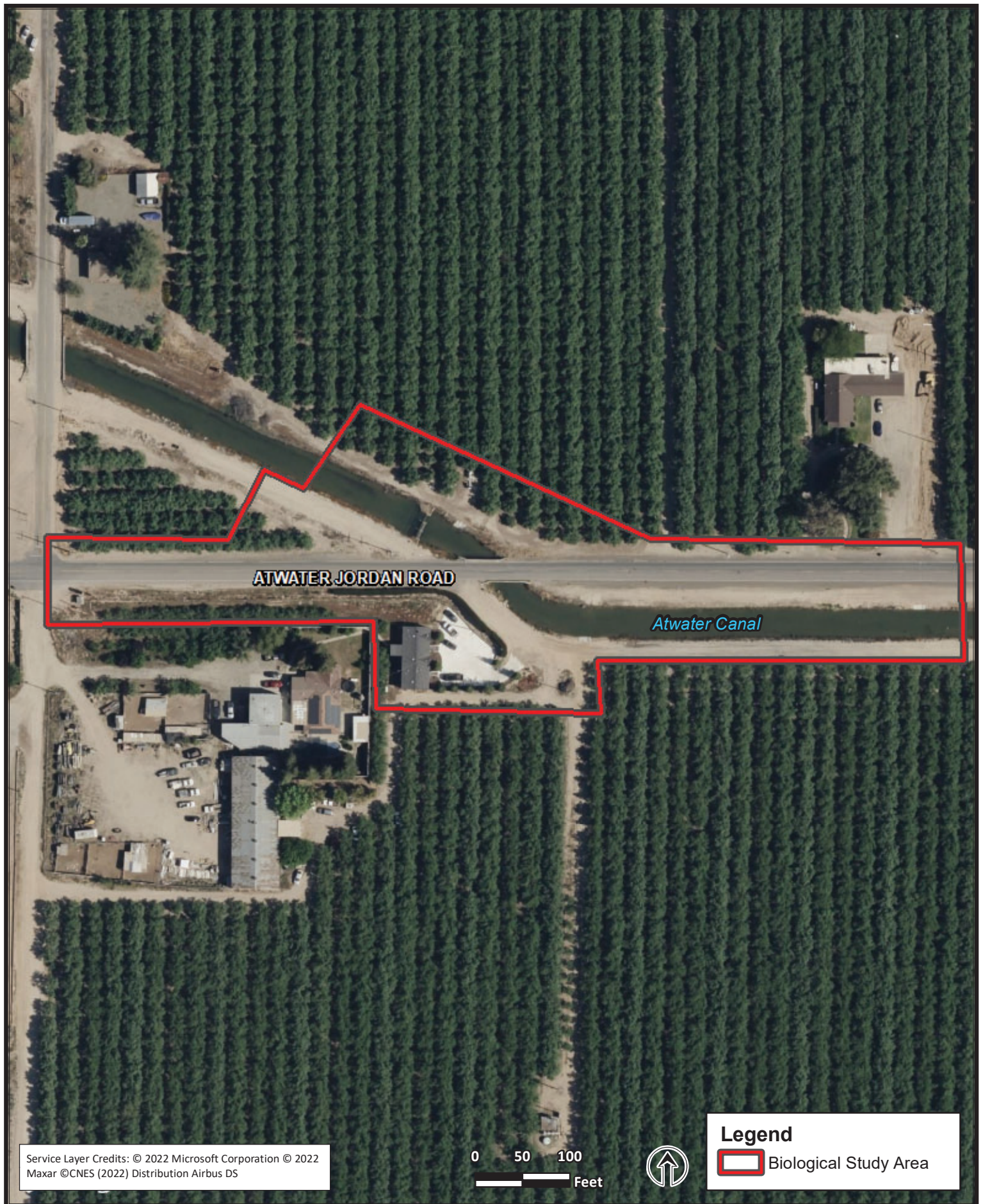


Table 1 Special-Status Species with Potential to be in the Biological Study Area

Common and Scientific Names	Status			General Habitat Requirements	Habitat Present/Absent	Rationale for Natural Communities Presence/Absence
	Federal USFWS	State CDFW	CNPS			
Natural Communities						
Coastal and Valley Freshwater Marsh	--	S2.1	N/A	The Coastal and Valley Freshwater Marsh is dominated by perennial, emergent monocots, often forming completely closed canopies. Coastal and valley freshwater marshes are permanently flooded by fresh water and have deep, peaty soils.	HP	There is Western North American Ruderal Marsh, Wet Meadows, and Shrubland Macrogroup in the BSA. This community is equivalent to the Holland classification of Coastal and Valley Freshwater Marsh (Holland, 1986). Therefore, this community is present in the BSA.
Plants						
<i>Sagittaria sanfordii</i> Sanford's arrowhead	--	--	1B.2	The Sanford’s arrowhead is a perennial rhizomatous herb found in standing or slow-moving freshwater ponds, marshes, and ditches and mostly under natural conditions in wetlands. This species is found in association with the water plantain (<i>Alisma plantago-aquatica</i>), water primrose (<i>Ludwigia peploides</i>), and various species of cattail (<i>Typha</i> spp.) Typical blooming period: May to October Typical elevation range: Zero to 2,132 feet	HP	There are small areas of wetlands along the banks of the canal within the BSA; therefore, although this species was not observed during the biological surveys, which were conducted during the typical blooming period for this species, there is potential for this species to be in the BSA.
<i>Trichocoronis wrightii</i> var. <i>wrightii</i>	--	--	2B.1	The Wright's trichocoronis is an annual herb found in marshes and swamps, riparian forest, meadows and seeps, and vernal pools in	HP	There are small areas of wetlands along the banks of the canal within the BSA; therefore, although this species was not observed

Common and Scientific Names	Status			General Habitat Requirements	Habitat Present/Absent	Rationale for Natural Communities Presence/Absence
	Federal USFWS	State CDFW	CNPS			
Wright's trichocoronis				freshwater wetland communities. This species is found in mud flats of vernal lakes, drying river beds, and alkali meadows. Typical blooming period: May to September Typical elevation range: 16 to 1,427 feet		during the biological surveys, which were conducted during the typical blooming period for this species, there is potential for this species to be in the BSA.
Insects						
<i>Danaus plexippus</i> Monarch butterfly	FC	None	N/A	The monarch butterfly roosts in wind-protected tree groves (eucalyptus, Monterey pine, cypress) with nectar and water sources nearby. Winter roost sites for the monarch butterfly extend along the coast from northern Mendocino to Baja California, Mexico.	A (roosting) HP (foraging)	There is suitable nectar producing plants and the Atwater Canal as a water source. No roosting habitat was observed that is typically preferred by this species. Therefore, there is potential for this species to forage in the BSA, but it is not expected to overwinter in the BSA.
Reptiles						
<i>Emys marmorata</i> Western pond turtle	--	SSC	N/A	The western pond turtle is found in slow moving rivers, streams, lakes, ponds, wetlands, reservoirs, and brackish estuarine waters. This species prefers areas that provide logs, algae, or vegetation for cover, and boulders, partially submerged logs, vegetation mats, or open mud banks for basking, and is found below 6,000 feet elevation.	HP	There is suitable habitat within the Atwater Canal which provides vegetation for cover. Therefore, there is potential for this species to be in the BSA.
<i>Thamnophis gigas</i> Giant garter snake	FT	ST	N/A	The giant garter snake is found in marshes, sloughs, drainage canals, irrigation ditches, and occasionally in slow-moving creeks. This species requires freshwater with emergent vegetation	HP	There is marginally suitable habitat within the Atwater Canal such as cattails and small mammal burrows. Therefore, there is potential for this species

Common and Scientific Names	Status			General Habitat Requirements	Habitat Present/Absent	Rationale for Natural Communities Presence/Absence
	Federal USFWS	State CDFW	CNPS			
				(typically tulle and cattail) cover that will allow foraging, an upland component near aquatic habitat that can be used for thermoregulation and for summer shelter in burrows, and upland refugia that will serve as winter hibernacula. This species preys upon fish and amphibians.		to be in the BSA.
Birds						
<i>Ardea alba</i> Great egret	--	S4	N/A	The great egret is found in brackish marsh, estuary, freshwater marsh, riparian forests, and wetlands. This species nests colonially in large trees. The rookery sites are located near marshes, tide-flats, irrigated pastures, and margins of rivers and lakes. The great egret feeds mainly on small fish, but will also eat amphibians, reptiles, small mammals, and invertebrates.	A (Nesting) HP (Foraging)	This species was observed foraging in the BSA during biological surveys. There is suitable foraging habitat in the BSA, but the nesting habitat typically preferred by this species is absent; therefore, there is potential for this species to forage in the BSA, but it is not expected to nest in the BSA.
<i>Ardea herodias</i> Great blue heron	--	S4	N/A	The great blue heron nests colonially in tall trees, cliff sides, and sequestered spots on marshes. This species forages in marshes, lake margins, tide flats, rivers, streams, and wet meadows. The rookery sites are in close proximity to foraging areas. Colonies need to be protected from human disturbances, which often cause nest desertion.	A (Nesting) HP (Foraging)	There is suitable foraging habitat in the BSA, but the nesting habitat typically preferred by this species is absent; therefore, there is potential for this species to forage in the BSA, but it is not expected to nest in the BSA.
<i>Buteo swainsoni</i> Swainson's	--	ST	N/A	The Swainson's hawk breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with	A (Nesting)	There is suitable foraging habitat in the BSA, but the nesting habitat typically preferred by this species is absent; therefore, there is

Common and Scientific Names	Status			General Habitat Requirements	Habitat Present/Absent	Rationale for Natural Communities Presence/Absence
	Federal USFWS	State CDFW	CNPS			
hawk				groves or lines of trees. This species requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations. The current distribution of Swainson's hawks is in the Central Valley and northeastern California from Butte Valley east to Nevada, south-central Modoc County, and eastern Lassen County. The range does not extend to the North Coast of California.	HP (Foraging)	potential for this species to forage in the BSA, but it is not expected to nest in the BSA.
<i>Circus hudsonius</i> Northern harrier	--	SSC	N/A	The northern harrier is a widespread migrant and winter visitor through California. This species breeds and forages in a variety of open (treeless) habitats that provide adequate vegetative cover, an abundance of suitable prey, and scattered hunting, plucking, and lookout perches such as shrubs or fence posts. In California, such habitats include freshwater marshes, brackish and saltwater marshes, wet meadows, weedy borders of lakes, rivers and streams, annual and perennial grasslands (including those with vernal pools), weed fields, ungrazed or lightly grazed pastures, some croplands, sagebrush flats, and desert sinks. This species nests on ground in shrubby vegetation, usually at marsh edges; nests are built of a large mound of sticks in wet areas.	A (Nesting) HP (Foraging)	There is suitable foraging habitat in the BSA, but the nesting habitat typically preferred by this species is absent; therefore, there is potential for this species to forage in the BSA, but it is not expected to nest in the BSA.
Mammals						

Common and Scientific Names	Status			General Habitat Requirements	Habitat Present/ Absent	Rationale for Natural Communities Presence/Absence
	Federal USFWS	State CDFW	CNPS			
<i>Antrozous pallidus</i> Pallid bat	--	SSC	N/A	The pallid bat is found year-round in a variety of low-elevation habitats in most parts of California, including grasslands, shrub lands, woodlands, and forests. This species is thought to prefer open, dry habitats with rocky areas for roosting. The pallid bat day roosts in caves, crevices, mines, hollow trees, buildings, and bridges, and night roosts in more open sites, such as porches, open buildings and bridges.	HP	There are old cliff swallow nests on the bridge that could provide suitable roosting habitat; therefore, there is potential for this species to be in the BSA.
<i>Myotis yumanensis</i> Yuma myotis	--	S4	N/A	The Yuma myotis is common in California. Optimal habitats for this species include open forests and woodlands with sources of water over which to feed. This species has also been documented in many urban areas. This species roosts in buildings, mines, caves, or crevices. This species also has been seen roosting in abandoned swallow nests and under bridges. Separate, often more open, night roosts may be used.	HP	There are old cliff swallow nests on the bridge that could provide suitable roosting habitat; therefore, there is potential for this species to be in the BSA.
<i>Antrozous pallidus</i> Pallid bat	--	SSC	N/A	The pallid bat is found year-round in a variety of low-elevation habitats in most parts of California, including grasslands, shrub lands, woodlands, and forests. This species is thought to prefer open, dry habitats with rocky areas for roosting. The pallid bat day roosts in caves, crevices, mines, hollow trees, buildings, and bridges, and night roosts in more open sites, such as porches,	HP	There are old cliff swallow nests on the bridge that could provide suitable roosting habitat; therefore, there is potential for this species to be in the BSA.

Common and Scientific Names	Status			General Habitat Requirements	Habitat Present/Absent	Rationale for Natural Communities Presence/Absence
	Federal USFWS	State CDFW	CNPS			
				open buildings and bridges.		

Source: (GPA Consulting, 2025) (Holland, 1986) (Sawyer, 2012): (California Native Plant Society, 2022a) (GPA Consulting, 2025) (Jepson Flora Project, 2022)

Notes: HP=Habitat Present; CNPS= California Native Plant Society; A=Absent S2 = Imperiled- rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the nation or California. 0.1=seriously threatened in California.; 1B= Plant species that are rare, threatened, or endangered in California and elsewhere; 2B= Plant species that are rare, threatened, or endangered in California, but are more common elsewhere; 0.1=seriously threatened in California and 0.2 = moderately threatened in California.

Habitat Connectivity

A migration or wildlife corridor is an area of habitat that connects two or more patches of habitat that would otherwise be isolated from each other. Wildlife corridors are typically adjacent to urban areas. A functional wildlife corridor allows for ease of movement between habitat patches and is important in preventing habitat fragmentation. Habitat fragmentation is typically caused by human development and can lead to a decrease in biodiversity and ecosystem functionality.

The land surrounding the BSA is used for agricultural practices. According to the CDFW Biogeographic Information and Observation System, there are no essential wildlife connectivity areas or natural landscape blocks in the BSA. Although the BSA is not likely to be used as a migration or travel corridor, the canal may be used for local wildlife movement and foraging in the area. Atwater Canal is an unlined intermittent canal which could provide habitat for fish and other aquatic species.

DISCUSSION OF CHECKLIST RESPONSES:

- 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, U.S. Fish and Wildlife Service, or NOAA Fisheries?**

Less Than Significant: A search of the CNDDDB was conducted, and a USFWS species list was reviewed for the project. Several candidate, sensitive, and special-status plant and wildlife species have potential to be in the project area, based on geographic distribution. A biological reconnaissance survey was conducted for the project on December 17, 2014, May 18, 2016, and updated survey was conducted on August 23, 2022.

The Sanford's arrowhead and Wright's trichocoronis could be impacted if they were to be growing in the canal during construction. These species could be directly impacted if plants were to be removed or trampled during construction. Construction activities could indirectly impact the Sanford's arrowhead or the Wright's trichocoronis if plants were to be covered in dust as a result of the project or if the hydrology of the canal was altered during construction. However, with the implementation of measures **BIO-1** through **BIO-5**, impacts on special-status plant species would be less than significant.

Northwestern pond turtle is proposed for listing as threatened under FESA. The northwestern pond turtle is found in slow moving rivers, streams, lakes, ponds, wetlands, reservoirs, and brackish estuarine rivers. could enter the project area prior to construction. Project activities, including excavating, staging, pedestrian and vehicle movement, installation of a water diversion, and grading could result in direct and indirect impacts on the northwestern pond turtle. If present, the northwestern pond turtle could be directly impacted if they were to be trampled or removed during construction activities. Temporary indirect impacts could include increased turbidity, temporary loss of basking sites, increased noise, vibration, and increased human activity from construction activities result in the turtle leaving the area. Measures **BIO-6** through **BIO-14** would be implemented to avoid and/or minimize impacts on the northwestern pond turtle. Therefore, the project would result in less than significant impacts on special-status reptiles.

Construction activities such as vegetation removal and widening the bridge and roadway shoulders could result in an increase in noise and vibration levels, which could result in indirect impacts on bird species, including foraging disruption. However, once construction is initiated, any birds foraging in the vicinity would be expected to move away from the area, and there are other portions of the canal in which they could forage. Additionally, no tree removal is anticipated for the project. Indirect impacts would be minimal, and direct impacts are not anticipated. Measures **BIO-15** through **BIO-20** would be implemented to reduce impacts on Swainson's hawk and northern harrier. Therefore, the project would result in less than significant impacts on migratory birds.

Bats could be directly impacted if individuals were to roost within the swallow nests on the bridge during construction. In addition, noise, vibration, and disturbance from adjacent construction activities could result in indirect impacts on bats roosting in trees immediately adjacent to the construction area, causing roost abandonment. Measures **BIO-21** through **BIO-24** would be implemented to avoid and/or minimize impacts on bats. Therefore, the project would result in less than significant impacts on bats.

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 Game or US Fish and Wildlife Service?

Less Than Significant With Mitigation Incorporated. Construction of the rock slope protection and footings for the new abutments of the new bridge would result in less than 0.01 acre of permanent impacts on wetlands/Western North American Ruderal Marsh, Wet Meadow & Shrubland Macrogroup, less than 0.01 acre of permanent impacts on non-wetland waters under jurisdiction of USACE and RWQCB and approximately 0.01 acre of permanent impacts on waters under jurisdiction of the CDFW. Construction activities within the canal, including demolition of the existing bridge, construction of the replacement bridge, and installation of the water diversion would result in less than 0.01 acre of temporary impacts on wetlands/Western North American Ruderal Marsh, Wet Meadow & Shrubland Macrogroup and approximately 0.070 acre of temporary impacts on non-wetland waters under jurisdiction of the USACE and RWQCB, and approximately 0.07 acre on waters under jurisdiction of the CDFW. Impacts on the Western North American Ruderal Marsh, Wet Meadow & Shrubland Macrogroup community would have the same impacts as the jurisdictional features within the BSA. Measures **BIO-25** and **BIO-27** would be implemented to avoid minimize and/or mitigate impacts on natural communities and jurisdictional features. Therefore, the project would result in less than significant impacts with mitigation incorporated related to sensitive natural communities.

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

Less Than Significant With Mitigation. See discussion to response (b) above.

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

Less Than Significant Impact. The land surrounding the BSA is used for agricultural practices. According to the CDFW Biographic information and observation system, there are no essential wildlife connectivity areas or natural landscape blocks in the BSA. Although the BSA is not likely to be used as a migration or travel corridor, the canal may be used for local wildlife movement and foraging in the area.

During the biological surveys, 20 bird species were observed foraging or flying over the BSA including rock pigeon, Nuttall's woodpecker, snowy egret, house finch, barn swallow, lesser goldfinch, western meadowlark, killdeer, Eurasian collard dove, turkey vulture, black phoebe, common raven, great egret, house sparrow, cliff swallow, western kingbird, mourning dove, white-crowned sparrow, and western scrub jay. In addition, old cliff swallow nests were observed on the underside of the bridge deck.

There is the potential for migratory birds to be in the BSA and construction area during construction. Nesting birds could be directly impacted by construction activities if they were to be nesting in structures or vegetation within the construction area. In addition, these species could be indirectly impacted by loss of habitat resulting from vegetation or structure removal. If construction is scheduled to begin during bird nesting season (typically February 1 to September 30), measures **BIO-15** through **BIO-20** would be implemented. With implementation of these measures, the project would be in compliance with the MBTA and California Fish and Game Code. Therefore, the project would result in less than significant impacts related to migratory wildlife corridors and native wildlife nursery sites.

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

No Impact. No trees would be removed as part of the project, and the project would not conflict with any local policies or ordinances protecting biological resources, including policies in the County's General Plan, Land Use Element, and Open Space Element. Therefore, the project would result in no impact related to local policies.

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

No Impact: The project area is not located within the limits of a regional conservation plan such as a Habitat Conservation Plan or Natural Community Conservation Plan. Therefore, the project would result in no impact related to habitat conservation plans.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES:

To avoid and/or minimize potential impacts on special-status plants, the following measures would be implemented:

BIO-1 Prior to construction, a qualified biologist would conduct rare plant surveys within the construction area. Surveys would be conducted during the appropriate blooming period for species with potential to be in the construction area, to the extent feasible.

BIO-2 If a special-status plant species is found during pre-construction surveys, high visibility Environmentally Sensitive Area (ESA) protective fencing would be installed around the special-

status plants to prevent construction staff or equipment from entering this area. The ESA protective fencing buffer would be species specific, with a minimum buffer radius based on the guidance from a qualified biologist.

- BIO-3** All excluded areas with ESA protective fencing would be monitored to determine whether exclusion measures were successful and to identify any outstanding concerns. Exclusionary measures would be monitored throughout construction to ensure they are functioning correctly and would be removed following construction.
- BIO-4** If surveys cannot be conducted within the appropriate blooming period, if presence for any species cannot be ruled out for any other reason, or if ESA protective fencing around an observed population is not feasible, additional avoidance measures would be implemented based on recommendations of a qualified biologist, to the extent feasible.

To mitigate for impacts on special-status plants, the follow measure will be implemented

- BIO-5** If it is determined that special-status plants will be directly impacted by the project, a species-specific mitigation plan will be prepared by a qualified biologist. The plan will include one or more of the following: plant relocation, seed collection and dispersal, on or off-site restoration, or payment into an agency-approved mitigation bank. The plan will be implemented prior to the completion of the project.

The following measures would be implemented to avoid and/or minimize impacts on the northwestern pond turtle:

- BIO-6** Pre-construction surveys for the northwestern pond turtle would be conducted by a qualified biologist within 72 hours prior to start of construction to determine if northwestern pond turtles are present. Surveys of the BSA would be repeated if there is a lapse in construction activity within the canal or on the banks of two weeks or more.
- BIO-7** If northwestern pond turtles are found in the construction area, the encounter would be treated on a case-by-case basis in coordination with regulatory agencies, but the general procedure would be as follows: 1) work would immediately be suspended in the vicinity of the turtle; 2) a qualified biologist would evaluate the animal; 3) the animal would not be disturbed if it is not in danger and would be allowed to exit the construction site on its own.
- BIO-8** Prior to the initiation of any work, including installation of exclusion fencing or clearing and grubbing activities, a qualified biologist would conduct an environmental worker awareness training for all project personnel. The training would discuss the sensitive habitats and special-status species with the potential to be within the construction site and would review the project's avoidance and minimization measures, and permitting conditions associated with biological resources.
- BIO-9** The exclusion fencing would be periodically inspected for trapped wildlife by a qualified biologist.
- BIO-10** To prevent inadvertent entrapment of the northwestern pond turtle during construction, all excavated, steep-walled holes or trenches more than six inches deep would be provided with one

or more escape ramps constructed of earthen fill or wooden planks. Before such holes or trenches are filled, they would be thoroughly inspected for trapped animals by a qualified biologist.

BIO-11 During demolition of the existing road and bridge, all grindings and asphaltic-concrete waste would be immediately removed offsite or be temporally stored onsite. If the waste is stored onsite, the waste would be placed on an elevated trailer, dumpster or similar so that the waste would not have contact with the ground or risk entering Atwater Canal.

BIO-12 Take or suspected take of listed wildlife species would be reported immediately to a qualified biologist. A qualified biologist would be required to report the incident, or suspected incident, to the wildlife agencies within 24 hours.

BIO-13 All project-related vehicle traffic would be restricted to established roads and construction areas, which include equipment staging, storage, parking, and stockpile areas.

BIO-14 No pets would be allowed in the construction area, to avoid and minimize the potential for harassment, injury, and death of wildlife.

To avoid and minimize impacts on migratory birds, the following measures would be implemented:

BIO-15 Construction during bird nesting season (typically February 1 to September 15) would be avoided to the extent feasible.

BIO-16 If construction is required during the nesting season, vegetation removal required for the project would be conducted during the nonbreeding season, wherever feasible.

BIO-17 For construction scheduled to begin during bird nesting season, nesting bird surveys would be completed no more than 48 hours prior to construction to determine if nesting birds or active nests are within 300 feet (500 feet for potential raptor nests) of the construction area. Surveys would be repeated if construction activities are suspended for five days or more.

BIO-18 If nesting birds are found in the construction area, measures to ensure that birds and/or their nests are not harmed would be implemented, including but not limited to, installation and maintenance of appropriate buffers (typically 300 feet for songbirds and 500 feet for raptors) until nesting activity has ended.**BIO-19** In the year prior to construction, cliff swallow nests and other nests would be removed under the supervision of a qualified biologist during the nonbreeding season (typically September 16 to January 31). In addition, nest removal would be conducted during the nonactive season (November 1 to February 28) for bats, as there is potential for bats to utilize swallow nests for roosting. Further, the inactive nests would also be checked for bats prior to removal.

BIO-20 During the nesting season (typically February 1 to September 15), the construction area would be monitored a minimum three days per week to ensure that any partially-built nests would be removed from the bridge to prevent swallows from nesting on the bridge structure and no new nests are built. If an active nest is observed, project biologists would coordinate with regulatory agencies as appropriate. Monitoring and nesting deterrence would continue until birds no longer attempt to nest on the bridge.

To avoid and minimize impacts on the bats, the following avoidance and minimization measures would be implemented:

- BIO-21** At least 30 days prior to construction, a thorough bat roosting habitat assessment would be conducted of all potential roosting habitat to be removed or otherwise impacted during construction, including swallow nests. Visual and/or acoustic surveys would be conducted, as needed to assess bat presence. If presence is detected, a count and species analysis would be completed to help assess the type of usage.
- BIO-22** No less than two weeks prior to construction, and during the non-breeding and active season (typically October), bats would be safely evicted from roosts impacted by the project under the direction of a qualified biologist. Once bats have been safely evicted, exclusionary devices would be installed to prevent bats from returning and roosting in these areas prior to removal. Roosts that would not be impacted by the project would be left undisturbed.
- BIO-23** If the presence or absence of bats cannot be confirmed in potential roosting habitat, a qualified biologist would be onsite during removal or disturbance of this area. If the biologist determines that bats are being disturbed during this work, work would be suspended until bats have left the vicinity on their own or can be safely excluded under direction of the biologist. Work would resume only once all bats have left the site and/or approval to resume work is given by a qualified biologist.
- BIO-24** In the event that a maternal colony of bats is found, no work would be conducted within 100 feet of the maternal roosting site until the maternal season is finished or the bats have left the site, or as otherwise directed by a qualified biologist. The site would be designated as a sensitive area and protected as such until the bats have left the site. No activities would be authorized adjacent to the roosting site. Combustion equipment, such as generators, pumps, and vehicles, would not be parked or operated under or adjacent to the roosting site. Construction personnel would not be authorized to enter areas beneath the colony, especially during the evening exodus (typically between 15 minutes prior to sunset and one hour following sunset).

To avoid and/or minimize impacts on jurisdictional features, the following avoidance and minimization measures would be implemented:

- BIO-25** Work areas would be reduced to the maximum extent feasible, and staging areas for equipment refueling and maintenance would be located 50 feet from the canal and outside of wetlands/ Western North American Ruderal Marsh, Wet Meadow & Shrubland Macrogroup to avoid any impacts from equipment and material staging. Appropriate hazardous material Best Management Practices (BMP) would be implemented to reduce the potential for chemical spills or contaminant releases into the canal, including any non-stormwater discharge. In addition, vehicles and equipment would be checked daily for fluid and fuel leaks, and drip pans would be placed under all equipment that is parked and not in operation.
- BIO-26** Following project construction, all temporarily disturbed areas adjacent to the canal would be restored to pre-project conditions or better, and any re-vegetation or erosion control implemented would be completed using non-invasive species.

To mitigate for impacts on jurisdictional features, the following measure will be implemented:

BIO-27 Mitigation for permanent and temporary impacts on jurisdictional features will be accomplished through on-site restoration or through the purchase of in-lieu fees or mitigation bank credits. Mitigation will be at a minimum ratio of 1:1; however, the final ratio will be established through consultation and coordination with regulatory agencies during the permitting process.

4.5 CULTURAL RESOURCES

Would the project:

Question	CEQA Determination
a) Cause a substantial adverse change in the significance of a historical resource pursuant to in §15064.5?	No Impact
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	Less Than Significant Impact
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	Less Than Significant Impact

The following discussion incorporates the results of the Historic Property Survey (HPSR) (GPA Consulting, 2025) and Archaeological Survey Report (ASR) (Chronicle Heritage, 2025).

REGULATORY SETTING:

State Regulations

CEQA Section 15064.5

Under CEQA, Title 14, CCR Section 15064.5(a)(3), a resource is considered historically significant if it meets one of the following four criteria:

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

CEQA requires public agencies and private interests to identify the potential adverse impacts or environmental consequences of their project to any object or site of significance with respect to history. CEQA also provides protection for paleontological remains.

California Public Resources Code (PRC)

PRC 21083.2, 5097.5, 30244, and 21084.1

According to PRC 21083.2 (a), if archaeological resources are determined to be significant, then the impacts on that resource should be addressed. PRC 5097.5 prohibits the excavation and/or the removal of a “vertebrate paleontological site...or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having

jurisdiction over such lands.” PRC 30244 requires reasonable mitigation of adverse impacts on paleontological resources resulting from development on public land.

PRC 21084.1 gives the lead agency power to determine that a resource is a historical resource, even if the resource is not listed or eligible for listing in the California Register of Historical Resources or a local register of historical places. In addition, the lead agency can also determine that a resource is a historical resource, even if it is not deemed significant in a historical resource survey.

Native American Heritage Act (PRC 5097.9)

The Native American Heritage Act, passed by California in 1976, established the Native American Heritage Commission (NAHC) for protecting Native American religious values on state property. The NAHC not only protects the heritage of Native Americans, but also ensures their participation in matters concerning heritage sites. The commission’s duty is to assist both federal and state agencies in protecting Native American sacred places and provide recommendations concerning Native American heritage in accordance with environmental law and policy. The act protects burials from disturbance, vandalism, and accidental destruction. It also stipulates which specific procedures laid out in the California Health and Safety Code (HSC) must be implemented if a Native American burial is uncovered during project construction or archaeological data recovery.

Assembly Bill 52 (PRC 21080.1, 21080.3.1, and 21080.3.2)

As of July 1, 2015, AB 52 requires public agencies to consult with California Native American tribes identified by the NAHC for the purpose of mitigating impacts on tribal cultural resources. The specific directives of the bill are as follows:

“Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section (PRC Section 21080.1(d)).”

California Health and Safety Code Section 7050.5

The State of California HSC Section 7050.5 requires that if human remains are discovered during ground disturbing activities, the County Coroner must be notified, and no further disturbance is authorized to occur until the County Coroner has made a determination of origin and disposition of the remains. If the human remains are determined to be prehistoric, the coroner must notify the NAHC, who would determine and notify a Most Likely Descendant (MLD). The MLD then inspects the site and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

Local Regulations

2030 Merced County General Plan

The Recreation and Cultural Resources Element of the General Plan contains the following policies that are applicable to the project (County of Merced, 2013).

Policy RCR-2.1: Archeological Site and Artifact Protection. Require development projects that affect archeological sites and artifacts to avoid disturbance or damage to these sites.

- Policy RCR-2.5: Human Remains Discovery. Require that, in the event of the discovery of human remains on any project construction site, all work in the vicinity of the find would cease and the County Coroner and Native American Heritage Commission would be notified.
- Policy RCR-2.10: Tribal Consultation. Consult with Native American tribes regarding proposed development projects and land use policy changes consistent with Planning and Zoning Law at Government Code Section 65351, and the OPR Tribal Consultation Guidelines (2005).

AFFECTED ENVIRONMENT:

A records search was conducted by the Central California Information Center (CCIC) at California State University, Stanislaus on February 26, 2016, and on March 8, 2023. The records searches included a review of all recorded historic and prehistoric cultural resources situated within a 1-mile radius of the Area of Potential Effects (APE), as well as a review of known cultural resource surveys and excavation reports. The Build Environment Resource Directory (BERD) with inventories of the National Register of Historic Places (NRHP), the California Register of Historical Resources, the California State Historic Resources Inventory, and California Historical Landmarks was also reviewed to identify cultural resources within the project's study area.

The CCIC identified two (2) previously recorded resources that intersect the APE and one (1) previously recorded resource within a 1-mile radius of the APE. The two previously recorded resources within the APE are the Atwater Canal (P-24- 000092) and the Merced Irrigation District (P-24-001909). The Atwater Canal is a 6.2 mile, secondary lateral constructed circa 1879 and mostly concrete-lined by circa 1945. The Merced Irrigation District consists of over 750 miles of canals that irrigate more than 110,000 acres. The Atwater Canal is a conduit operated and owned by the Merced Irrigation District. Neither of these resources are eligible for listing in the NRHP. No archaeological resources or additional built environment resources were identified in the APE as a result of the field survey. In addition, no cultural resources or sacred sites were identified through communications with the NAHC.

DISCUSSION OF CHECKLIST RESPONSES:

- a. Would the project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?**

No Impact. The project would include replacing the existing Atwater Jordan Road Bridge. Project activities would be completed within existing County easements, and there are no structures within the area therefore, no properties would be affected by the project. According to the National Register of Historic

Places (NRHP) database, there are no properties listed on the NRHP within or adjacent to the project area (National Register of Historic Places, 2025). Therefore, the project would result in no impact related to historical resources.

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

Less Than Significant Impact. As discussed above in response (a), there are no known eligible cultural resources in the project vicinity. Due to the nature of previous ground disturbances within the APE for the construction of the bridge and existing road, along with the research and survey results, there is a low potential to adversely affect unknown, potentially intact buried archaeological deposits that might be eligible for NRHP listing. Avoidance and minimization measure **CUL-1** would be implemented as part of the project if previously unidentified resources are uncovered. Therefore, the project would result in less than significant impacts on archaeological resources.

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

Less Than Significant Impact. The project area is located in a rural part of Merced County that is not near or within a formal cemetery. In addition, the land surrounding and within the project area has already been disturbed. However, construction of the project would include ground-disturbing activities that could unearth previously undiscovered human remains interred outside of a formal cemetery, should they be present in the project limits. Per avoidance and minimization measure **CUL-2**, if any human remains are discovered, all construction activities would cease, and the County Coroner would be contacted. Therefore, the project would result in less than significant impacts on human remains.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES:

The following measures would be implemented to reduce impacts to the extent feasible.

CUL-1 If previously unidentified cultural materials are encountered or unearthed during construction, work would be halted in that area until a qualified archaeologist can assess the nature and significance of the find. Additional surveys would be required if the project limits change to include areas not previously surveyed.

CUL-2 In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, steps would be taken in compliance with the CCR Section 15064.5. All construction activities would cease, and the County Coroner would be contacted if any human remains are discovered, in accordance with 14 CCR Section 15064.5(e). If the coroner determines that the human remains are of Native American origin, the NAHC would be notified to determine the MLD for the area. The MLD would make recommendations for the arrangements for the human remains per PRC Section 5097.98.

4.6 ENERGY

Would the project:

Question	CEQA Determination
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	Less Than Significant Impact
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	No Impact

REGULATORY SETTING:

State Regulations

Executive Order S-01-07 (January 18, 2007)

This order sets forth the low carbon fuel standard (LCFS) for California. Under this Executive Order, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by the year 2020. CARB re-adopted the LCFS regulation in September 2015, and the changes went into effect on January 1, 2016. The program establishes a strong framework to promote the low-carbon fuel adoption necessary to achieve the Governor's 2030 and 2050 GHG reduction goals.

Senate Bill 375, Chapter 728, 2008, Sustainable Communities and Climate Protection

This bill requires the Air Resource Board (ARB) to set regional emissions reduction targets for passenger vehicles. The Metropolitan Planning Organization (MPO) for each region must then develop a Sustainable Communities Strategy (SCS) that integrates transportation, land use, and housing policies to plan how it will achieve the emissions target for its region.

Energy Efficiency Strategic Plan

The California Public Utilities Commission adopted an Energy Efficiency Strategic Plan in September of 2008 outlining a roadmap to maximum energy savings for California's groups and sectors (California Public Utilities Commission, 2011).

AFFECTED ENVIRONMENT:

The project area includes an existing transportation facility. The project area does not currently require energy resources to operate.

DISCUSSION OF CHECKLIST RESPONSES:

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

Less Than Significant Impact. Operation of the project would not require an energy input beyond that which is currently required because the project would not increase vehicle use. However, during construction the project would require limited to minor energy needs, such as gasoline or diesel for worker vehicles, small pieces of maintenance equipment, and generators used to power equipment. Fuel consumption from construction vehicles and equipment would be temporary and would represent a negligible increase in regional energy consumption. Following construction, energy consumption would be consistent with existing activities in the project area. As such, the project would not result in significant impacts of wasteful or inefficient energy consumption. Therefore, the project would result in less than significant impacts related to energy consumption.

b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

No Impact. There are no known state or local plans for renewable energy or energy efficiency that would apply to the project. Therefore, the project would result in no impact related to energy plans.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES:

The project would result in less than significant impacts on Energy. Therefore, the project would not require avoidance, minimization, and/or mitigation measures for Energy.

4.7 GEOLOGY AND SOILS

Would the project:

Question	CEQA Determination
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.	Less Than Significant Impact
ii) Strong seismic ground shaking?	Less Than Significant Impact
iii) Seismic-related ground failure, including liquefaction?	No Impact
iv) Landslides?	No Impact
b) Result in substantial soil erosion or the loss of topsoil?	Less Than Significant Impact
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	No Impact
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?	Less Than Significant Impact
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	No Impact
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Less Than Significant Impact

REGULATORY SETTING:

State Regulations

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (PRC Sections 2621 to 2630) was passed in 1972 to provide a statewide mechanism for reducing the hazard of surface fault rupture to structures used for human occupancy. The main purpose of the Act is to prevent the siting of buildings used for human occupancy

across the traces of active faults. It should be noted that the Act addresses the potential hazard of surface fault rupture and is not directed toward other earthquake hazards, such as seismically induced ground shaking or landslides.

The law requires the State Geologist to identify regulatory zones (known as Earthquake Fault Zones or Alquist-Priolo Zones) around the surface traces of active faults, and to depict these zones on topographic base maps, typically at a scale of one inch to 2,000 feet. Earthquake Fault Zones vary in width, although they are often 0.75 mile wide. Once published, the maps are distributed to the affected cities, counties, and State agencies for their use in planning and controlling new or renewed construction. With the exception of single-family wood-frame and steel-frame dwellings that are not part of a larger development (i.e. four units or more), local agencies are required to regulate development within the mapped zones. In general, construction within 50 feet of an active fault zone is prohibited.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act (PRC Sections 2690 to 2699.6), which was passed in 1990, addresses earthquake hazards other than surface fault rupture. These hazards include strong ground shaking, earthquake-induced landslides, liquefaction, or other ground failures. Much like the Alquist-Priolo Earthquake Fault Zoning Act discussed above, these seismic hazard zones are mapped by the State Geologist to assist local government in the land use planning process. The Act states, “It is necessary to identify and map seismic hazard zones in order for cities and counties to adequately prepare the safety element of their general plans and to encourage land use management policies and regulations to reduce and mitigate those hazards to protect public health and safety.” The Act also states, “Cities and counties shall require, prior to the approval of a project located in a seismic hazard zone, a geotechnical report defining and delineating any seismic hazard.”

California Building Standards Code (CCR, Title 24)

The State of California provides minimum standards for building design through the California Building Standards Code (CCR, Title 24) (CBC). Where no other building codes apply, Chapter 29 regulates excavation, foundations, and retaining walls. The CBC applies to building design and construction in the state and is based on the federal Uniform Building Code used widely throughout the country (generally adopted on a state-by-state or district-by-district basis). The CBC has been modified for California conditions with more detailed and/or more stringent regulations.

The State earthquake protection law (California HSC Section 19100, et seq.) requires that structures be designed to resist stresses produced by lateral forces caused by wind and earthquakes. Specific minimum seismic safety and structural design requirements are set forth in Chapter 16 of the CBC. The CBC identifies seismic factors that must be considered in structural design. Chapter 18 of the CBC regulates the excavation of foundations and retaining walls, and Appendix Chapter A33 regulates grading activities, including drainage and erosion control and construction on unstable soils, such as expansive soils and areas subject to liquefaction. The CBC is updated every three years. The current 2019 CBC will be updated with the 2022 CBC, effective January 1, 2023.

Local Regulations

2030 Merced County General Plan

The Health and Safety Element of the General Plan contains the following policies that are applicable to the project (County of Merced, 2013).

- Goal HS-1: Minimize the loss of life, injury, and property damage of county residents due to seismic and geologic hazards.
- Policy HS-1.1: Structure Location and Compliance. Require that all new habitable structures be located and designed in compliance with the Alquist-Priolo Special Studies Zone Act and related State earthquake legislation.
- Policy HS-1.4: Ensure Earthquake Resistant Design. Require earthquake resistant design for proposed critical structures such as hospitals, fire stations, emergency communication centers, private schools, high occupancy buildings, bridges and freeway overpasses, and dams that are subject to county permitting requirements.
- Policy HS-1.9: Unstable Soils. Require and enforce all standards contained in the International Building Code related to construction on unstable soils.

AFFECTED ENVIRONMENT:

The geology of Merced County includes two beds of lake sediments and marsh deposits that consist of fine-grained materials that do not readily transmit water (GPA Consulting, 2023). The Sierra Nevada Mountains on the east are comprised of crystalline rock and also contribute to the base of the sediments within the San Joaquin Valley. The geologic units comprising the ground water reservoir in the Merced Groundwater Basin consist of consolidated rocks including the Lone Formation, the Valley Springs Formation, and the Mehrten Formation, and unconsolidated deposits.

The USDA Web Soil Survey indicates that the project area is underlain by Atwater sand, based on survey area data for Merced Area, California (Natural Resources Conservation Service, 2019). The Atwater sand soil unit is composed of sand from zero to 20 inches, and sandy loam from 20 to 60 inches. The soils were formed from sandy alluvium derived from granite. Atwater sand is characterized as well drained soil with a water table depth of more than 80 inches and a high-water capacity. The soil is in Hydrologic Group A, which indicates high infiltration rates and low runoff potential.

DISCUSSION OF CHECKLIST RESPONSES:

- 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.**

Less Than Significant Impact. The project area is outside of the Alquist-Priolo fault zone. The closest known active earthquake fault is the San Joaquin Fault, approximately 25 miles west of the project area (California Department of Conservation, 2015). The risk of substantial adverse effects resulting from earthquake fault activity and related to the project is low. The project design would adhere to applicable standards related to seismic safety. Therefore, the project would result in less than significant impacts related to a known earthquake fault.

ii. Strong seismic ground shaking?

Less Than Significant Impact. As discussed in response (a.i.) above, project design would adhere to applicable standards related to seismic safety. Therefore, the project would result in less than significant impacts related to strong seismic ground shaking.

iii. Seismic-related ground failure, including liquefaction?

No Impact. Liquefaction in soils and sediments occurs during earthquake events when soil material is transformed from a solid state to a liquid state generated by an increase in pressure between pore space and soil particles. No specific liquefaction hazard areas have been identified in the County; however according to the General Plan there is potential for liquefaction throughout the San Joaquin Valley where unconsolidated sediments and a high water table coincide (County of Merced, 2013). Because the project would be limited to replacing an existing bridge of an existing roadway and would not include new structures, the potential for exposure of people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving liquefaction is considered low. Therefore, the project would result in no impact related to seismic-related ground failure.

iv. Landslides?

No Impact. Factors that contribute to landslide potential are steep slopes, unstable terrain, and proximity to earthquake faults. There are currently no landslide inventory maps that cover the County; however, landslide risks are considered low because the majority of the County is within the low-lying areas of the Central Valley Basin (Merced County, 2013). The project area does not contain steep slopes or unstable terrain. Therefore, the project would result in no impact related to landslides.

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

Less Than Significant Impact. According to the USDA Web Soil Survey, soils in the project area have a low to moderate susceptibility to erosion (U.S. Department of Agriculture, 2019). Project construction would require the removal of some existing vegetation. Standard BMPs include, but are not limited to, limiting the construction area to the smallest area required to complete construction, dust control measures such as watering exposed soils, and use of silt fencing, fiber rolls, and sheeting to contain soils on site during storm events. Following construction, exposed soils would either be paved or be stabilized through compaction and/or new vegetation. With implementation of standard BMPs and compliance with the NPDES requirements, the project would not be expected to result in soil erosion or loss of topsoil. Therefore, the project would result in less than significant impacts on soil erosion or loss of topsoil.

- c. **Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?**

No Impact. There have been no problems related to on-site or off-site landslides, lateral spreading, subsidence, liquefaction, or collapse in the project area since the existing bridge was constructed. The project area does not contain steep slopes or unstable terrain; therefore, there is no risk of landslides. The risk of land surface subsidence in Merced County is low, and there are no areas where subsidence has previously occurred in proximity to the project area (Merced County, 2013). No specific liquefaction hazard areas have been identified in the County. Project design would be consistent with standard engineering practices and would adhere to applicable standards related to safety. Therefore, the project would result in no impact related to landslides, liquefaction, lateral spreading, and subsidence.

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

Less Than Significant Impact. Expansive soil is a soil that is prone to large volume changes (swelling and shrinking) that are directly related to changes in water content; with higher moisture levels, the soils swell, and with lower moisture levels, the soils shrink. The USDA Web Soil Survey indicates the soil in the project area has a low shrink swell potential (U.S. Department of Agriculture, 2021). The soil textures in the project area would not cause damage to buildings, roads, or other structures. Therefore, the project would result in a less than significant impact related to expansive soils.

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

No Impact. The project would replace an existing bridge and would not require the installation of septic tanks or alternative wastewater disposal systems. Therefore, the project would result in no impact related to the use of sewers or septic tanks.

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

Less Than Significant Impact. The project area is located on marine and nonmarine sedimentary rocks. Pleistocene and Holocene aged sedimentary rocks are geologically too young to contain fossils and have a low paleontological sensitivity (California Department of Conservation, 2015). The potential for discovery of cultural resources during construction, including paleontological resources or unique geologic features, is considered low because the project area has been previously disturbed by construction of the existing roadway and residences, and agricultural activities. Additionally, there are no unique geological features listed in the General Plan. Therefore, the project would result in a less than significant impact on unique paleontological resources or unique geologic features.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES:

The project would result in less than significant impacts on Geology and Soils. Therefore, the project would not require avoidance, minimization, and/or mitigation measures for Geology and Soils.

4.8 GREENHOUSE GAS EMISSIONS

Would the project:

Question	CEQA Determination
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Less Than Significant Impact
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	No Impact

REGULATORY SETTING:

Federal Regulations

Greenhouse Gas Endangerment

On December 7, 2009, the U.S. EPA signed two distinct findings regarding Greenhouse Gases (GHGs) under Section 202(a) of the federal CAA:

- The U.S. EPA finds that the current and projected concentrations of the mix of six key GHGs—CO₂, methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFC), perfluorocarbons (PFC), and sulfur hexafluoride (SF₆)—in the atmosphere threaten the public health and welfare of current and future generations. This is referred to as the endangerment finding.
- The U.S. EPA finds that the combined emissions of CO₂, CH₄, N₂O, and HFCs from new motor vehicles and motor vehicle engines contribute to the atmospheric concentrations of these key GHGs and hence to the threat of climate change. This is referred to as the cause or contribute finding.

The findings do not include any proposed regulations.

State Regulations

Assembly Bill 1493

AB 1493 (Pavley I) of 2002 (HSC Sections 42823 and 43018.5) requires the ARB to develop and adopt the nation's first GHG emission standards for automobiles. The California Legislature declared in AB 1493 that global warming is a matter of increasing concern for public health and the environment. In 2004, the State of California submitted a request for a waiver from federal clean air regulations, as the State is authorized to do under the federal CAA, to allow the state to require reduced tailpipe emissions of CO₂. In June 2009, the US EPA granted California's waiver request, enabling the state to enforce its GHG emissions standards for new motor vehicles beginning with the current model year.

A national policy aimed at both increasing fuel economy and reducing GHG pollution for all new cars and trucks sold in the US. The new standards would cover model years 2012 to 2016 and would raise passenger

vehicle fuel economy to a fleet average of 35.5 miles per gallon by 2016. CARB extended this ruling with a goal of an annual rate of improvement between three and six percent for the years 2017-2025.

Assembly Bill 32 - California Global Warming Solutions Act of 2006

The Global Warming Solutions Act of 2006 sets the same overall GHG emissions reduction goals outlined in Executive Order S-3-05 while further mandating that the ARB create a plan that includes market mechanisms and implements rules to achieve “real, quantifiable, cost-effective reductions of GHG.” The AB 32 Climate Change Scoping Plan (Scoping Plan) was adopted by the ARB December 12, 2008. In August 2011, the initial Scoping Plan was re-approved by the ARB in order to satisfy environmental review requirements. Governor’s Executive Order S-20-06 further directs State agencies to begin implementing AB 32, including the recommendations made by the State’s Climate Action Team.

Executive Order S-3-05 (June 1, 2005)

The goal of this Executive Order is to reduce California’s GHG emissions to: 1) 2000 levels by 2010; 2) 1990 levels by 2020; and 3) 80 percent below 1990 levels by 2050. In 2006, this goal was further reinforced with the passage of AB 32. The Executive Order also intended that that the statewide GHG emissions limit continue in existence and be used to maintain and continue reductions in emissions of GHGs beyond 2020 (HSC Section 38551(b)). The law requires CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions.

Senate Bill 391 -Chapter 585, 2009 California Transportation Plan

SB 391 bill requires the state’s long-range transportation plan to meet California’s climate change goals under AB 32.

Executive Order S-6-06

Executive Order S-6-06 (State of California), signed on April 25, 2006, established two primary goals related to the use of biofuels within California, including: (1) by 2010, 20 percent of its biofuels need to be produced within California; increasing to 40 percent by 2020 and 75 percent by 2050; and (2) by 2010, 20 percent of the renewable electricity should be generated from biomass resources within the state, maintaining this level through 2020.

Senate Bill 97

SB 97 required the Governor’s Office of Planning and Research (OPR) to develop amendments to the State CEQA Guidelines for addressing GHG emissions. The amendments became effective on March 18, 2010. AB 1493—Pavley Rules (2002, amendments 2009)/Advanced Clean Cars (2011): Known as Pavley I, the standards set forth in AB 1493 were the nation’s first GHG standards for automobiles. AB 1493 required the ARB to adopt vehicle standards that would lower GHG emissions from new light-duty autos to the maximum extent feasible beginning in 2009. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009 model year. In June 2009, the US EPA administrator granted a Federal CAA waiver of preemption to California. This waiver allowed California to implement its own GHG emission standards for motor vehicles beginning with model year 2009. Additional strengthening of the Pavley standards (referred to previously as Pavley II, now referred to as the Advanced Clean Cars measure) has been proposed for vehicles built during model years 2017 through

2020. Together, the two standards were expected to increase average fuel economy to roughly 43 miles per gallon by 2020 and reduce GHG emissions from the transportation sector in California by approximately 14 percent.

Senate Bill 375, Chapter 728, 2008, Sustainable Communities and Climate Protection

SB 375 requires the CARB to set regional emissions reduction targets from passenger vehicles. The MPO for each region must then develop a SCS that integrates transportation, land use, and housing policies to plan for the achievement of the emissions target for their region.

Climate Change Scoping Plan

In October 2008, ARB published its Scoping Plan, which is the State's plan to achieve GHG reductions in California required by AB 32. The Scoping Plan contains the main strategies California will implement to achieve reduction of GHG emissions. The initial Scoping Plan was first approved by ARB on December 11, 2008 and is updated every five years. The first update of the Scoping Plan was approved by the ARB on May 22, 2014, which looked past 2020 to set mid-term goals (2030-2035) on the road to reaching the 2050 goals. Currently, the goal of the Scoping Plan to reduce GHG emissions 40 percent below 1990 levels by 2030, and carbon neutrality by 2045.

California Building Standards Code

The State of California provides minimum standards for building design through the CBC. Where no other building codes apply, Chapter 29 regulates excavation, foundations, and retaining walls. The CBC applies to building design and construction in the state and is based on the federal Uniform Building Code used widely throughout the country (generally adopted on a state-by-state or district-by-district basis). The CBC has been modified for California conditions with more detailed and/or more stringent regulations.

The State earthquake protection law (California HSC Section 19100, et seq.) requires that structures be designed to resist stresses produced by lateral forces caused by wind and earthquakes. Specific minimum seismic safety and structural design requirements are set forth in Chapter 16 of the CBC. The CBC identifies seismic factors that must be considered in structural design. Chapter 18 of the CBC regulates the excavation of foundations and retaining walls, and Appendix Chapter A33 regulates grading activities, including drainage and erosion control and construction on unstable soils, such as expansive soils and areas subject to liquefaction. The CBC is updated every three years. The current 2019 CBC will be updated with the 2022 CBC, effective January 1, 2023.

Green Building Standards

Green buildings standards are contained in the CBC and regulate the construction of new buildings and improvements. The focus of green building standards is to improve environmental performance. AB 32 increased the urgency around the adoption of green building standards. In the Scoping Plan for the implementation of AB 32, ARB identified energy use as the second largest contributor to California's GHG emissions, constituting roughly 25 percent of all such emissions. The green building standards were most recently updated in 2019.

AFFECTED ENVIRONMENT:

GHGs are gases that trap heat in the atmosphere. The transportation sector (i.e., the movement of people and goods by cars, trucks, trains, ships, airplanes, and other vehicles) accounts for 41 percent of total GHG emissions in California (California Air Resources Board, 2024). The majority of GHG from transportation are CO₂ emissions resulting from the combustion of petroleum-based products, like gasoline, in internal combustion engines (United States Environmental Protection Agency, 2025). The largest sources of transportation-related GHG emissions include passenger cars and light-duty trucks, which account for over half of the emissions from the sector. The sources of GHG emissions within the project area are limited to the internal combustion engine vehicles that use the bridge. The most commonly recognized GHGs include CO₂, CH₄, N₂O, water vapor, O₃, aerosols, HFCs, Chlorofluorocarbon, PFCs, and SF₆.

Local Regulations

2030 Merced County General Plan

The Air Quality Element of the General Plan contains the following policies that are applicable to the project (County of Merced, 2013).

- Policy AQ-1.11: Truck-Related Development. Discourage development that causes significant increases in truck traffic on roads that are not capable of accommodating truck traffic due to pavement section deficiency or other capacity limitations, unless adequate mitigation through fees or improvements is required as part of the permit approval.

DISCUSSION OF CHECKLIST RESPONSES:

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

Less Than Significant Impact. During construction, the use of construction equipment, delivery of construction materials and waste, and worker commutes would contribute to the generation of GHGs. Because construction would be temporary and short term, the contribution of construction GHG emissions to climate change would be minimal.

Operation of the project is not expected to increase GHG emissions because it would maintain the same number of through lanes (one in each direction) and would not increase capacity or result in additional cars on the roadway. Therefore, operation of the project would not result in impacts related to GHG emissions. Therefore, the project would result in less than significant impacts on GHG emissions.

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

No Impact. AB 32, or the California Global Warming Solutions Act of 2006, was passed to establish regulations that reduce GHG emissions in California to 1990 levels by 2020.

To implement AB 32, the SJVAPCD has adopted emission reduction targets and BMPs that must be met by each jurisdiction in the district, including the County. The Air Quality Element of General Plan also includes GHG reduction and climate change adaptation policies, with the goal of reducing air pollutants

and GHG emissions and facilitating adaptation in anticipation of consequences from future global and local climate change. Therefore, the project would result in no impact related to GHG plans, policies, or regulations.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES:

The project would result in less than significant impacts on Greenhouse Gas Emissions. Therefore, the project would not require avoidance, minimization, and/or mitigation measures for Greenhouse Gas Emissions.

4.9 HAZARDS AND HAZARDOUS MATERIALS

Would the project:

Question	CEQA Determination
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Less Than Significant Impact
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?	Less Than Significant Impact
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	No Impact
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	No 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
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Less Than Significant Impact
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	Less Than Significant Impact

The following discussion incorporates the results of the Initial Site Assessment (ISA) that was prepared for the project (Crawford and Associates Inc., 2022).

REGULATORY SETTING:

Federal Regulations

United States Environmental Protection Agency (EPA)

The EPA's purpose is to protect human health and the environment by writing and enforcing regulations based on laws passed by Congress. The EPA relies on the National Priorities List (NPL), which is a list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the U.S. and its territories. The NPL is intended primarily to guide the EPA in determining which sites warrant further investigation.

CERCLIS is a database used by the U.S. Environmental Protection Agency (EPA) to track activities conducted under its Superfund program. Specific information is tracked for each individual site. WasteLAN is the name of the regional version of this database.

Resource Conservation and Recovery Act (RCRA)

The RCRA Subtitle C addresses hazardous waste generation, handling, transportation, storage, treatment, and disposal. RCRA establishes a system that uses hazardous waste manifests to track the movement of hazardous waste from generation to disposal (cradle-to-grave). The 1984 amendments to RCRA created a national priority for waste minimization. Subtitle D establishes national minimum requirements for solid waste disposal sites and practices. It requires States to develop plans for the management of wastes within their jurisdictions. Subtitle I requires monitoring and containment systems for underground storage tanks (UST) that hold hazardous materials. Owners of USTs must demonstrate financial assurance for the cleanup of a potential leaking tank.

State Regulations

Government Code Section 65962.5, Hazardous Waste and Substances Site List - Site Cleanup

Government Code Section 65962.5, Hazardous Waste and Substances Site List- Site Cleanup (Cortese List) is a planning document used by the State, local agencies and developers to comply with the 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. California 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.

The California Hazardous Waste Control Law

The Hazardous Waste Control Law (HWCL) is the primary hazardous waste statute in the State of California. HWCL implements RCRA as a “cradle-to-grave” waste management system in the State. The law states that generators have the primary duty to determine whether their wastes are hazardous and to ensure their proper management. HWCL also establishes criteria for the reuse and recycling of hazardous wastes. The law exceeds federal requirements by mandating source reduction planning, and a much broader requirement for permitting facilities that treat hazardous waste. It also regulates a number of types of wastes and waste management activities that are not covered by RCRA.

California Code of Regulations

Most state and federal regulations and requirements that apply to generators of hazardous waste are spelled out in the CCR, Title 22, Division 4.5. Title 22 contains detailed compliance requirements for hazardous waste generators and transporters, and treatment, storage, and disposal facilities. Because California is a fully authorized State according to RCRA, most RCRA regulations (those contained in 40 CFR 260, et seq.) have been duplicated and integrated into Title 22. However, because the DTSC regulates hazardous waste more stringently than the EPA, Title 22 contains fewer exemptions and exclusions than 40 CFR 260. Title 22 also regulates a wider range of waste types and waste management activities than

RCRA regulations in 40 CFR 260. To make regulatory requirements more accessible and easier to follow, California compiled the hazardous materials, waste, and toxics-related regulations contained in CCR, Titles 3, 8, 13, 17, 19, 22, 23, 24, and 27 into one consolidated CCR Title 26 “Toxics.” However, California hazardous waste regulations are still commonly referred to as Title 22.

Local Regulations

2030 Merced County General Plan

The Health and Safety Element of the General Plan contains the following policies that are applicable to the project (County of Merced, 2013).

- Policy HS-5.1: Compliance with Safety Standards. Require that hazardous materials are used, stored, transported, and disposed of in a safe manner, in compliance with local, State, and Federal safety standards.
- Policy HS-5.4: Contamination Prevention. Require new development and redevelopment proposals that have suspected or historic contamination to address hazards concerns and protect soils, surface water, and groundwater from hazardous materials contamination by conducting Phase I Environmental Site Assessments according to the American Society for Testing and Materials standards and applicable DTSC remediation guidelines. Also, complete additional Phase II Environmental Site Assessments and soil investigations, and any identified or needed remediation when preliminary studies determine such studies are recommended.

AFFECTED ENVIRONMENT

Contaminated Sites

According to the State Water Resources Control Board (SWRCB) there are no known hazardous waste sites within 0.5 mile of the project area (SWRCB, 2025). Additionally, according to the DTSC there are no known hazardous waste sites within 0.5 mile of the project area (DTSC, 2025).

Airports

The nearest airport is the Merced Castle Airport located approximately 5.5 miles northeast of the project area.

DISCUSSION OF CHECKLIST RESPONSES:

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

Less Than Significant Impact. Hazardous materials used during construction, such as petroleum products (gasoline and oil) for construction equipment, would be transported, used, stored, and disposed of according to county, state, and federal regulations. With adherence to existing construction standards and requirements, the risk of hazards to the public or environment would be low. Following construction, hazardous materials, such as common herbicides, may be used for periodic maintenance of the roadway, or may be transported in vehicles travelling along the roadway; however, no routine transport, use, or disposal of hazardous materials would be conducted that is not already in practice. Therefore, the project

would result in less than significant impacts related to the 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?

Less Than Significant Impact. According to the Phase I ISA, existing structures that would be impacted by project demolition are constructed of materials having the potential to contain asbestos. Concrete bridge components (piers, footings, abutments, deck) and concrete pipes (storm drain) could potentially contain asbestos. In addition, lead based paint, thermoplastic striping, agricultural chemicals, and treated wood waste have the potential to be present within the project area. These hazardous materials have the potential to harm the environment in the event of their release. Measures **HAZ-1** through **HAZ-5** would be implemented to avoid or minimize impacts related to hazardous materials. Therefore, the project would result in a less than significant impact related to the release of hazardous materials.

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?

No Impact. There are no schools located within one-quarter mile of an existing or proposed school. The nearest school is Aileen Colburn Elementary School located approximately 2.6 miles northeast of the project area. Hazardous materials may be used during the construction of the project; however, the handling of hazardous materials associated with project construction would be conducted in compliance with county, state, and federal regulations. After construction is complete, no handling of hazardous materials would be conducted within the project area that is not already in practice. Therefore, the project would result in no impacts related to emission of a hazardous material within one-quarter mile of an existing or proposed school.

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. According to the DTSC Envirostor, and the SWRCB Geotracker, there are no known hazardous materials, hazardous waste sites, or cleanup sites that meet the Cortese List requirements within or immediately adjacent to the project area (Department of Toxic Substance Control, 2025). Therefore, the project would result in no impact related to Government Code Section 65962.5.

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 for people residing or working in the project area?

No Impact. There are no public airports within two miles of the project area. The nearest public airport is the Merced County Castle Airport, approximately 5.5 miles northeast of the project area. In addition, the project would not include tall vertical structures or create new sources of light or glare that could result in airport safety hazards. Therefore, the project would result in no impact related to airports.

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

Less Than Significant Impact. Traffic flow along Atwater Jordan Road would be temporarily affected during project construction. However, a detour would be required to allow traffic access around the project area. Expected roads to be used for the detour include Steinberg Road, Sunset Drive, and Central Avenue. Although construction would affect response times, the impacts would be temporary, and traffic patterns would resume to normal once the project is complete. Therefore, the project would result in less than significant impacts related to emergency plans.

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

Less Than Significant Impact. According to the Fire Hazard Severity Zones Map, the project is in an unzoned Local Responsibility Area (LRA) (CALFIRE, 2023). According to their website, CALFIRE has determined that the county does not have a very high fire hazard area in the LRA (CALFIRE, 2022). The project area is surrounded by farm and grazing land, along with some sparse residential land and is not a wildland area. Project activities would be limited to replacement of an existing bridge and would be constructed to fire safety standards prescribed in the Building Code and the County Fire Prevention Ordinance (County of Merced, 2013). Therefore, the project would result in less than significant impacts related to wildland fires.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

The following measures would be implemented to avoid or minimize impacts related to hazards and hazardous materials:

HAZ-1 Bridge components would be tested by a Certified Asbestos Consultant for the presence of Asbestos Containing Construction Material.

HAZ-2 Ten business days prior to the demolition or renovation operations of structures written notification would be required to the Air Quality Management District.

HAZ-3 Paint on the bridge would be tested for the presence of lead by a Certified Lead Inspector.

HAZ-4 White and yellow paint striping would be tested for the presence of heavy metals at concentration above threshold values.

Haz-5 Soil likely to be impacted by bridge replacement activities would be tested for agricultural chemicals.

4.10 HYDROLOGY AND WATER QUALITY

Would the project:

Question	CEQA Determination
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	Less Than Significant Impact
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such the project may impede sustainable groundwater management of the basin?	Less Than Significant Impact
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;	Less Than Significant Impact
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	Less Than Significant Impact
(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	Less Than Significant Impact
(iv) impede or redirect flood flows?	No Impact
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	No Impact
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	Less Than Significant Impact

The following discussion incorporates the results of the Location Hydraulic Study (WRECO, 2019).

REGULATORY SETTING:

The following discussion incorporates the results of the Water Quality Assessment Report that was conducted for the project (GPA Consulting, 2022). The following regulations are applicable to water resources in the project area.

Federal Regulations

Clean Water Act

The USACE regulates the placement of dredged and fill material into waters of the U.S., including wetlands, under Section 404 of the CWA. The limits of USACE jurisdiction extend to the ordinary high water mark. No discharge of dredged or fill material into waters of the U.S. is permitted unless authorized by the USACE under a Nationwide Permit or Individual Permit. For all work subject to an USACE Section 404 permit, project proponents must obtain a Water Quality Certification from the applicable RWQCB under CWA Section 401 stating that the project would comply with applicable water quality regulations.

U.S. Army Corps of Engineers

The USACE is responsible for issuing permits for discharge of dredged or fill material into waters of the U.S. These permits are required under Sections 401 and 404 of the CWA. Water supply projects that involve instream construction, such as dams or other types of diversion structures, trigger the need for these permits and related environmental reviews by USACE. USACE also is responsible for flood control planning and assisting state and local agencies with the design and funding of local flood control projects.

State Regulations

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act) of 1969 is California's statutory authority for the protection of water quality. Under the Porter-Cologne Act, the State must adopt water quality policies, plans, and objectives that protect the State's waters for the use and enjoyment of its residents. The Porter Cologne Act requires the State Water Resources Control Board (SWRCB) and its RWQCB to adopt and periodically update water quality control plans (Basin Plans). Basin Plans are the regional water quality control plans required by both the CWA and Porter-Cologne Act, in which beneficial uses, water quality objectives, and implementation programs are established for each of the RWQCBs. The Porter Cologne Act also requires waste dischargers to notify the RWQCBs of their activities through the preparing of Reports of Waste Discharge and authorizes the SWRCB and its RWQCBs to issue and enforce waste discharge requirements, NPDES permits, Section 401 water quality certifications, and other approval actions.

State Water Resources Control Board

In California, the SWRCB has broad authority over water quality control issues for the State. The SWRCB is responsible for developing statewide water quality policy and exercises the powers delegated to the State by the federal government under the CWA.

Regional authority for planning, permitting, and enforcement is delegated to the RWQCBs. The regional boards are required to formulate and adopt water quality control plans for all areas in the region and establish water quality objectives in those plans. Merced County is within the jurisdiction of the Central Valley RWQCB.

National Pollution Discharge Elimination System Permit System and Waste Discharge Requirements for Construction

The 1972 amendment to the CWA established the NPDES permit program. The NPDES permit program outlined in the CWA contains effluent limitation guidelines, water quality requirements, and permit program requirements for discharges to waters of the U.S. The EPA has overall responsibility for the NPDES program, but administration of the program in California has been delegated to the SWRCB and the nine RWQCBs.

California Fish and Game Code, Section 1602

Section 1602 of the California Fish and Game Code governs construction activities that substantially divert or obstruct natural stream flow or substantially change the bed, channel, or bank of any river, stream, or lake under the jurisdiction of CDFW. Under Section 1602, a Streambed Alteration Agreement must be issued by the CDFW prior to the initiation of construction activities that may substantially modify a river, stream, or lake under CDFW's jurisdiction. Under the California Fish and Game Code, the limits of CDFW's jurisdiction within streams and other drainages extends from the top of the stream bank to the top of the opposite bank, to the outer drip line in areas containing riparian vegetation, and/or within the 100-year floodplain of a stream or river system containing fish or wildlife resources.

Local Regulations

Central Valley RWQCB Water Quality Objectives

The Central Valley RWQCB has established water quality objectives for the San Joaquin River Basin (Central Valley Regional Water Quality Control Board, 2016). These objectives designate allowable limits of water quality constituents or characteristics that allow for the reasonable protection of the resource's beneficial uses. The beneficial uses of a water body generally apply to its tributary streams. The canal in the project area is an irrigation channel where water is used for agricultural supply. Water quality objectives for inland surface waters include toxicity objectives such as keeping the waters maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life. In addition, objectives include keeping waters free of changes in turbidity that cause nuisance or adversely affect beneficial uses. The goal is to maintain levels of turbidity attributable to controllable water quality factors within the following limits:

- Where natural turbidity is less than one Nephelometric Turbidity Unit (NTU), controllable factors shall not cause downstream turbidity to exceed two.
- Where natural turbidity is between one and five NTUs, increases shall not exceed one NTU.
- Where natural turbidity is between five and 50 NTUs, increases shall not exceed 20 percent.
- Where natural turbidity is between 50 and 100 NTUs, increases shall not exceed 10 NTUs.
- Where natural turbidity is greater than 100 NTUs, increases shall not exceed 10 percent

Merced County Stormwater Management Program

The Merced County Stormwater Management Program (SWMP) was developed to limit the discharge of pollutants from the Merced Stormwater Group (MSWG) storm sewer system. The MSWG is a coalition of municipalities acting as co-permittees consisting of the City of Atwater, City of Merced, the County, and the Merced Irrigation District. For the County, the SWMP includes a public outreach program, an illicit discharge detection and elimination program, a construction site stormwater runoff control program, a post-construction stormwater management in new development and redevelopment program, and a pollution prevention/good housekeeping for municipal operations program.

Merced County Stormwater Ordinance

The County adopted Stormwater Ordinance No. 1923 in August 2014 that regulates stormwater in Merced County. The purpose of the ordinance is to ensure the health, safety, and general welfare of citizens, and protect and enhance the water quality of watercourses and water bodies pursuant to and consist with the CWA. The ordinance aims to ensure the reduction of pollutants in stormwater discharges to the maximum extent practicable and to prohibit non-stormwater discharges to the storm drain system.

2030 Merced County General Plan

The Public Facilities and Services Element of the General Plan identifies the following policies related to hydrology and water quality that are applicable to the project (County of Merced, 2013).

- Goal W-2: Protect the quality of surface and groundwater resources to meet the needs of all users.
- Policy W-2-2: Prepare updated development regulations, such as BMPs, that prevent adverse effects on water resources from construction and development activities.
- Policy W-2-7: Monitor and enforce provisions of the U.S. EPA NPDES program to control non-point source water pollution.
- Policy W-2-8: Coordinate with the SWRCB, RWQCB, and other responsible agencies to ensure that sources of water contamination (including boron, salt, selenium and other trace element concentrations) do not enter agricultural or domestic water supplies, and will be reduced where water quality is already affected.

AFFECTED ENVIRONMENT:

The project is located in the San Joaquin Valley in the Central Valley of California. The Central Valley is a flat alluvial plain that extends from the Tehachapi Mountains in the south to the Klamath Mountains in the north, and from the Sierra Nevada Mountains on the east to the Coast Ranges on the west. The Sierra Nevada foothills are to the east of the project area, and the flat San Joaquin Valley floor is to the west. The elevation in the project area is approximately 138 feet above mean sea level.

Hydrology

The project area is in the Winton-Bear Creek Watershed- within the Middle San Joaquin-Lower Chowchilla Subbasin. Within the project area, the canal is a channelized, un-lined waterway with gravel/dirt canal access roads at the tops of the banks. Flows in the canal are controlled artificially to meet the agricultural

needs of adjacent properties. The canal is part of a series of agricultural canals and connected water networks surrounding the project area.

Surface Waters

The Merced River flows east to west through the northern portion of Merced County and joins the San Joaquin River. The Merced River and Tuolumne River are tributaries to the San Joaquin River and carry runoff from the Sierra Nevada Mountains. Local San Joaquin River tributaries in western Merced County are typically intermittent or ephemeral streams with low runoff volumes. The canal appears to potentially connect to the Merced River and San Joaquin River through the surrounding network of agricultural waters.

Floodplains

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map the project area (Map ID 06047C0400G) indicates that the project area is within Other Areas - Zone X, which is determined to be outside the 0.2 percent annual chance floodplain (see **Attachment D**, FEMA Floodplain Map). However, Atwater Canal is designated as a levee and the project is within a regulatory floodway.

Groundwater

The project area is located within the Merced Groundwater Basin. The Merced Groundwater Basin is bounded on the west by San Joaquin River, bounded on the east by the Sierra Nevada foothills, bounded on the North by the Merced River, and bounded on the South by the Chowchilla River. The County of Merced uses groundwater as its source of drinking and irrigation water. Most of the drinking water in Merced County is obtained from groundwater resources and is utilized by public and private water systems.

Agricultural irrigation, surface water seepage, and infiltration from precipitation are primary sources of groundwater recharge for Merced County. The well depths in the Merced Groundwater Basin vary from 100 to 800 feet and yield 1,500 to 1,900 gallons per minute (Merced County, 2013). Total dissolved solids values range from 200 to 400 milligrams per liter (Merced County, 2013). The annual urban extraction is approximately 54,000 acre-feet per year and the annual agricultural extraction is approximately 492,000 acre-feet per year.

DISCUSSION OF CHECKLIST RESPONSES:

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. The Atwater Canal is subject to standards established by the RWQCB for inland surface waters. Construction activities associated with the project would include replacement of the existing Atwater Bridge to improve safety of the crossing. During construction, there is potential for debris and materials to fall into the canal below the bridge, resulting in water quality impacts.

Construction of the widened bridge abutments would require work at the edges of the dirt banks and possibly inside the canal. There is potential for erosion of the banks, and dust/soil to fall into the canal, resulting in water quality impacts. Additionally, oil, fuel, and other petroleum products used to maintain

and operate construction equipment could be accidentally released. Required excavation would not reach groundwater, and the project would not interfere with groundwater recharge.

Standard BMPs outlined below would be included in the project to avoid or minimize the release sediment and pollutants, including bridge materials and chemical toxins, into the canal during construction. Typical BMPs include, but are not limited to, limiting the construction area to the smallest area required to complete construction, dust control measures such as watering exposed soils, and use of silt fencing, fiber rolls, and sheeting to contain soils on site during storm events. The project would be conducted in accordance with applicable water quality regulations and regulatory permits.

Implementation of the project would result in a slight increase of impervious surface area from the widened bridge structure. Although the project would result in a minor increase in storm water runoff, the project would be designed to accommodate existing and anticipated runoff levels, and the project would not result in substantial increases in polluted runoff. The widened bridge would not increase the volume of traffic on the bridge and would not result in an increase in pollutant runoff from vehicles. The project would also comply with regulatory requirements. Minimization measures **WQ-1** through **WQ-6** would be implemented to further reduce impacts. Therefore, the project would result in less than significant impacts related to water quality.

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

Less Than Significant Impact. The project would not require any excavation that would have the potential to reach groundwater and the project would not interfere with groundwater recharge. The project would increase the amount of impervious surface in the project area slightly; however, this additional area would not be large enough to substantially interfere with groundwater recharge. In addition, the new impervious areas would be surrounded by natural surfaces and vegetation. Surface waters running off from paved areas would percolate into the surrounding subsurface soils and canal, and eventually into the groundwater supply. Therefore, the project would result in less than significant impacts related to groundwater recharge.

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 through the addition of impervious surfaces, in a manner which would:

i. result in substantial erosion or siltation on- or off-site?

Less Than Significant Impact. The new bridge would be approximately 10-feet wider than the existing horizontal alignment to provide two 11-foot lanes, a three-foot shoulder on each side of the roadway, and new concrete barrier bridge rails similar to those on the existing bridge. The wider bridge would result in a slight increase in impervious surfaces within the project area by approximately 0.1 acre. However, drainage patterns in the project area would remain similar to existing conditions, and no substantial erosion or siltation would result on site or off site. In addition, minimization measures **WQ-1** through **WQ-3** and **WQ-6** would be implemented to further reduce erosion. Atwater Canal would not be altered such

that substantial on site or off-site erosion or siltation would result. Therefore, the project would result in less than significant impacts related to erosion.

ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

Less Than Significant Impact. The wider bridge would result in a slight increase in impervious surfaces within the project area by approximately 0.1 acre. However, drainage patterns in the project area would remain similar to existing conditions. The project would be designed to accommodate anticipated runoff levels as required by standard design guidelines used by the County; therefore, no flooding would be expected to result on site or off site. The existing canal would not be altered such that surface runoff would substantially increase, resulting in flooding on site or off site. Therefore, the project would result in less than significant impacts related to surface runoff resulting in flooding.

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?

Less Than Significant Impact. While the project would increase the impervious surface in the area by approximately 0.1 acre, which could result in increased storm water runoff, the project would be designed to accommodate existing and anticipated runoff levels as required by standard design guidelines used by the County. Therefore, the project would result in less than significant impacts related to polluted runoff.

iv. impede or redirect flood flows?

No Impact. The existing bridge piers would be used in the rehabilitation of the bridge. The project would not include new structures that would impede or redirect flows. In addition, according to the FEMA, the project area is located in Zone X, an area that is outside the Special Flood Hazard Area subject to inundation by the 100-year flood (Federal Emergency Management Agency, 2008). Therefore, the project would result in no impact relating to flood flows.

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

No Impact. The project would not increase the risk of flooding from levee or dam failure, because there are no dams or levees in the proximity to the project area. The nearest dam to the project area is the El Nido Reservoir, approximately 17.9 miles south of the project area. Atwater Canal is a channelized, unlined waterway with gravel/dirt canal access roads at the tops of the banks. Flows in the canal are controlled artificially to meet the agricultural needs of adjacent properties. The canal is part of a series of agricultural canals and connected water networks surrounding the project area. The project would also result in a slight increase in impervious surfaces within the project area by approximately 0.1 acre, which could result in increased stormwater runoff. The project would be designed to accommodate anticipated runoff levels as required by standard design guidelines used by the county. Therefore, no flood hazard would result.

A tsunami is a large ocean wave associated with a seismic event; and a mudflow is the rapid, downhill movement of a large mass of mud formed from loose soil and water. The project area is not in proximity to the ocean and would therefore not be impacted by tsunamis. In addition, the project area and vicinity are relatively flat and would not be impacted by mudflows.

A seiche is an oscillation of a land-locked water body, such as a lake or dam, typically caused by strong winds and rapid changes in atmospheric pressure. There are no land-locked waterways located in or adjacent to the project area. San Luis Reservoir is located approximately 30 miles southwest. Atwater Canal is a channelized, un-lined waterway with gravel/dirt canal access roads at the tops of the banks. Flows in the canal are controlled artificially to meet the agricultural needs of adjacent properties, therefore would not pose a risk for inundation. Additionally, the project is not within a flood hazard zone. Therefore, the project would result in no impact relating to flood hazard, tsunami, or seiche zones.

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

Less Than Significant Impact. Standard BMPs would be incorporated into the project to comply with the County's National Pollutant Discharge Elimination System (NPDES) Permit. The project would be compliant with SWMP goals and General Plan objectives. The project is unlikely to degrade the water quality with implementation of the protective measures and acquisition of the relevant permits. The project design, as well as compliance with all federal, state, and local regulations regarding water quality standards, would ensure that the project would not substantially degrade water quality and would support existing water quality and management plans. Therefore, the project would result in less than significant impacts related to water quality control plans or groundwater management plans.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

The following avoidance and minimization measures would be implemented during construction to avoid or minimize adverse effects on water quality within Atwater Canal during construction:

- WQ-1** Work areas would be minimized to the smallest area feasible.
- WQ-2** Staging areas would be sited away from the edges of the canal to reduce potential for disturbance of, or non-storm water discharge to, Atwater Canal.
- WQ-3** BMPs would be implemented to minimize dust, dirt, and debris resulting from construction activities, and to protect the water quality of Atwater Canal pursuant to the requirements of the RWQCB and project permits.
- WQ-4** Appropriate hazardous material BMPs would be implemented to minimize the potential for chemical spills or containment releases into Atwater Canal, including any non-storm water discharge.
- WQ-5** All equipment refueling, and maintenance would be conducted in the upland staging area away from the canal, per standard specifications and regulatory permits. In addition, vehicles and equipment would be checked daily for fluid and fuel leaks, and drip pans would be placed under all equipment that is parked and not in operation.
- WQ-6** Following completion of construction activities, appropriate erosion control measures would be implemented to ensure that soils disturbed by construction are stabilized, to minimize non-storm water discharges into Atwater Canal, and to meet the requirements of the RWQCB and project permits.

4.11 LAND USE AND PLANNING

Would the project:

Question	CEQA Determination
a) Physically divide an established community?	Less Than Significant Impact
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	Less Than Significant with Mitigation Incorporated

REGULATORY SETTING:

State Regulations

California Government Code Section 65300, et seq. establishes the obligation of cities and counties to adopt and implement general plans. The general plan is a comprehensive, long-term, and general document that describes plans for the physical development of a city or county and of any land outside its boundaries that, in the City's or County's judgment, bears relation to its planning. The general plan addresses a broad range of topics, including at a minimum land use, circulation, housing, conservation, open space, noise, and safety. In addressing these topics, the general plan identifies the goals, objectives, policies, principles, standards, and plan proposals that support the City's or County's vision for the area.

The State Zoning Law (California Government Code Section 65800, et seq.) establishes that zoning ordinances, which are laws that define allowable land uses within a specific zone district, are required to be consistent with the general plan.

Local Regulations

2030 Merced County General Plan

The Land Use and Community Character Element of the General Plan identifies policies as they relate to land use and planning (County of Merced, 2013).

- Policy LU-10.12: Consultation with State and Federal Agencies. Continue to consult with applicable State and Federal regulatory agencies during project review and permitting activities.

AFFECTED ENVIRONMENT

The County's current land use pattern consists of fifteen land use designations, which include Foothill Pasture (FP), Agricultural (A), Agricultural Residential (AR), Very Low Density Residential (VLDR), Low Density Residential (LDR), Medium Density Residential (MDR), High Density Residential (HDR), Mixed-Use (MU), Neighborhood Commercial (NC), General Commercial (GC), Business Park (BP), Public/Quasi-Public (P), Industrial (I), Recreation and Open Space (RE), and Urban Reserve (UR). Land use designations in the project area include Agricultural.

DISCUSSION OF CHECKLIST RESPONSES:

a. Would the project physically divide an established community?

Less Than Significant Impact. The physical division of an established community typically refers to the construction of a physical feature (such as an interstate highway or railroad tracks) or removal of a means of access (such as a local road or bridge) that would impair mobility within the existing community or between a community and outlying areas. The purpose of the project is to improve public safety by providing a safe, permanent crossing over the Atwater Canal along Atwater Jordan Road. The project would include rehabilitation and widening of the existing Atwater Bridge to improve safety of the crossing and therefore operation of the project would not divide the existing community. Construction of the project would temporarily impact emergency services due to the closure of the roadway. However, a detour would be required to allow traffic access around the project area. Expected roads to be used for the detour include Steinberg Road, Sunset Drive, and Central Avenue. Although construction would affect response times, the impacts would be temporary, and traffic patterns would resume to normal once the project is complete. Therefore, the project would result in a less than significant impact related to the division of an established community.

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

Less Than Significant with Mitigation. The purpose of the project is to improve public safety by providing a safe, permanent crossing over the Atwater Canal along Atwater Jordan Road. The project is consistent with plans and goals established by the community, including goals and policies outlined in the General Plan and is included in the currently approved FSTIP, Administrative Modification No. 21, and would be expected to improve long-term public safety. In addition, the project would be consistent with Goal CIR-1 adopted in the General Plan, Transportation and Circulation Element, requiring “Maintain an efficient roadway system for the movement of people and goods that enhances the physical, economic, and social environment while being safe, efficient, and cost-effective” (Merced County, 2013). Therefore, the project would be consistent with plans and goals adopted by the community.

Additionally, the project could impact biological resources in the project area, including habitats and natural lands of significant value (see Section IV). However, the project would include implementation of measures **BIO-1** through **BIO-16** in *Section 4.4 Biological Resources*. Therefore, the project would result in less than significant impacts related to land use plans, policies, and regulations.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES:

The project would result in a less than significant impact on Land Use and Planning. Therefore, the project would not require avoidance, minimization, and/or mitigation measures for Land Use and Planning. See avoidance, minimization and mitigation measures in *Section 4.4 Biological Resources*.

4.12 MINERAL RESOURCES

Would the project:

Question	CEQA Determination
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	No Impact
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	No Impact

REGULATORY SETTING:

Local Regulations

2030 Merced County General Plan

The Natural Resources Element of the General Plan identifies to the following goal and policies that area applicable to the project (County of Merced, 2013).

- Goal NR-3: Facilitate orderly development and extraction of mineral resources while preserving open space, natural resources, and soil resources and avoiding or mitigating significant adverse impacts.
- Policy NR-3.1: Soil Protection. Protect soil resources from erosion, contamination, and other effects that substantially reduce their value or lead to the creation of hazards.
- Policy NR-3.2: Soil Erosion and Contamination. Require minimal disturbance of vegetation during construction to improve soil stability, reduce erosion, and improve stormwater quality.
- Policy NR-3.12: Sand and Gravel Extraction Control. Ensure that strict control is maintained on sand and gravel extractions in streambed channels and within areas designated as having sensitive habitat and open space resources.

AFFECTED ENVIRONMENT:

Merced County is rich in nonfuel mineral and soil resources; however, there are very few traditional hard rock mines in operation today. The county's mineral resources are primarily sand and gravel, which are ample in the county. Currently, there is very little mineral in the county and only one gold mining company operating (circa 1914). The mineral indications are found in the Coast Range Mountains in the southwestern part of the county adjoining Santa Clara County and in the northeastern part adjoining Mariposa County (County of Merced, 2013).

DISCUSSION OF CHECKLIST RESPONSES:

- 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?**

No Impact. The County General Plan identifies sand and gravel as the primary mineral resources found in the County (Merced County, 2013). No mineral resources that would be of value to the region or residents of the state have been identified in the vicinity of the project area. Therefore, the project would result in no impact related to known mineral resources of value.

- 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?**

No Impact. The project area does not include any important mineral resources recovery sites delineated on the City's General Plan (Merced County, 2013). Therefore, the project would result in no impact related to a locally important mineral resource.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES:

The project would result in no impact on Mineral Resources. Therefore, the project would not require avoidance, minimization, and/or mitigation measures for Mineral Resources.

4.13 NOISE

Would the project result in:

Question	CEQA Determination
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?	Less Than Significant Impact
b) Generation of excessive groundborne vibration or groundborne noise levels?	Less Than Significant with Mitigation Incorporated
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 following discussion incorporates the results of the Construction Noise & Groundborne Vibration Technical Memorandum that was conducted for the project (Ambient Air Quality and Noise Consulting, 2018).

REGULATORY SETTING:

The following construction noise standards are applicable to the project.

Caltrans Standard Specifications Section 14-8.02

Caltrans Standard Specifications Section 14-8.02, Noise Control, requires the following mandatory noise abatement measures:

- Per Section 14-8.02, Noise Control, do not exceed 86 A-weighted decibels (dBA) at 50 feet from the job site activities from 9 p.m. to 6 a.m.
- Each internal combustion engine, used for any purpose on the job, or related to the job, shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine shall be operated on the job site without an appropriate muffler.

Local Regulations

2030 Merced County General Plan

The following noise level standards have been developed in order to quantify noise impacts in the county. **Table 1** shows the noise level standards for noise-sensitive areas affected by traffic, railroad, or airport noise sources in the county. **Table 2** shows the interior and exterior noise level standards for noise-sensitive areas affected by existing non-transportation noise sources in the county. In addition to these

standards, the policies in this section address ways to reduce or eliminate existing and future conflicts between land uses and noise.

Table 2. Noise Standards for New Uses Affected by Traffic, Railroad, and Airport Noise

New Land Use	Sensitive ¹ Outdoor Area - Ldn	Sensitive Interior ² Area - Ldn	Notes
All Residential	65	45	3
Transient Lodging	65	45	3,4
Hospitals & Nursing Homes	65	45	3, 4, 5
Theaters & Auditoriums	---	35	4
Churches, Meeting Halls, Schools, Libraries, etc.	65	40	4
	65	40	4
Office Buildings	65	45	4
Commercial Buildings	---	50	4
Playgrounds, Parks, etc.	70	---	
Industry	65	50	4

Notes:

1. Sensitive Outdoor Areas include primary outdoor activity areas associated with any given land use at which noise-sensitivity exists and the location at which the county's exterior noise level standards are applied.
2. Sensitive Interior Areas includes any interior area associated with any given land use at which noise-sensitivity exists and the location at which the county's interior noise level standards are applied. Examples of sensitive interior spaces include, but are not limited to, all habitable rooms of residential and transient lodging facilities, hospital rooms, classrooms, library interiors, offices, worship spaces, theaters. Interior noise level standards are applied within noise-sensitive areas of the various land uses with windows and doors in the closed positions.
3. Railroad warning horn usage shall not be included in the computation of Ldn.
4. Only the interior noise level standard shall apply if there are no sensitive exterior spaces proposed for these uses.
5. Since hospitals are often noise-generating uses, the exterior noise level standards are applicable only to clearly identified areas designated for outdoor relaxation by either hospital staff or patients.

Table 3. Non-Transportation Noise Standards Median (L50) / Maximum (Lmax)

Receiving Land Use	Outdoor Area ²		Interior ³	Notes
	Daytime	Nighttime	Day or Night	
All Residential	55 / 75	50 / 70	35 / 55	
Transient Lodging	55 / 75	---	35 / 55	4
Hospitals & Nursing Homes	55 / 75	---	35 / 55	5, 6
Theaters & Auditoriums	---	---	30 / 50	6
Churches, Meeting Halls, Schools, Libraries, etc.	55 / 75	---	35 / 60	6
Office Buildings	60 / 75	---	45 / 65	6
Commercial Buildings	55 / 75	---	45 / 65	6
Playgrounds, Parks, etc.	65 / 75	---	---	6
Industry	60 / 80	---	50 / 70	6

Notes:

1. These standards shall be reduced by 5 dB for sounds consisting primarily of speech or music, and for recurring impulsive sounds. If the existing ambient noise level exceeds the standards in this table, then the noise level standards shall be increased at 5 dB increments to encompass the ambient.
2. Sensitive Outdoor Areas include primary outdoor activity areas associated with any given land use at which noise-sensitivity exists and the location at which the county's exterior noise level standards are applied.
3. Sensitive Interior Areas includes any interior area associated with any given land use at which noise sensitivity exists and the location at which the county's interior noise level standards are applied. Examples of sensitive interior spaces include, but are not limited to, all habitable rooms of residential and transient lodging facilities, hospital rooms, classrooms, library interiors, offices, worship spaces, theaters. Interior noise level standards are applied within noise-sensitive areas of the various land uses with windows and doors in the closed positions.
4. Outdoor activity areas of transient lodging facilities are not commonly used during nighttime hours.
5. Since hospitals are often noise-generating uses, the exterior noise level standards are applicable only to clearly identified areas designated for outdoor relaxation by either hospital staff or patients.
6. The outdoor activity areas of these uses (if any) are not typically used during nighttime hours.
7. Where median (L50) noise level data is not available for a particular noise source, average (L_{eq}) values may be

The Health and Safety Element of the General Plan identifies the following goal and policies in regard to the noise environment in the project area. (County of Merced, 2013).

- Goal HS-7: Protect residents, employees, and visitors from the harmful and annoying effects of exposure to excessive noise.
- Policy HS-7.2: Acoustical and Groundborne Vibration Analysis Requirements. Require development project applicants to prepare an acoustical analysis as part of the environmental review process when noise-sensitive land uses are proposed in areas exposed to existing or projected exterior noise levels exceeding the levels shown in Tables HS-1 and HS-2. Require an analysis of groundborne vibration for proposed residential and other sensitive projects (including but not limited to hospitals and schools) located within 1,000 feet of a rail line with at least 30

operations per day or an existing industrial groundborne vibration source. The acoustical and groundborne vibration analyses shall:

- a) Be the responsibility of the applicant;
 - b) Be prepared by qualified persons experienced in the fields of environmental noise and groundborne vibration assessment and architectural acoustics;
 - c) Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions;
 - d) Estimate projected future (20 year) noise levels relative to the standards shown in Tables HS-1 and HS-2 at the property line of the proposed use, and, as applicable, estimate project future groundborne vibration levels using a maximum vibration standard of 70 VdB;
 - e) Recommend appropriate mitigation to achieve compliance with the adopted policies and standards in this element, including setbacks from groundborne vibration sources causing adverse levels of vibration; and
 - f) Estimate interior and exterior noise, and groundborne vibration exposure after the prescribed mitigation measures have been implemented at the property line.
- **Policy HS-7.5: Noise Generating Activities.** Limit noise generating activities, such as construction, to hours of normal business operation.
 - **Policy HS-7.9: Transportation Project Construction/Improvements.** Require transportation project proponents to prepare all acoustical analysis for all roadway and railway construction projects in accordance with Policy HS-7.2; additionally, rail projects shall require the preparation of a groundborne vibration analysis in accordance with Policy HS-7.2. Consider noise mitigation measures to reduce traffic and/or rail noise levels to comply with Table HS-1 standards if pre-project noise levels already exceed the noise standards of Table HS-1 and the increase is significant. The County defines a significant increase as follows:

○ Pre-Project Noise Environment (Ldn)	Significant Increase
○ Less than 60 dB	5+ dB
○ 60 - 65 dB	3+ dB
○ Greater than 65 dB	1.5+ dB

The County does not have a noise ordinance that regulates construction noise. Caltrans Standard Specifications Section 14-8.02 requires that noise levels from construction between the hours of 9:00 p.m. and 6:00 a.m. not exceed 86 dBA at a distance of 50 feet from the construction area.

AFFECTED ENVIRONMENT:

Existing noise sources in the project area and vicinity are predominantly from vehicle traffic along Atwater Jordan Road, agricultural activities and natural noise sources. (e.g., animals, wind, etc.). Traffic levels in

the project area have a current average daily traffic (ADT) rate of 1109 vehicles per day. Because traffic is the dominant noise source, ambient noise levels are assumed to be the highest during the peak traffic hours, generally between 7:00 a.m. to 9 a.m. The nearest sensitive noise receptors are residences located less than 100 feet southeast and 300 feet northeast of the project area (Ambient Air Quality and Noise Consulting, 2018).

DISCUSSION OF CHECKLIST RESPONSES:

- 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?**

Less Than Significant Impact. The project would include rehabilitation and widening of the existing Atwater Bridge to improve safety of the crossing. Although the bridge would be approximately 10 feet wider, the project would maintain the same number of through lanes (one lane in each direction) and would not increase capacity, result in additional vehicles on the roadway, or move traffic closer to sensitive noise receptors. Therefore, operation of the project would not change the existing noise environment in the project vicinity.

Construction activities for the project could result in short-term and intermittent increases in noise levels in the project area. Sensitive noise receptors (residential structures) are located southwest and northeast of the project area. Noise levels would vary depending on construction activity, equipment type, duration of use, and the distance between noise source and receiver. Typical sound emission characteristics of construction equipment that may be used during project construction are provided in **Table 3**. The noise levels are described in terms of L_{max} , which is the maximum sound level of a particular noise event.

Table 4. Construction Equipment Noise

Equipment	Noise Level (dBA L_{max} at 50 feet)
Backhoe	78
Bulldozers	82
Compressor	78
Crane	81
Drill Rig	79
Heavy Trucks	81
Hoe Ram	90
Loader	79
Pile Driver	101
Pneumatic Tools	85

Equipment	Noise Level (dBA L _{max} at 50 feet)
Pumps	81
Roller	80

Source: (Federal Highway Administration, 2017)

dBA = A weighted decibels; L_{max} = maximum sound level

Based on the levels depicted in **Table 3**, construction equipment can be expected to generate intermittent noise levels ranging from approximately 77 to 101 dBA L_{max} at a distance of 50 feet. The highest noise levels would occur during pile driving for the abutments. Actual noise levels will vary depending on various factors, including the type and number of pieces of equipment used, and duration of use.

Construction of the project would be short-term, occurring over approximately 80 working days. The project would be in compliance with current Caltrans Standard Specifications Section 14-8.02, which currently requires that construction noise does not exceed 86 dBA at 50 feet from the job site from 9 p.m. to 6 a.m. The project would be in compliance with the County's noise control requirements, which limit construction activities from 7 a.m. to 6 p.m. In addition, implementation of avoidance and minimization measures **NOI-1** through **NOI-5** would further reduce construction noise levels. Once construction is completed noise levels would return to pre-construction conditions. Therefore, the project would result in a less than significant impact related to noise.

b. Generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant With Mitigation. The project would include replacement of the existing Atwater Bridge to improve safety of the crossing. Operation of the project would maintain the same number of lanes in the project area (one in each direction) and would not increase capacity or result in additional vehicles on the roadway. Therefore, project operation would not change the existing groundborne vibration or noise environment in the project vicinity.

Groundborne noise and vibration from project construction would be intermittent and would be localized near the project area. Adjacent land consists of rural residential land uses, and the nearest noise receptors are approximately 80 feet north of the project construction area.

There are no federal, state, or local regulatory standards for ground-borne vibration. However, Caltrans has developed vibration criteria based on potential structural damage risks and human annoyance. Caltrans-recommended criteria for the evaluation of groundborne vibration levels, with regard to structural damage and human annoyance, are summarized in **Table 4**. Vibration levels are listed as peak particle velocity in inches per second (in/sec ppv).

Table 5. Summary of Groundborne Vibration Levels and Potential Effects

Vibration Level	Human Reaction	Effect on Buildings
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(in/sec ppv)		
0.006-0.019	Threshold of perception; possibility of intrusion	Vibrations unlikely to cause damage of any type
0.08	Vibrations readily perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
0.10	Level at which continuous vibrations begin to annoy people	Virtually no risk of “architectural” damage to normal buildings
0.20	Vibrations annoying to people in buildings (this agrees with the levels established for people standing on bridges and subjected to relative short periods of vibrations)	Threshold at which there is a risk of “architectural” damage to normal dwelling - houses with plastered walls and ceilings. Special types of finish such as lining of walls, flexible ceiling treatment, etc., would minimize “architectural” damage
0.4-0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic but would cause “architectural” damage and possibly minor structural damage.

Source: (California Department of Transportation, 2013)

Notes:

The vibration levels are based on peak particle velocity (ppv) in the vertical direction for continuous vibration sources, which includes most construction activities, with the exception of transient or intermittent construction activities, such as pile driving. For pile driving, the minimum criterion level is typically considered to be 0.2 in/sec ppv.

Groundborne vibration levels commonly associated with roadway construction equipment are summarized in **Table 5**. As indicated, the highest groundborne vibration levels are typically generated by the use of pile drivers and vibratory rollers. Actual vibration levels vary depending on ground conditions and the specific equipment to be used.

Construction related groundborne vibration would be primarily from pile driving and the operation of off-road equipment. Construction would require the use of pile drivers, vibratory rollers, hoe rams, bulldozers, trucks, and jackhammers. Reference noise levels for construction equipment are identified in **Table 5**. As indicated, groundborne vibration levels associated with pile drivers can range from a typical level of approximately 0.644 inches per second peak particle velocity (in/sec ppv) to a high of approximately 1.518 in/sec ppv at 25 feet. Vibration levels associated with other construction equipment generally range from approximately 0.003 to 0.210 in/sec ppv at 25 feet.

Table 6. Representative Vibration Levels for Construction Equipment

Equipment		Peak Particle Velocity at 25 Feet (in/sec)
Pile Driver (Impact)	Upper Range	1.518
	Typical	0.644
Vibratory Roller		0.210
Hoe Ram		0.089
Large Bulldozer		0.089
Loaded Truck		0.076
Jackhammer		0.035
Small Bulldozer		0.003

Source: (Federal Transit Authority, 2006; California Department of Transportation, 2013)

The nearest residential structure is located approximately 65 feet from the proposed pile driving and approximately 45 feet from areas along Atwater Jordan Road that would be reconstructed. Based on this distance, the highest predicted ground vibration levels at the nearest residential structure would be from pile driving and would exceed Caltrans' recommended criteria for human annoyance (i.e., 0.2 in/sec ppv) (Table 6). However, with implementation of mitigation measures **NOI-1** through **NOI-5**, increases associated with groundborne vibration would have less than significant impact. Therefore, the project would result in less than significant impacts with mitigation related to groundbourne vibration and groundbourne noise.

Table 7. Predicted Construction Vibration Levels at Nearest Residential Structure

Activity	Peak Particle Velocity (in/sec)
Bridge Demolition	0.03
Pile Driving (Typical/High)	0.19/0.44
Bridge Construction	0.03
Road Construction and Paving	0.10
Miscellaneous Activities/Equipment	0.02

Source: (Ambient Air Quality and Noise Consulting, 2018)

- 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. There are no public airports within two miles of the project area. The nearest public airport is the Merced County Castle Airport, approximately 5.5 miles northeast of the project area. The project area

is approximately 15 miles west of Hunt Farms Airport, a private use airport. The Hunt Farms Airport is a dirt runway. Because the project would include replacing the bridge along the existing alignment, the people residing or working in the project area would be exposed to the same noise levels they are currently exposed to during project operation. Therefore, the project would result in no impact related to airports in the project area.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

To minimize impacts from construction-related noise and groundborne vibrations the following measures would be implemented:

- NOI-1** Construction activities, excluding activities that would pose a significant safety risk to workers or citizens, would be limited to between the daytime hours of 7:00 a.m. and 6:00 p.m.
- NOI-2** Stationary construction equipment and equipment staging areas would be located to the furthest distance from nearby residential dwellings.
- NOI-3** Construction vehicles and equipment would be turned off when not in use.
- NOI-4** Construction activities and deliveries would be scheduled to avoid noise sensitive days (i.e., holidays).
- NOI-5** Where possible, noise generating construction methods and/ or equipment would be lowered to the lowest extend locally available.

4.14 POPULATION AND HOUSING

Would the project:

Question	CEQA Determination
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	No Impact
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	No Impact

REGULATORY SETTING:

No federal, state or local plans, policies, regulations, or laws related to population and housing are applicable to the project.

AFFECTED ENVIRONMENT:

The project area is surrounded mostly by agricultural land uses. There are a few rural residential properties located within 0.5-mile of the project area.

DISCUSSION OF CHECKLIST RESPONSES

- 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)?**

No Impact. The project would include rehabilitation and widening of the existing Atwater Bridge to improve safety of the crossing. The project would not include new residential uses and the infrastructure improvements would not increase the capacity along Atwater Jordan Road. The project would not induce population growth in the area. Therefore, the project would result in no impact related to population growth.

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

No Impact. The project would not result in the demolition of any existing residential units or the displacement of any resident. Therefore, the project would result in no impact related to housing in the area.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES:

The project would result in no impact on Population and Housing. Therefore, the project would not require avoidance, minimization, and/or mitigation measures for Population and Housing.

4.15 PUBLIC SERVICES

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 following public services:

Question	CEQA Determination
a) Fire protection?	Less Than Significant Impact
b) Police protection?	Less Than Significant Impact
c) Schools?	No Impact
d) Parks?	No Impact
e) Other public facilities?	No Impact

REGULATORY SETTING:

No federal, state or local plans, policies, regulations, or laws related to public services are applicable to the project.

AFFECTED ENVIRONMENT:

The Merced County Fire Department (MCFD) is responsible for providing emergency medical services in the project area. The MCFD's station response areas vary from 16 miles to 325 square miles. The service area for the department is over 2,000 square miles.

Emergency response time standards vary by area; the response time guideline established by the California Emergency Medical Services Agency is five minutes in urban areas, 15 minutes in suburban or rural areas, and as quickly as possible in wilderness areas. Response times for the MCFD are not available. The nearest fire station to the project area is the Atwater Fire Department, approximately 3.2 miles northeast to the project area.

The Merced County Sheriff's Department is the primary agency responsible for law enforcement in unincorporated Merced County, including the project area. The Sheriff's Department is staffed with 72 full-time and 25 part-time sworn officers. The department offices are located at 700 W 22nd Street in Merced.

The Merced County Office of Education oversees public primary education for the Merced County District and Schools. Merced County District provides Kindergarten through 12th grade education to students living in Merced County. The district has a total of 20 school districts within the county. The nearest school is Atwater Valley Community School located approximately 2.3 miles northeast to the project area.

The nearest park, Heller Park, is located 2.7 miles northeast of the project area.

DISCUSSION OF CHECKLIST RESPONSES:

- 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?**

Less Than Significant Impact. The project would not result in an increase in population and would not increase the capacity of the traffic along the roadway. Therefore, the project would not be expected to increase the demand for public services and would not require the development of new public facilities that would cause significant environmental impacts. Construction of the project would temporarily impact emergency services due to the closure of the roadway. However, a detour would be required to allow traffic access around the project area. Expected roads to be used for the detour include Steinberg Road, Sunset Drive, and Central Avenue. Although construction would affect response times, the impacts would be temporary, and traffic patterns would resume to normal once the project is complete. The project would not result in population growth that would require the need for additional fire and police facilities. Therefore, the project would result in less than significant impact related to fire protection.

ii. **Police protection?**

Less Than Significant Impact. See discussion in response a(i) above.

iii. **Schools?**

No Impact. The nearest school is Atwater Valley Community School located approximately 2.3 miles northeast of the project area. The project would not include residential development, would not result in an increase in population, and would not increase the potential number of students within the service area of Atwater Valley Community School. Therefore, the project would result in no impacts related to schools.

iv. **Parks?**

No Impact. The nearest park is Heller Park located approximately 2.7 miles northeast of the project area. The project would not create new housing units or induce population growth due to employment, which would result in the need for new or expanded parks or other public facilities. Therefore, the project would result in no impacts related to parks.

v. **Other public facilities?**

No Impact. The project would not create new housing units or induce population growth due to employment, which would result in the need for new or expanded public facilities. Therefore, the project would result in no impacts related to public facilities.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES:

The project would result in no impact on Public Services. Therefore, the project would not require avoidance, minimization, and/or mitigation measures for Public Services.

4.16 RECREATION

Question	CEQA Determination
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?	No Impact
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?	No Impact

REGULATORY SETTING:

Federal and State Regulations

No federal or state plans, policies, regulations, or laws related to public services are applicable to the project.

Local Regulations

2030 Merced County General Plan

The Recreation and Cultural Resources Element of the General Plan identifies the following goal as applicable to the project (County of Merced, 2013).

- Goal RCR-1: Preserve, enhance, expand, and manage Merced County's diverse system of regional parks, trails, recreation areas, and natural resources for the enjoyment of present and future residents and park visitors.

AFFECTED ENVIRONMENT:

Merced County contains several county, state, and federal parks and recreation areas and public open space areas. There are approximately 114,000 acres of park and recreation facilities in the county that offer a variety of amenities such as picnicking, swimming, boating, hunting, bird watching, playgrounds, sports fields, and hiking. While no parks are located within 1.5 mile of the project area, the nearest park to the project area is Heller Park located approximately 2.7 miles northeast of the project area. According to the USFWS, the nearest wildlife refuge is the San Luis National Wildlife Refuge, located more than 13 miles southeast of the project area.

DISCUSSION OF CHECKLIST RESPONSES:

- 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?**

No Impact. The project would not result in population growth or generate increased demand for recreational facilities. Construction of the project also would not necessitate the closure of any parks.

Therefore, the project would result in no impact related to the increased use of existing neighborhoods, regional parks, or recreational facilities.

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?

No Impact. The project would not require ROW acquisitions from recreational facilities and would not require the construction of any such facilities. Therefore, the project result in no impact related to the construction or expansion of recreational facilities.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES:

The project would result in no impact on Recreation. Therefore, the project would not require avoidance, minimization, and/or mitigation measures for Recreation.

4.17 TRANSPORTATION

Would the project:

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

REGULATORY SETTING:

Federal Regulations

The Federal Highway Administration's Highway Safety Improvement Program

The goal of the program is to achieve a significant reduction in traffic fatalities and serious injuries on all public roads, including non-State-owned public roads and roads on tribal lands. The Highway Safety Improvement Program requires a data-driven, strategic approach to improving highway safety on all public roads that focuses on performance.

State Regulations

CEQA Guidelines section 15064.3, subdivision (b)

CEQA Guidelines section 15064.3, subdivision (b) outlines criteria for analyzing transportation impacts. Per CEQA Guidelines section 15064.3 subdivision (b), transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact.

Local Regulations

2030 Merced County General Plan

The Transportation and Circulation Element of the General Plan identifies the following goal and policies that are applicable to the project (County of Merced, 2013).

- Goal CIR-1: Maintain an efficient roadway system for the movement of people and goods that enhances the physical, economic, and social environment while being safe, efficient, and cost-effective.

- Policy CIR-1.9: Roadway Maintenance and Improvement. Require that roadways are maintained and improved consistent with established peak period level of service.
- Policy CIR-1.10: Road System Coordination. Cooperate with the cities within the county, adjacent counties, and State and Federal transportation agencies to coordinate the countywide roadway system, including ROW dedication and roadway improvements.
- Policy CIR-1.13: Cost-Effective Roadway Maintenance and Improvement (RDR). Support all methods to achieve cost-effective design, construction, and maintenance of existing and future roadways.

AFFECTED ENVIRONMENT:

The County maintains a variety of roadways which have differing characteristics. These roadways include everything from low-volume rural local roadways serving agricultural areas to high-volume urban expressways serving large urban areas. All of these roadways play a vital role in how people and goods are transported throughout the county. The roadway network that serves the county consists of Freeways, Principal Arterials, Minor Arterials, Major Collectors, Minor Collectors, and Local Roads. The County Arterials are all state highways, including SR-99, SR-59, SR-140, SR-165, and SR-33. I-5 traverses through the county to the south. The roadway network that serves the project area consists of Atwater Jordan Road, which is identified as Minor Collector. The project area is not currently served by pedestrian, bicycle or public transportation or bus systems.

DISCUSSION OF CHECKLIST RESPONSES:

- a. Would the project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, including transit, roadway, bicycle and pedestrian facilities?**

Less Than Significant Impact. The existing concrete bridge railing has substantial deterioration and cracking. According to a Caltrans Bridge Inspection Report, the existing bridge was rated as Functionally Obsolete with an overall sufficiency rating of 55.8. The purpose of the proposed bridge is to improve public safety by providing a safe, permanent crossing over the Atwater Canal on Atwater Jordan Road. Construction activities associated with construction of the project would be expected to last approximately four months. Construction of the project would temporarily impact travel times due to the closure of the roadway. However, a detour would be required to allow traffic access around the project area. Expected roads to be used for the detour include Steinberg Road, Sunset Drive, and Central Avenue. Although construction would affect response times, the impacts would be temporary, and traffic patterns would resume to normal once the project is complete. There are no bicycle or pedestrian facilities in the project area and the area is not served by public transit. During operation, the project would maintain the same number of through lanes (one in each direction) and would not increase capacity or result in additional vehicles on the bridge. Therefore, the project would result in less than significant impacts related to program plans, ordinances, or policies addressing the circulation system.

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

Less Than Significant Impact. As stated in response (a) the project would maintain the same number of through lanes (one in each direction) and would not increase capacity or result in additional vehicles on the bridge. During construction, travel times could be impacted due to the closure of the roadway; however, a detour route would be required to allow traffic access around the project area. Expected roads to be used for the detour include Steinberg Road, Sunset Drive, and Central Avenue. Although construction would affect response times, the impacts would be temporary, and traffic patterns would resume to normal once the project is complete. Therefore, the project would result in less than significant impacts related to CEQA Guidelines section 15064.3, subdivision (b).

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

No Impact. The existing bridge is structurally deficient, and the new bridge would provide a safe, permanent crossing over the Atwater Canal on Atwater Jordan Road. The project would not increase hazards because of a design feature or incompatible use and would be expected to meet current safety and geometric standards. Therefore, the project would result in no impact related to geometric hazards.

d. Would the project result in inadequate emergency access?

Less Than Significant Impact. Construction of the project would temporarily impact emergency services due to the closure of the roadway. However, a detour would be required to allow traffic access around the project area. Expected roads to be used for the detour include Steinberg Road, Sunset Drive, and Central Avenue. Although construction would affect response times, the impacts would be temporary, and traffic patterns would resume to normal once the project is complete. Therefore, the project would result in less than significant impacts related to emergency access.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES:

The project would result in less than significant impacts on Transportation. Therefore, the project would not require avoidance, minimization, and/or mitigation measures for Transportation.

4.18 TRIBAL AND CULTURAL RESOURCES

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:

Question	CEQA Determination
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	Less Than Significant Impact
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	Less Than Significant Impact

REGULATORY SETTING:

State Regulations

Assembly Bill 52 (PRC 21080.1, 21080.3.1, and 21080.3.2)

As of July 1, 2015, AB 52 requires public agencies to consult with California Native American tribes identified by the NAHC for the purpose of mitigating impacts on tribal cultural resources. The specific directives of the bill are as follows:

“Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section (PRC Section 21080.1(d)).”

California Health and Safety Code Section 7050.5

The State of California HSC Section 7050.5 requires that if human remains are discovered during ground disturbing activities, the County Coroner must be notified, and no further disturbance is authorized to occur until the County Coroner has made a determination of origin and disposition of the remains. If the human remains are determined to be prehistoric, the coroner must notify the NAHC, who will determine and notify a MLD. The MLD then inspects the site and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

Local Regulations

2030 Merced County General Plan

The Recreation and Cultural Resources Element of the General Plan contains the following policies that are applicable to the project (County of Merced, 2013).

- Policy RCR-2.1: Archeological Site and Artifact Protection (RDR). Require development projects that affect archeological sites and artifacts to avoid disturbance or damage to these sites.
- Policy RCR-2.5: Human Remains Discovery (RDR). Require that, in the event of the discovery of human remains on any project construction site, all work in the vicinity of the find will cease and the County Coroner and Native American Heritage Commission will be notified.
- Policy RCR-2.10: Tribal Consultation (RDR/MPSP/IGC). Consult with Native American tribes regarding proposed development projects and land use policy changes consistent with Planning and Zoning Law at Government Code Section 65351, and the OPR Tribal Consultation Guidelines (2005).

AFFECTED ENVIRONMENT:

According to the California Office of Historic Preservation, there are no historic properties within or adjacent to the project area listed on the CRHR (National Register of Historic Places, 2025).

DISCUSSION OF CHECKLIST RESPONSES:

- a. **Would the project cause a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?**

Less than Significant. A record search of the APE and a surrounding 1-mile radius was conducted at the CCIC to identify any historic properties or previous cultural resources studies on file. No tribal historic resources or tribal cultural resources were documented within the search radius. Three previous studies were conducted within one mile of the APE, however no cultural resources or sacred sites were identified by the NAHC, or with interested Native American individuals and groups identified by the NAHC. Additionally, no tribes responded to or provided information on tribal cultural resources in the project area in response to invitations to consult under Section 106.

Pedestrian reconnaissance field surveys were also conducted to examine the APE for evidence of cultural resources. No newly identified tribal cultural resources were present within the APE.

Due to the nature of previous ground disturbances within the APE, there is a low potential to adversely affect unknown, potentially intact buried archaeological deposits that might be eligible for NRHP listing. However, construction of the project would include ground disturbing activities that could unearth tribal cultural resources should they be present in the project limits. Tribal cultural resources could include, but are not limited to, Native American human remains, funerary objects, items or artifacts, sites, features, cultural resources. Therefore, the project would result in a less than significant impact on tribal cultural

resources. If tribal cultural resources are unearthed, implementation of the avoidance and minimization measures **CUL-1** and **CUL-2** would be implemented.

- b. Would the project cause a substantial adverse change in the significance of a tribal cultural resource that is 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. See discussion from response (a) above.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES:

CUL-1 and **CUL-2** are also applicable to minimizing Tribal Cultural Resource impacts. See avoidance, minimization, and mitigation measures in *Section 4.5, Cultural Resources*.

4.19 UTILITIES AND SERVICE SYSTEMS

Would the project:

Question	CEQA Determination
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?	Less Than Significant Impact
b) 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
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?	No Impact
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?	Less Than Significant Impact
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	Less Than Significant Impact

REGULATORY SETTING:

Federal and State Regulations

No federal or state plans, policies, regulations, or laws related to utilities and service systems are applicable to the project.

Local Regulations

2030 Merced County General Plan

The Public Facilities and Services Element of the 2030 General Plan identifies the following policies that are applicable to the project (County of Merced, 2013).

- Policy PFS-3.1: Stormwater Management Plans. Require stormwater management plans for all Urban Communities to reduce flood risk, protect soils from erosion, control stormwater runoff, and minimize impacts on existing drainage facilities.
- Policy PFS-3.4: Agency Coordination. Coordinate with the U.S. Army Corps of Engineers and other appropriate agencies to develop stormwater detention/retention facilities and recharge facilities that enhance flood protection and improve groundwater recharge.

- Policy PFS-3.6: Retention/Detention Facility. Encourage stormwater detention/retention project designs that minimize drainage concentrations and impervious coverage, avoid floodplain areas, are visually unobtrusive and, where feasible, provide a natural watercourse appearance and a secondary use, such as recreation.
- Policy PFS-4.6: Solid Waste Reduction. Support and promote feasible waste reduction, recycling, and composting efforts.

Merced Irrigation District Water Resources Management Plan

The Merced Irrigation District Water Resources Management Plan (WRMP) is an in-depth study of the District's water resources, delivery system, and operations. The WRMP is essentially a long-range business plan for the District. It will give practical, specific recommendations for system and operational improvements that will ensure reliable quality service to its customers and comply with CEQA.

Stormwater Management Program

The SWMP has been developed to meet the terms of the General Permit and consists of the six minimum control measures established by SWRCB for Phase II stormwater discharges. Implementation of these control measures are expected to result in significant reductions of pollutants discharged into receiving water bodies. The following control measure is applicable to the project:

- Illicit Discharge Detection and Elimination Program, which is intended to minimize illicit discharges into the storm sewer system. Illicit discharges are discharges that are not composed entirely of stormwater. Storm sewer systems are not designed to accept process or discharge such non-stormwater wastes. Minimizing these discharges can help to prevent high levels of pollutants from entering receiving waters. The BMPs in this section include:
 - Storm sewer system map
 - Stormwater ordinance
 - Dry weather screening program
 - Public information program
 - Employee training program

AFFECTED ENVIRONMENT:

The Merced Irrigation District Water and Power provides water to the county and project area from the Merced River at two locations. The Northside Canal diversion serves about 10,000 acres of farm ground north of the Merced River. The Main Canal diversion has a capacity of 2,000 cubic feet per second and is located three miles downstream of the McSwain Dam. The diversion is from a small reservoir created by the Crocker Huffman Diversion Dam, owned and operated by the Merced Irrigation District. The Diversion Dam also provides water to salmon and trout hatcheries and rearing facilities.

The project area lies within the Merced County Regional Waste Authority, which provides waste disposal services to the county and project area.

DISCUSSION OF CHECKLIST RESPONSES:

- 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?**

Less Than Significant Impact. There are PG&E electrical distribution lines that run along the north side of Atwater Jordan Road. Additionally, a telecommunications cable crosses Atwater Jordan Road in the project area. These utilities would need to be relocated as part of the project. Utilities would be relocated near their existing location and would not result in significant environmental effects. The PG&E poles would be relocated outside the clear recovery zone and the telecommunications cable would be detached from the existing bridge during construction and either run overhead to cross the canal or reattach to the new bridge.

The project would not involve the development of residential dwellings or any other facilities that would increase the water usage or wastewater generated. The project is limited to bridge improvements, focusing on the safety of the roadway. The project would not result in new or expanded electric power, natural gas, or telecommunications facilities. All utility relocations would be conducted in coordination with the service providers.

The project would result in a slight increase in impervious surfaces within the project area by approximately 0.1 acre from the installation of the new bridge, which could result in small amounts of increased stormwater runoff. However, drainage patterns would remain similar to existing conditions, and the project would be designed to accommodate existing and anticipated runoff levels as required by standard design guidelines used by the county. The project would require work in the Atwater Canal, which could result in water quality impacts; therefore, a Section 404 Nationwide Permit from USACE, Section 401 Water Quality Certification from the RWQCB, and Section 1602 Streambed Alteration Agreement from the CDFW would be required for the project. The project would be conducted in compliance with applicable water quality regulations and required permits, potential water quality impacts and potential impacts associated stormwater drainage facilities would be minimized.

Project construction would comply with the requirements of the NPDES permit required for the project, which requires implementation of BMPs to minimize soil erosion and protect water quality. Typical BMPs include, but are not limited to, limiting the construction area to the smallest area required to complete construction; dust control measures, such as watering exposed soils; and use of silt fencing, fiber rolls, and sheeting to contain soils on site during storm events. Following construction, exposed soils would either be paved or be stabilized through compaction and/or new vegetation. With implementation of measures **WQ-1** through **WQ-6** and compliance with the NPDES requirements, the project would not be expected to result in substantial water quality impacts, requiring the need for new or expanded storm water drainage facilities. Therefore, the project would result in less than significant impacts related to utilities.

- b. 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 may require minimal amounts of water during construction (for mixing cement or watering areas to stabilize loose soils) or during operation (for routine cleaning of the roadway). However, the project would not be expected to require the need new or expanded entitlements; therefore, the project would result in less than significant impacts related to water supplies.

- 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 does not require any wastewater treatment, and it would not require wastewater treatment for future operation. Therefore, the project would result in no impact related to wastewater treatment capacity.

- 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?**

Less Than Significant Impact. The project would generate small amounts of solid waste during the construction phase, which could be accommodated by existing area landfills. Operation of the project would not result in an increase of solid waste. Therefore, the project would result in less than significant impacts related to local infrastructure capacity.

- e. **Would the project comply with federal, state, and local statutes and regulations related to solid waste?**

Less Than Significant Impact. Solid waste generated during short-term construction activities, as well as during routine maintenance activities during project operation, would be disposed of in accordance with all federal, state, and local regulations. Therefore, the project would result in less than significant impacts related to solid waste management and regulations.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES:

The project would result in less than significant impacts on Utilities and Service Systems. Therefore, the project would not require avoidance, minimization, and/or mitigation measures for Utilities and Service Systems.

4.20 WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

Question	CEQA Determination
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	Less Than Significant Impact
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	No Impact
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	No Impact
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	Less Than Significant Impact

AFFECTED ENVIRONMENT

According to the Fire Hazard Severity Zones Map, the project is in an unzoned Local Responsibility Area (LRA) (CALFIRE, 2023). According to their website, California Department of Forestry and Fire Protection (CALFIRE) has determined that the county does not have a very high fire hazard area in the LRA (CALFIRE, 2022).

DISCUSSION OF CHECKLIST RESPONSES:

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

Less Than Significant Impact. Construction of the project would temporarily impact emergency services due to the closure of the roadway. However, a detour would be required to allow traffic access around the project area. Expected roads to be used for the detour include Steinberg Road, Sunset Drive, and Central Avenue. Although construction would affect response times, the impacts would be temporary, and traffic patterns would resume to normal once the project is complete. Therefore, the project would result in less than significant impacts related to adopted emergency response plans or emergency evacuation plans.

- b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?**

No Impact. According to the Fire Hazard Severity Zones Map, the project is in an unzoned Local Responsibility Area (LRA) (CALFIRE, 2023). According to their website, CALFIRE has determined that the county does not have a very high fire hazard area in the LRA (CALFIRE, 2023). The project area is surrounded by farm and grazing land, along with some sparse residential land and is not a wildland area. Project activities would be limited to replacement of an existing bridge and would be constructed to fire safety standards prescribed in the Building Code and the County Fire Prevention Ordinance (County of Merced, 2013). Project activities would not expose people to pollutant concentrations from wildfire, nor exacerbate wildfire risks. Therefore, the project would result in no impact related to wildfire pollutant exposure.

- c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?**

No Impact. The project would require the maintenance of the existing road that runs through and adjacent to the bridge as well as the relocation of telephone and electric poles. However, all utilities would be installed or relocated in accordance with standard practices to prevent the risk or spread of fire and would not exacerbate fire risk or result in temporary or ongoing impacts to the environment. Therefore, the project would result in no impact related to exacerbating fire risks.

- 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?**

Less Than Significant Impact. Factors that contribute to landslide potential are steep slopes, unstable terrain, and proximity to earthquake faults. There are currently no landslide inventory maps that cover the County; however, landslide risks are considered low because the majority of the County is within the low-lying areas of the Central Valley Basin (Merced County, 2013). Additionally, the project area is located in a relatively flat area and based on the existing topography the landslide potential in the project area would be low. The project area does not contain steep slopes or unstable terrain; therefore, there is no risk of substantial effects from landslides.

Implementation of the project would not result in a substantial alteration of existing drainage patterns in the project area, because drainage patterns would remain largely the same as existing drainage patterns. Implementation of the project would result in a slight increase of impervious surface area from installation of the new bridge. Although the project would result in a minor increase in stormwater runoff, the project would be designed to accommodate existing and anticipated runoff levels, and the project would not impact flood risk. Therefore, the project would result in no impact related to landslides, runoff, instability, or drainage changes.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES:

The project would result in less than significant impacts on Wildfires. Therefore, the project would not require avoidance, minimization, and/or mitigation measures for Wildfires.

4.21 MANDATORY FINDINGS OF SIGNIFICANCE

Question	CEQA Determination
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 Impact
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 with Mitigation Incorporated
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	Less Than Significant Impact

DISCUSSION OF CHECKLIST RESPONSES:

- a. Does the project have the potential to 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. As described in *Section 4.4 Biological Resources*, implementation of measures **BIO-1** through **BIO-27** would reduce impacts to less than significant. *Section 4.5 Cultural Resources* describes measures **CUL-1** and **CUL-2** which would avoid and minimize impacts on cultural and tribal resources. Therefore, the project would result in less than significant impact on the quality of the environment, fish or wildlife species habitat, fish or wildlife population, plant or animal communities, number or restricting the range of a rare or endangered plant or animal, or important examples of the major periods of California history or prehistory.

- b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Less Than Significant With Mitigation. According to 14 CCR § 15355, "Cumulative impacts" refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. The cumulative impact from several projects is the change in the environment which results from the incremental impact when added to other closely related past,

present, and reasonably foreseeable future projects.

There are no projects in a 2-mile radius of the project area. Additionally, the project would not result in any significant impacts. Because the project's impacts would be less than significant, the project would not contribute considerably to cumulative impacts. Therefore, the project would result in a less than significant impact related to cumulative impacts. Implementation of the measures with implementation of measures **BIO-1** through **BIO-10**, **CUL-1** and **CUL-2**, **WQ-1** through **WQ-6**, **HAZ-1** through **HAZ-5**, and **NOI-1** through **NOI-5** would further reduce impacts.

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

Less Than Significant with Mitigation: The Initial Study analysis shows that the project would not have environmental effects causing substantial adverse effects on human beings, directly or indirectly. Impacts associated with air quality, biological resources, cultural resources, geology and soils, GHGs, hazards and hazardous materials, transportation, and utilities would all be reduced to a less than significant level with implementation of avoidance, minimization, and/or mitigation measures **BIO-1** through **BIO-10**; **CUL 1** through **CUL-2**; **HAZ-1** through **HAZ-5**; **WQ-1** through **WQ-6**; **NOI-1** through **NOI-5**. Therefore, with implementation of these measures, the project would result in less than significant impacts on human beings, either directly or indirectly.

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